Logistics applied to food and feeding activities

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MEDECINS SANS FRONTIERES

Logistics applied to food and feeding activities.

OCB

2010 edition

PREFACE

Rare are the times when a logistician does not face issues linked to food management in the field.

Whether in terms of logistical support given to specific feeding programmes, or additional food for patients in a hospital, food logistics represents **a significant domain** in programmes developed by MSF.

This significance is linked to the issues such a domain represents on a day-to-day basis, which are specific to it:

A strategic and medical issue
High-quality programmes can only exist when satisfactory food is given to beneficiaries taken care of by MSF. Meeting this requirement involves the continuous measurement and monitoring the quality of food products before they are consumed with the appropriate tools and expertise. This need to provide qualitative monitoring and follow-up is heightened by the sensitivity of food products to factors such as humidity or heat as well as being widely favoured by insects and rodents of all kinds.

A financial issue
Every year, substantial volumes and tonnage are purchased, stored and distributed in the field. Without needs requirement planning, and secure supply chain management, a food-based response may rapidly generate excessive financial costs.

A security issue:
Food management in a country where food is scarce is by definition sensitive, and fraught with danger.
Without preliminary care in food handling - from its acquisition to its distribution, or its destruction when this is required - MSF teams may be placed in a difficult situation. Difficult in legal terms but equally difficult in terms of the populations concerned.

A political issue
In a context where civil populations are, for the most part, targeted by armed conflict, food and its control can be a powerful weapon, at the root of manipulations of programmes designed to support these populations by the forces present.
Distributing food in some regions thus requires specific knowledge of the geopolitical issues inherent in the areas concerned.

All these factors oblige logisticians to implement management methods in the field which are both rigorous and adapted to the requirements of operations.

For this reason, the objective of this chapter is to collate information - or refer to specialist works - concerning food logistics - from supervision aspects to distribution techniques - to help all logisticians make day-to-day choices about food management in the field.

To this end, two prerogatives will ensure a high-quality logistical response regarding food:

- Excellent **joint working with medical teams** in the field. To recap, the medical department remains and must remain the project manager in terms of needs assessment and response definition. Food logistics is part of a process of support for medical operations.
- A **continuous critical approach** in terms of the quality of logistical activities regarding a food response. The solutions suggested may indeed not be able to be adapted to some contexts. In addition, the nutrition domain is continuously evolving. This review - if correctly worded and expressed - must also allow this guide to be developed in the future, to move towards a degree of improvement.

This handbook is complementary to the **guide relating to food logistics** which contains all the stages necessary to ensure high quality or food upon acquisition, storage and transport.

Indeed it highlights the logistician's role at several levels:

- rapid food assessments
- definition of nutrition strategies
- food supervision activities

Finally, it allows a better understanding of logistical involvement in food and feeding programmes.

This guide collates information from various sources (other MSF departments - other humanitarian actors) which have been essential to its creation.
I wish to thank all those who contributed to writing this guide and in particular Bérangère Leurquin for putting so much energy and availability into this project.

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CHAPTER 1. MSF-OCB POLICY AND CONCEPTS REGARDING FOOD AID

1. CONCEPTS

1.1. Malnutrition and its causes

Malnutrition is defined as the cellular imbalance between the supply of nutrients and energy on the one hand, and the body's demand for them to ensure growth, maintenance, and specific functions, on the other (WHO). In other words, appropriate nutrition is essential to physiological development and maintenance, resistance to illness and ability to work.

An insufficient supply of macro-nutrients (proteins, carbohydrates, lipids) causes protein-energy malnutrition; while an insufficient supply of micro-nutrients (vitamins and minerals) causes a micro-nutrient deficiency.

Malnutrition is not always caused by a lack of food but is rather the result of imbalanced nutrition and/or illness (for instance tuberculosis, AIDS). Nutrient deficiencies can weaken immunity and increase sensitivity to infections, which in turn cause poor absorption of nutrients and a reduction in food supply (loss of appetite, nausea, diarrhea, etc.), thus creating a vicious circle perpetuating malnutrition. The interaction of malnutrition and infections results in a very clear increase in infant morbidity and mortality in developing countries. Standard childhood illnesses, specifically measles[1] are particularly serious in undernourished children.

Acute malnutrition

Acute malnutrition (as opposed to "chronic" malnutrition) occurs according to the assumption that it can develop rapidly. **Its indicator is the Weight-to-Height ratio (W/H)** allowing a child who is too thin for their height to be discerned.

- **Severe acute malnutrition = Danger of Death!!!**
  Major weight loss and very high risk of mortality; requirement of intensive treatment in a medical or pediatrics department, or more specifically in a Therapeutic Feeding Centre (TFC).
  The 2 main[2] clinical forms of severe acute malnutrition are:
  - marasmus: severe emaciation with loss of muscular and fat mass;
  - kwashiorkor: bilateral swelling[3] of feet, legs, general (face, hands, arms, core) in the most severe cases

[1] It is a vicious circle because malnutrition results in a weakened defence system, which is behind serious infections, while viral infections such as measles are themselves responsible for a reduction in immune responses, with its serious consequences for people suffering from malnutrition.
[2] The mixed form - marasmic kwashiorkor - is frequent.
[3] Swelling of the tissue due to the infiltration of water into the tissue (serositis).

- **Moderate acute malnutrition**
  Moderate weight loss requiring supplementary feeding in a Supplementary Feeding Centre.

- **Overall acute malnutrition**
  Severe + moderate malnutrition

Chronic malnutrition

This is defined according to the assumption that it develops more slowly, shown by a delay in gaining height. Its indicator is thus the **Height-Age index (H/A)**. A child who is malnourished over a long period will witness a delay in growth compared to another child of the same age. Responses to this problem are mainly political and socio-economic in nature, requiring development actions or access to dietary supplements in the longer term.

Micro-nutrient deficiencies (vitamins and minerals)

May occur in populations experiencing substantial food insecurity or wholly dependent on food aid and lead to **deficiency epidemics** (scurvy, pellagra, beriberi, etc.) These epidemics are predictable and can be prevented. Quality control of food rations and early detection of all cases of deficiency are essential. The best preventive measure is food diversification, while alternatives are food fortification and mass supplementation.

Causes of malnutrition

a) Immediate causes

1. Energy, protein and micro-nutrient deficiencies: due to a poorly adapted food ration.

2. Infections: repeated non-specific infections (diarrhea, respiratory, urinary, cutaneous) are at the root of delayed growth and chronic malnutrition. Often, a serious and sometimes specific infection (for instance measles) is a precipitating factor in acute malnutrition.

b) Underlying causes

1. Food safety factors: availability and access to food *(more access to fields, insufficient household income to buy food at the market, etc.)*

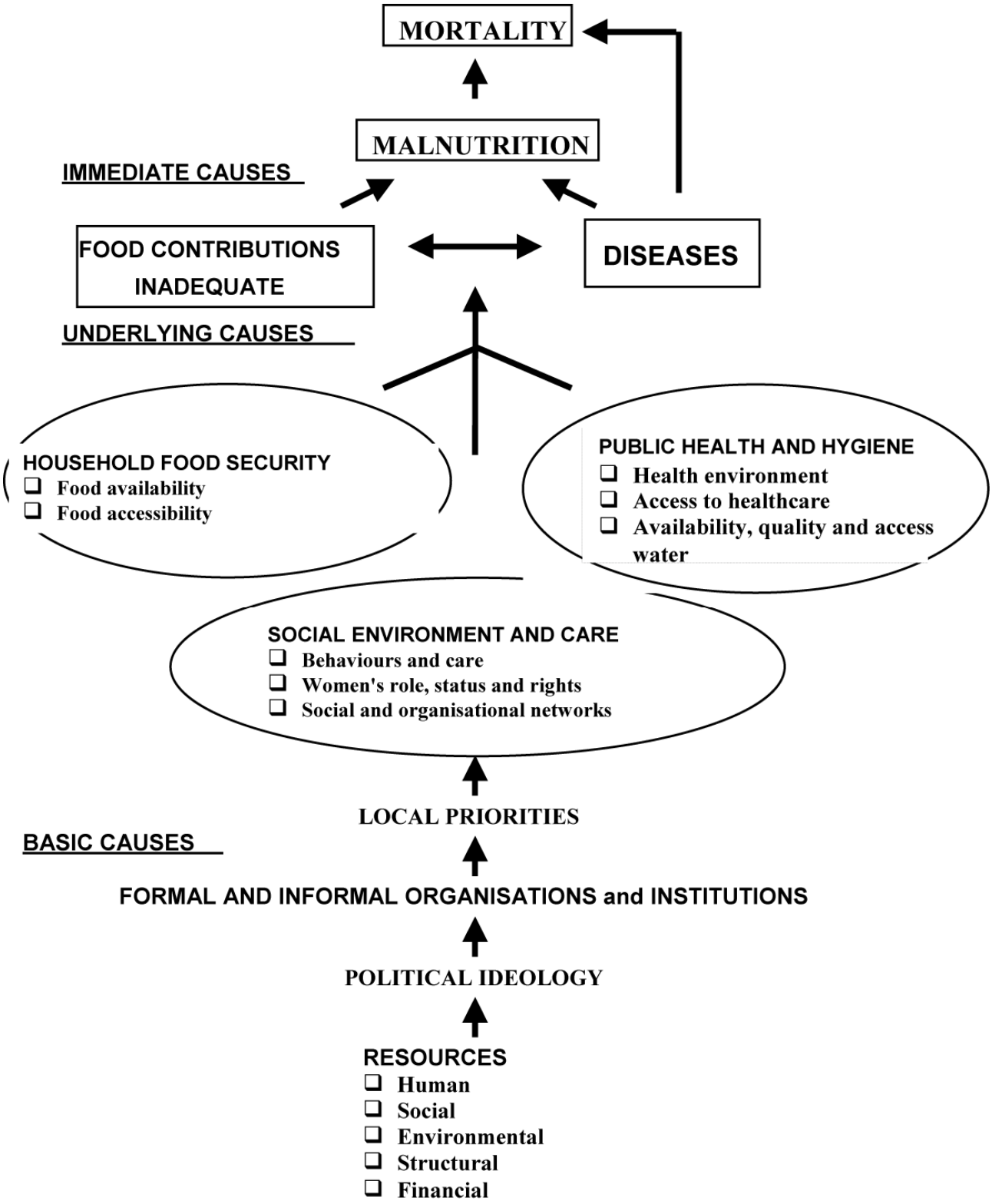
2. Public health and hygiene factors:
   - environmental health *(absence of latrines, no way to wash hands, measles epidemic, etc. all increase the risk of infectious diseases)*
   - accessibility and quality of healthcare *(no healthcare structures, or drugs available, or out-of-date drugs, no vaccination, etc. expose individuals to increased nutrition risks due to prolonged illness)*
   - availability, quality and access to water *(no water, contaminated wells, etc. cause diarrhea and dehydration which will result in significant weight loss in children)*

3. Social environmental factors:
   - social and organisational networks *(poverty, large family, abandoned children, orphans, prostitutes, rejected by the group, etc.)*
   - women's role, status and rights *(weight of workload, short birth spacing, lack of education, etc.)*
   - childcare *(in some countries, weaning occurs abruptly at 6 months, and the child goes from mother's milk to bread and water or rice: the lack of protein and micro-nutrients then causes malnutrition in the very young)*.

c) Basic cases

All the families' efforts to ensure good nutrition can be swept aside by political, legal and cultural factors, such as the degree to which women's and girls' rights are protected by law and custom; the political and economic system dictates the distribution of income and goods; finally, the ideologies and policies governing social sectors.

Causal diagram of malnutrition
UNICEF, Nutrition Causal Analysis



1.2. Food Security concepts - Some definitions

FOOD SECURITY is assured when all people, at all times, have access economically, socially and physically to sufficient healthy and nutritious food, which meets their nutrition needs and their food preferences, allowing them to lead a healthy, active life.

FOOD INSECURITY corresponds to the situation of those people obliged to consume their reserves, to ask their welfare system for help or to give up their means of production, who as a result increase their vulnerability level.

In many countries, populations are faced with a seasonal disruption to food supplies, which is known as the LEAN SEASON. For growers, this normally occurs before the harvest season when food stocks from the previous harvest (i.e. grain lofts) are exhausted and market prices are high. For stockbreeders, this often occurs at the end of the dry season, when grazing ground is rare and livestock epidemics are present. In addition to seasonal changes, an economic upset can cause transitory food insecurity.

Most populations have learned to adapt to these seasonal shortages and are able to manage the little food they have until the following harvest. Stockbreeders who must face the same difficulties sometimes at different times, are used to getting through these harsh periods thanks to transitory adjustment.

This type of scarcity is **a recurring problem but can worsen** under certain circumstances:

- **human factors**: war, insecurity or armed conflict
- **natural factors**: drought, flooding, predators or crop diseases which affect the availability of food or its accessibility.

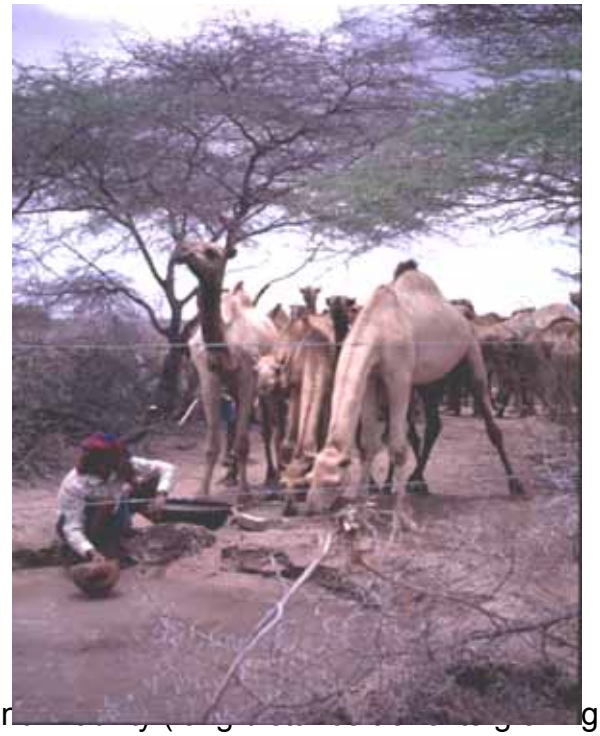
FOOD AVAILABILITY is the ability of a region or village to be supplied with basic foodstuffs, in sufficient quality and quantity, to feed all the people living there.

FOOD ACCESSIBILITY is characterised by families' ability to acquire their food over a given period, by combining their own production, their reserves, their purchases and their capacities of exchange.

Food insecurity can worsen until it reaches famine. This process often occurs in THREE STAGES; each one is distinguished by specific mortality risks and adjustment mechanisms. People try to adjust to deteriorating food security by diversifying their income and reducing their expenses. This may have detrimental consequences on environmental health and care practices.

1/ Characteristics of food insecurity

At the first stage, adjustment mechanisms developed by the population can be reversed and do not in principle affect their future production capacity. Food insecurity is generally temporary. Households are generally able to return to normal life once the food situation has improved. Levels of mortality and morbidity are somewhat affected by the lack of hygiene and healthcare combined with marginal food supply.



Adjustment mechanisms

Increased resources

- Diversification of sources of income
- Long working hours
- Livestock: overuse of grazing pastures ar[illegible] grounds)
- Sale of excess livestock
- Sale of non-productive goods (utensils, jewels, coal, furniture)
- Borrowings
- Money sending
- Prostitution

Reduced expenditure

- Reduction of food supply (reduction in frequency of meals and smaller amounts eaten)
- Change to diet (consumption of wild food, cheaper food, etc.)
- Reduction in mutual assistance (to family and neighbours)
- Reduced expenditure in water usage (inter alia in town), healthcare or firewood

Population movements

- Temporary or seasonal migration to look for city work or better grazing grounds

Results

Care given

- Quality and time of care reduced
- Care restricted to family members
- Lack of community support for vulnerable groups

Malnutrition

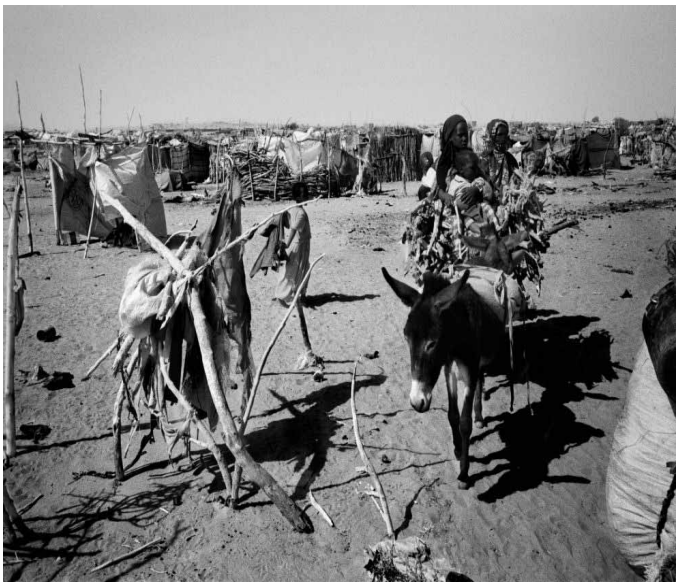
- Moderate general deterioration in nutritional status

Morbidity and mortality

- Likely increase in morbidity

2/ Characteristics of a food crisis

In a conflict situation, food crises are caused by unforeseen severe disruptions to food supplies. Populations may experience sudden reductions in food availability due to forced population movements, destruction or pillaging of harvests and livestock, diversion of food aid, dangerous access to food sources (markets, farms, aid) etc.
In peacetime, food crises may be caused by a gradual deterioration in food access due to repeated prolonged droughts, flooding, livestock epidemics, an economic crisis, etc.
Populations are obliged to sell goods essential to their future subsistence (e.g. livestock). These mechanisms are irreversible and a return to normal life is difficult.



Darfour refugees, 2004

Drought in Afghanistan, 2002

Adjustment mechanisms

Increased resources

- Sale of productive goods (tools, seeds, livestock, land, house, sale of land rights, etc.)
- Mass slaughter of livestock
- Land or house rental
- Low exchange rate for livestock in comparison to basic food

Decreased expenditure

- Serious cutbacks in terms of healthcare, water, food and firewood

Population movements

- Long-term migration of men
- Displacement of families

Results

Collapse of social structures

- Extended migration: men do not return from seasonal migrations or are conscripted
- Collapse of community structures: mutual assistance reduces, skilled and educated people migrate, collapse of healthcare system
- Reduction in community funds for funerals and marriages
- Reduction in support to non-productive household members (young children, the elderly and disabled)
- Marginalisation of non-productive individuals (orphans, beggars, etc.)

Malnutrition

- Deterioration of the nutritional status, especially among vulnerable and marginal groups (e.g. children, the elderly, the poor, disabled, ill people etc.

Mortality and morbidity

- Increased morbidity in the population
- Mortality risk increased among those severely and moderately malnourished

3/ Characteristics of famine

During a famine, households are defenceless, having exhausted their adjustment mechanisms. Many people and families leave their home looking for food: distress migration. Famine is often linked to war and conflicts. It may also be a sign of inadequate humanitarian aid at the food crisis stage.

The combination of insufficient food and poor environmental health are the main causes of famine and death in severely and moderately malnourished people. Sufficient food supplies, access to healthcare, sanitation and shelters can prevent many deaths.

Southern Sudan, 98

Adjustment mechanisms

Resources exhausted

Distress migration. Entire families and villages leave their homes looking for food

Expenditure

Targets food and individual consumption

Results

Social collapse

Distress migration

Broken families

Traumatised people

Malnutrition

In all age groups, particularly in marginalised groups

Linked to a general lack of food

Mortality and morbidity

Extremely high mortality and morbidity

Specific characteristics of food insecurity, food crisis and famine

MSF Nut Guideline DRAFT 2009

INDICATORS	GENERALLY FOOD SECURE	BODERLINE* FOOD INSECURE	ACUTE FOOD CRISIS	FOOD / HUMANITARIAN EMERGENCY	FAMINE / HUMANITARIAN CATASTROPHE
FOOD SECURITY					
Food access/ availability	Adequate and stable like in typical years with sufficient energy intake.	Borderline adequate and/or with seasonal unstable variations.	Lack of livelihood sources (e.g. food, labour, cash) to guarantee food access.	Severe lack of livelihood sources, unable to meet food needs.	Extreme lack of livelihood sources, serious unmet food needs (starvation).
Dietary diversity	Constant quality and quantity of diversity (e.g. minimum 5 – 6 food groups eaten per day) during 3	Chronic and/ or limited dietary diversity during 2 – 3 daily meals. Vulnerable groups	Acute deficit and insufficient nutrient intake within 1– 2 meals per day. Larger swaths of	Regularly 2 or fewer main food groups consumed within 1 daily meal. Malnutrition affects	Negligible.

	meals per day.	(children, pregnant- and lactating women, elderly) subject to malnutrition.	population subject to malnutrition.	all segments of the population.	
Livelihood/ productive assets	Sustainable use.	Depletion, but reversible.	Accelerated and critical depletion or loss of access.	Near complete and irreversible depletion or loss of access.	Effectively complete loss and collapse.
Strategies to respond to food insecurity	Negligible.	Insurance/ coping strategies to provide basic needs during lean periods.	Intensification of coping strategies or use of distress strategies to respond to food insecurity.	Intensification of distress strategies according to context.	–
Destitution/ displacement	Negligible.	Seasonal migration, mainly by men and strong household members.	Emerging, diffuse.	Concentrated, increasing, often entire families.	Large scale, concentrated.
Vulnerability	Stable, low.	Certain segments of the population vulnerable.	Exposure to a shock/ hazard, food security can only be maintained through crisis coping strategies.	Exposure to a shock/hazard with severe entitlement gap and use of distress coping strategies that undermine livelihoods.	No ability to cope.
NUTRITION					
GAM ** (defined by W/H < -2 z-score and oedema in children 65.0–109.9 cm of height)	< 5 % (z-score, WHO 2006)	5 – 20 %*** (z-scores, WHO 2006), depending on aggravating factors	10 – 20 % (z-scores, WHO 2006), depending on aggravating factors	20 – 40 % (z-scores, WHO 2006)	> 40 % (z-scores, WHO 2006)
SAM ** (defined by W/H < -3 z-score and oedema in children 65.0–109.9 cm of height) Update to new WHO standard!	< 1 % (z-score, NCHS)	< 3 % (z-scores, NCHS)	3 – 4 % (z-scores, NCHS)	> 4 % (z-scores, NCHS)	> 5 % (z-scores, NCHS)
GAM (defined by MUAC < 125 mm and oedema in children 65.0–109.9 cm of height) Estimates need to be confirmed!	Rapid proportional cut-off MUAC < 125 mm and oedema: Under control < 10 % Further investigation 10-25 % (investigation through nutrition survey) Serious situation > 25 % (intervention start next to nutrition survey)				
SAM (defined by MUAC < 115 mm and oedema in children 65.0–109.9 cm of height)	No clear cut-offs at time available; needs to be updated in future! Estimations for cut-off MUAC < 115 mm and oedema: No alert < 1 % Alert for further investigation > 2 %				
HEALTH					
Morbidity (disease)	Under control.	Under control, endemic diseases increase (e.g. seasonal).	Increase, epidemic likely.	Epidemic, pandemics likely.	Epidemic, pandemics.
Mortality: CMR	< 0.5 /10.000/day	< 1 /10.000/day	1 – 2 /10.000/day	> 2 /10.000/day	> 5 /10.000/day
Mortality: U5MR	< 1 /10.000/day	< 2 /10.000/day	> 2 /10.000/day	> 4 /10.000/day	> 10 /10.000/day
Impact on health care system	Stable admission rates.	Seasonal increases in admissions; especially	Risk of epidemics, nutrition programs fail	Health care system overwhelmed.	-

* *Also considering chronically food insecure contexts*

** *Nutrition survey results must be interpreted in light of anticipated seasonal trends, i.e. SAM prevalence of 3% at the beginning of the hunger gap is more worrisome than 3% at the end.*

*** *Range between 10 – 20% reflects chronic food insecure contexts where during hunger gap/ lean seasons the GAM increases (e.g. representing 15 %) i.e. counties of South Sudan*

Aggravating factors are 1) Natural disasters, 2) Armed conflict and 3) Sudden increases in food prices.

		to nutrition programs.	to cope with work load.		
ADDITIONAL					
Water access/ availability	Usually adequate (> 15 liters ppp day), stable.	Borderline adequate (15 liters ppp day), unstable.	Reduced, minimum needs (7.5-15 liters ppp day) met via asset stripping to bridge the water gap.	< 7.5 liters ppp day (human usage only).	< 4 liters ppp day (human usage only).
Civil security (Depends also on the general context!)	Prevailing and structural peace.	Unstable, disruptive tension.	Limited spread, low intensity conflict.	Widespread high intensity conflict.	Widespread high intensity conflict.

Source: Adapted from MSF-OCA: Food security monitoring and programming in MSF (2008) and the IPC reference table (2008)

Glossary to the food security classification table

TERM	DEFINITION
Asset stripping	Involves the sale of household assets or items to bridge a food gap.
Crude Mortality Rate (CMR)	Total number of deaths per year per 10 000 persons per day. [4]
Food access	Refers to the ways in which food is obtained for a nutritious diet during a given period. It is determined by the resources (capital, labour, knowledge) available and on prices and reflects the household's ability to obtain sufficient income that is used to meet food requirements.[5]
Food availability	Refers to the quantity and quality of food available at household level and is determined on household level by own household production and by market supply. It derives from domestic food stocks, food imports, food aid and domestic food production on the village, regional or national level.[2]
Livelihood	Refers to the capabilities, assets (including both material and social resources) and activities needed for a means of living: a livelihood is sustainable, which can cope with and recover from stress and shocks/ hazards and maintain or enhance its capabilities and assets.[6]
Livelihood/ productive assets	Refers to assets in the household that are used to obtain food and cash income, e.g. agricultural land and tools, livestock etc,
Strategies to respond to food insecurity	There are two types of strategies to respond to food insecurity: Coping strategies that are defined as fallback mechanisms to deal with short-term insufficiency of food during a hunger gap.[7] Main coping strategies are an intensified search for jobs, use of loans, rent or sale of assets, increased collection and consumption of wild foods, increased sale of animals, short-term migration, etc. Distress strategies that are applied by households in a serious crisis/ famine. They are often a desperate act to obtain food, e.g. inhabitual consumption of wild foods (including poisonous wild foods), eating grass, exchange sex for food, sale of reproductive animals.
Under-5 Mortality Rate (U5MR)	Number of deaths of children less than 5 years old per 10 000 children less than 5 years per day.[1]
Vulnerability	Refers to the presence of factors that place people at risk of food insecurity or malnutrition, including those factors that affect their ability to cope.[8]

[4] MSF-B: Rapid nutritional and mortality surveys: step by step, 2. Version, 2002.
[5] Hahn H.: Conceptual Framework of Food and Nutrition Security, Deutsche Welthungerhilfe, 2000.
[6] Save the Children: The Household Economy Approach: What is it and what can it be used for? 2005. Available at: http://www.odi.org.uk/hpg/papers/SCF_HEA.pdf, last accessed: 29.07.2009.
[7] Maxwell D.G.: Measuring food insecurity: the frequency and severity of "coping strategies", 1995. Available at: http://www.ifpri.org/divs/fcnd/dp/papers/dp08.pdf, last accessed 29.07.2009.
[8] FIVIMS: Glossary: food insecurity. Available at http://www.fivims.org/, last accessed 29.07.2009.

2. MSF-OCB FOOD AID POLICY

General

MSF is a Medical Humanitarian Organisation and our involvement in care for patients suffering from acute malnutrition via feeding programmes is thus obvious. As responsible humanitarian actors responsible regarding the populations in whose service we work, we cannot intervene in terms of malnutrition without understanding the causes and attempting to act on these, by all possible means.

On-site risk assessments are carried out by MSF teams.

All MSF actions must follow clear protocols in terms of food rationing; these will be drawn up by the mission's Medical Coordinator and must imperatively be applied by the action's implementation team.

Foodstuffs are part of a population's vital requirements, and as such MSF will foresee handling of food distribution each time that the nutrition situation of the population risks deteriorating. These food operations will be implemented essentially for emergency situations; food aid in rehabilitation and development situations are not the main priority of MSF's food programmes.
In any event, there will be medical activities linked to the food programme (Therapeutic Feeding Centre, dispensary, etc.)

Generally speaking, no distribution can occur without prior identification of beneficiaries.
MSF does not subcontract food operations to other national or international organisations.
MSF staff must be present when distributions are made to populations and ensure smooth running of the operation.

Our food and feeding programmes will be subject to continuous assessment and supervision. Specific attention will be paid to the consequences of food aid operations on the region's social organisation and economy.

Quality of food products

It is MSF's duty to provide a sufficient quantity of quality food to the recipients of care in its programmes. At each stage of the supply chain, from purchase to distribution, particular care must be taken in terms of quality, preservation, traceability and hygiene.
Purchasing is fundamental, but also the whole logistical chain (transport, storage, distribution). The objective is to maintain the initial quality of food until it reaches beneficiaries via:

- demanding quality guarantees for products in writing
- giving priority to quality, both in terms of composition and packing and acceptance by beneficiaries
- verifying the quality of products by analyses carried out by reliable laboratories. If these are not available locally, or if there are doubts about their reliability, samples must be sent to head office who will take care of this.

When the quality is identical, give priority to local purchases over imported products. An exception exists with regard to therapeutic nutrition foods, dairy products and vitamin-

enhanced flours for which you must consult head office before accepting a gift or making a purchase.
Before beginning to purchase food products, check that they are absolutely unavailable in the form of gifts in kind from other organisations (WFP, UNICEF, ICRC, etc.)
Refuse any gifts if they do not meet MSF quality standards.

Fumigation of food products

Considering the high toxicity and complex use of fumigants, it is essential that such products are only handled by skilled, experienced people. As a result, MSF staff must never do this instead delegating this task to agencies qualified in this domain *(see MSF policy in terms of fumigation in Appendix 1.1).*

CHAPTER 2. RAPID FOOD AND NUTRITION ASSESSMENT AND CHOICE OF A NUTRITIONAL STRATEGY

1. RAPID FOOD AND NUTRITION ASSESSMENT

1.1. Objectives and principles

1.1.1. Objectives

The objective of the rapid food and nutrition assessment is to decide on an appropriate nutrition strategy by:

- Assessing food availability and the nutrition situation of the population
- Estimating the scope of the crisis
- Identifying vulnerable groups
- Estimating food and nutrition needs
- Collecting the information needed to implement the programme
- Drafting operational restraints and opportunities

An extensive assessment may be difficult to achieve in an emergency due to time constraints. The rapid food and nutrition assessment should be sufficient to determine the need for a nutrition intervention, and to draft appropriate strategies to implement a programme along with initial planning and ordering.

Later, the assessment may be built up and refined with more accurate data such as anthropometric data, more detailed information about food security, micro-nutrient deficiencies, etc. Assessments must be continued throughout the emergency. This allows nutrition strategies and programmes to be adjusted.

1.1.2. Principles

Whom?

The goal of this chapter is to provide a quick method of assessing the food and nutrition situation which can be applied by non-specialists in food security since it does not require any complex technical skills.

When?

This rapid food and nutrition assessment will always be carried out in an overall environment where MSF, due to its very nature, will take medical needs into account as a priority; it is thus in connection with this medical approach and using as a basis the nutrition monitoring system implemented in relation to our patients and more broadly speaking in our projects which will trigger the need for a rapid food and nutrition assessment.

In the event that MSF is not present in a given country, external signs giving early warning of a deterioration in food security will trigger any MSF decision to move on-site in order to assess the situation.

How?

Regardless of the type of assessment, it must be part of the following process:

a/ Early warning analysis, decision as to assessment requirement

b/ Preliminary information search on the web, other actors, bibliography, and preparation of the field stage thanks to assumptions

c/ "Quick field assessment" thus:
- rapid nutrition assessment → MED
- rapid food assessment → LOG (or MED)

d/ Analysis of information collected + recommendation for an additional survey (nutrition? mortality? other?)

e/ Report, recommendations

f/ Operational decision

The benefits of a rapid assessment in an insecure or hostile environment are considerable: time and energy savings for the MSF team, especially in speeding up the intervention process.
The most obvious drawbacks are: superficial, simplistic or at worst erroneous analyses and information, statistics which may not correspond to reality

The method must thus try to minimise these drawbacks by suggesting an assessment in several phases which may be performed according to the time available to the team. Obviously, the longer time is spent on collecting information, the more refined results will be.

This assessment is still but a summary survey and cannot claim to be exhaustive or to replace forecasts from certain high-performance early warning systems which have been in place for many years.

1.2. Assessment method

As with any method of survey, it is advisable that it should always be at once simple, practical, reliable and adaptable to a number of varying contexts, whether ecological, cultural or economic. Given the complexity and diversity of analyses of a food situation, this is a challenging task.

Throughout the survey, **the questions at the heart of the research** must be borne in mind:

- **which population is most affected?**
- **how serious is it?**
- **what are its origins?**

By focusing on these questions, we can reach the heart of the issue.

One golden rule which is fundamental in this type of assessment is **cross-checking information**. If a piece of data collected in an interview or by direct observation reveals an item which may aid diagnosis, this must always be confirmed by other people.

The rapid food and nutrition assessment is performed after 2 or 3 survey phases. The phases are as follows:

A/ Preliminary information search → LOG or MED
B/ Quick field assessment → LOG and MED
- rapid nutrition assessment → MED
- rapid food assessment → LOG (or MED)

C/ Nutritional and mortality survey if necessary → MED EXP

A/ Preliminary information search and identification of areas to assess:

The objective of the first phase is to collect a minimum amount of existing information about the region being surveyed and to prepare the following phase which will take place in the field. This stage should not be neglected; the field assessment will be even quicker and more enriching if the primary data is reliable and accurate.

In terms of head office and/or capital and/or region:

• Collect existing information about the region (background/situation/demographics/agriculture/breeding/socio-economic data/health)

Useful web addresses:

- FAO (Food and Agriculture Organisation): http://www.fao.org. See GIEWS – Global Information on Early Warning System: http://www.fao.org/giews
- WFP (World Food Programme): http://www.wfp.org
- WHO (World Health Organisation): http://www.who.org. See in particular the Health Action in Crisis division: http://www.who.int/hac
- FEWS (Famine Early Warning Systems): http://www.fews.net
- ICRC (International Committee of the Red Cross): http://www.icrc.org

Ask people who have worked in the country and region in question: read activity reports about the situation
The information sought essentially covers factors such as: **monetary and food availabilities** (income), **food accessibility** and **general information** which may affect the first 2 factors.

The *Preliminary information search* table featured in *Appendix 2.1* outlines all information to be sought according to their level of aggregation. The source where the information can generally be found is given. In several countries, bodies exist which may centralise information: planning and statistics office, UNDP[9], FAO, early warning system, price information system, NGO and charitable missions working in the region. It is obviously

[9] United Nations Development Programme

worthwhile meeting with this type of body who can provide a number of necessary information in a short space of time.
However, it is essential, as far as possible, to cross-check information and to put them into perspective according to the body providing them.

The final columns in the table outline the use to be made of the information collected.

• Organise the information
• Analyse and critically evaluate the information

• Prepare for the rapid field assessment:
  - Draw up the visit route taking into account the security conditions and give priority to visiting those areas which appear most at risk.
  - Organise assessment logistics

B/ Quick field assessment

Key information to collect should include:
- Population figures, population movements and vulnerable groups
- Causes of the crisis and geopolitical context
- Mortality, health indicators, nutritional status
- Access to water and sanitation
- Food security
- Operational information

1. Quick nutrition assessment

Medical staff will collect information about mortality and health as well as assessing the nutritional status of the population. This activity will consist of checking for the presence of bilateral swelling and measuring the mid-upper arm circumference of children from **65 to 110 cm** (that is to say from 6 months to 5 years of age[10]) with the objective of:
- assessing the seriousness of the situation
- giving a quick-and-dirty analysis of the prevalence rates of acute malnutrition, since the anthropometric survey remains the most reliable way to quantify malnutrition in a population *(see point C/)*
- detecting children with high mortality risk.

For more details, ask the team's doctor or nurse or consult the MSF Nutrition guide or Nut memo.

2. Quick food assessment

Although the method is called the rapid food assessment, a number of principles must be adhered to in order to obtain an image close to reality and reduce survey bias (cultural, seasonal, translation-based, and so on).

Two fundamental principles specific to any survey have already been outlined:

[10] In fact, an analysis of children is the best way to look at the nutritional status of the population they come from, since they are undergoing a major growth period, and a change in food resources will be reflected in a more noticeable way in them.

- **cross-check information**
- **keep information in perspective according to the information provider** a farm manager will not have the same perception of events as a politician.

How?

➔ observe
➔ interview key people
➔ visit markets
➔ interview families

Chambers lists appropriate attitudes and behaviours for assessors to adopt:
- respect of rural populations[11]
- interest in what they know, say and show
- patience, not to be in a hurry or interrupt the interviewee.
- humility.

You should know how to listen to, learn from and also show a critical mind and good sense as to what is said and observed. Intuition is also a significant factor in analysis of the situation[12].

The interview practice of using short questions and answers is not generally a custom in Africa. There is thus a risk of misunderstanding of questions (in addition to translation issues) and simplification of phenomena which are sometimes complex to explain.

Open discussions are often more instructive than structured questionnaires. Assessors may thus use suggested questions as a basis *(see below)* for their work but information will be even more enriching if the discussion is widened to a less formal scope.
An individual interview will be limited to a maximum of one hour or else run the risk of tiring and boring the interviewee.

Teams of assessors must rely if possible on a woman for better contact in interviews and a person who is originally from the region who can translate, guide and introduce the team and decipher some information thanks to their better perception of the environment.

In Appendix 2.2, an assessor's handbook will help you in your task. This handbook comprises:
- *information to collect + comments*
- *a blank sheet of information to collect + agricultural calendar*

You will also find an *example report (Appendix 2.3).*

The aspects to be taken into account in a region's food factors are multiple. A systematic approach to studying a context is difficult. Curiosity and an analytical mind are decisive tools for assessors, especially in an MSF context where the few days available to draft the study will never be enough.

[11] Respect of local traditions, for instance: contact the village chief of his representatives first of all as soon as you arrive, then go and meet individual families
[12] You must always take care when carrying out food security surveys, especially when the populations are hoping for a distribution of food aid.

Results and interpretation
Disruption of a normal situation:
Access to food for non-displaced populations must always be compared to a normal year during which the population has not experienced a food crisis. A situation which may appear 'poor' to a foreigner may be perceived as normal by the population, and vice versa.

The first part of the *assessor's handbook* in *Appendix 2.2* will help you to interpret the information received. Read it before travelling in the field!

Timing and Season:
It is crucial to take into account the time of year and season during which information is collected. The results of an assessment can lead to different conclusions, depending on whether it is carried out at the beginning or the end of the lean season.

C/ Nutritional (or anthropometric) survey
The anthropometric survey remains the most reliable method to quantify overall acute malnutrition in the population and can be considered in the event that the rapid survey does not yield enough information about the nutrition situation, or gives contradictory results (compared to direct observations, results of the quick nutrition assessment or preliminary anthropometric surveys). It may sometimes be necessary in order to convince funding bodies to intervene.

Its objectives are to:
- Measure the prevalence of severe, moderate and overall acute malnutrition, in children under 5 years of age.
- Define the objectives of nutrition intervention, its strategy and the resources to implement (estimate of the number of children expected in nutrition centres)
- Record the seriousness of a situation

In almost all cases, a retrospective mortality survey is carried out, along with measles vaccine cover survey.

This survey responds to an accurate sampling methodology in order to have reliable results which represent the population[13].
The parameters collected are age, gender, weight, height, the presence or absence of nutrition-based swelling, along with the mid-upper arm circumference.
However, it requires a significant investment in terms of time and staff trained in this type of survey.

2. CHOOSING A NUTRITION STRATEGY

There is no universal, standard approach to nutrition problems. The response strategies vary according to the context of the food crisis, the way it evolves and practical restrictions. Each situation requires a consistent strategy, combining several types of nutrition intervention. These various nutrition interventions can be implemented simultaneously or consecutively.
Responses must be regularly adapted to suit changes in food or nutrition situation.

[13] The methodology is set out in Chapter 2 of the MSF Nutrition Guide.

Nutrition strategy, the combination of programmes and specific target groups are thus determined by:

- The food insecurity status, based on the results of the rapid food and nutrition assessment
- The sociopolitical environment (war, population displacement, camps, open situation, natural catastrophes, activities or other organisations, sanitation, etc.)
- The size of the population in need (crisis scale)
- Access of the population to the programme
- Anticipation of developments in the crisis (trend)
- Feasibility of implementation (human resources, **logistics**, etc.)
- The potential side effects of various interventions ('do not harm'; e.g. Do not upset the local adjustment mechanisms).

Below you will find the table *Some items used in defining strategy* which will help you in your task but which must not be followed to the letter!

Nutrition interventions are **generally designed** to:

- reduce mortality and morbidity due to acute malnutrition **(feeding programmes)**
- prevent deterioration in the nutritional status of a population and ensure that food requirements are covered according to the food security level of the populations at risk **(food programmes)**.

They will be outlined in chapters 4 and 5 and can be summarised as follows:

feeding programmes:

- therapeutic feeding programme (TFP)
- supplementary feeding programme (SFP)
- nutrition support for medical programmes

Food programmes:

- targeted food distribution (TFD)
- general food distribution (GFD)

Programme name	**Beneficiaries**	**Notes**
TFP	Severely malnourished patients	Medicalised +++
SFP	Moderately malnourished patients	Medicalised ++
TFD	Population at risk of malnutrition (children under 5, pregnant women and those breastfeeding, etc.)	Medicalised +
GFD	General population	Non-medicalised

Please note: this holds only for <u>feeding</u> interventions since, if there is a real nutritional problem, the other underlying causes will also have to be treated simultaneously *(see causal diagram of malnutrition, Unicef)*, that is to say, ensure principally that the target population has access to:

- high-quality health care
- sufficient quantities of drinking water (20 litres pppd)
- satisfactory sanitation

Some items used in defining strategy *(MSF Nut Guideline draft 2007)*

Situation	Indicators	Specific objectives	Nutrition interventions	Comments and recommendations
Famine	- Overall acute malnutrition rate > 40-50% - CMR > 5 / 10,000 per day - Malnutrition among adults - Food availability and accessibility non-existent or severely reduced - Distress migration	- Increase access to food to prevent future deterioration - Reduce mortality and morbidity in malnourished people	- **G**eneral **F**ood **D**istribution (**GFD**) - **B**lanket **F**ood **D**istribution (**TFD**) if necessary - TFP for children and adults - SFP for children and women breastfeeding	- Ensure adequate general distribution (monitoring and lobbying) - Implement TFD if general distribution is inadequate - If necessary, start with a day therapeutic centre and organise a 24-hours TFC whenever possible - Implement an SFP - Monitor epidemics and transmissible diseases via access to adequate healthcare and WHS (Water, Hygiene and Sanitation) services
Serious food crisis	- Overall acute malnutrition rate > 20% - Severe acute malnutrition > 5% - CMR > 2 / 10,000 per day - General reduction in food availability and accessibility	- Prevent a famine - Encourage decentralised distribution (as a result, prevent distress migration) - Reduce mortality and morbidity in malnourished people		
Food crisis	- Overall acute malnutrition rate > 10-15% - Severe acute malnutrition >3-4% - CMR increased > 1/10,000 per day - Reduced food accessibility for vulnerable households	- Increase access to food to prevent future deterioration for vulnerable groups - Reduce mortality and morbidity in malnourished people	- GFD + food security measures - TFD if necessary - TFP - SFP	- If the situation worsens, give priority to general distribution (+ TFD if inadequate) - If the situation improves, give priority to TFD via identified vulnerable groups - Foresee simple interventions (dry ration SFP) initially
Food insecurity	- Severe acute malnutrition < 3-4% - CMR < 1/10,000 per day - Slightly reduced food accessibility and availability	- Reduce mortality and morbidity in malnourished people - Prevent deterioration	- TFP (often integrated in healthcare structures) - Food security measures	- Implement food security measures: veterinary services, seed and tool distribution, etc. - Implement nutrition testing in healthcare structures; organise a referral system - TFP: support the hospital (pediatrics department) to improve treatment of severe malnutrition - Support medical structures; open an SFP if necessary

CHAPTER 3. FOOD AND NUTRITION MONITORING

1. OBJECTIVES AND PRINCIPLES

The main objective of this monitoring is to detect trends in malnutrition, food security and health, with the aim of reacting rapidly and appropriately when this is necessary.
It is also a way of assessing the programmes implemented throughout their lifespan, which is essential in following up their progress and identifying the sources of problems, both immediate and potential.

As is the case with rapid food and nutrition assessments, medical staff will monitor health-based indicators (mortality, morbidity, absence/presence of epidemic, vaccine coverage) and nutrition-based indicators (mid-upper arm circumference trend in healthcare structures and sentinel sites, prevalence of acute malnutrition, number of admissions to feeding programmes); the logistician will enhance the overview of the situation by following food security indicators.
These indicators must be collected each week or each month according to the emergency nature of the nutrition situation; this data collection exercise must be systematic and does not necessarily represent an entire population. Sentinel sites[14] may be used to collect routine data.

2. INDICATORS AND METHODS

INDICATORS	METHODS / SOURCES
Food security	
Monitoring of general food distribution · Distribution quality · Amount of food distributed: Kcal pppd · Distribution coverage	· GFD survey [15]
Food availability · Harvests (good / bad) · Market (full / empty) · Weekly price trend of some basic foodstuffs (including exchange rate) · Changes in means of subsistence · Number of meals per day	· Routine observation · Key person · Market report · Discussion with target group
Sale of goods · Number of people selling inessential goods · Number of people selling essential goods	· Routine observation · Key person

[14] Sentinel site = site considered as representative of the population in which information is regularly collected (medical, nutritional, food security, etc.) to monitor trends.
[15] See Chapter 4 of the MSF Nut Guideline

Continue to regularly consult the websites outlined in Chapter 1 *(point 1.2. A/)*.

In addition to these indicators to be collected systematically, it is very important to perform intermittent data collection: these intermittent surveys such as rapid food and nutrition assessments or nutrition surveys serve to confirm the trends identified by systematic data, and measure the scope of the change. Among them, remember to request food monitoring reports or food security surveys carried out by other NGOs or appropriate bodies in this domain such as Action Contre la Faim (Action Against Hunger), the ICRC or the FAO or WFP

CHAPTER 4. FEEDING PROGRAMMES AND THEIR LOGISTICAL IMPLICATIONS

1. OBJECTIVE AND PRINCIPLES

1.1. Objective

The objective of feeding programmes is to reduce the mortality and morbidity of malnourished patients.

1.2. Principles

Feeding programmes are reserved for malnourished individuals who require specialised food and individual medical care.
Severely malnourished patients are cared for via a Therapeutic Feeding Programme (TFP) while moderately malnourished are cared for via a Supplementary Feeding Programme (SFP).
In the vast majority of cases, beneficiaries of these programmes are children under 5 since their vulnerability and high risk of mortality make them priority targets for specific feeding programmes. However, in the event of a severe food crisis or famine, the admission of malnourished adolescents and adults may become necessary.

a) Testing and selection:

The quickest way to identify all children to be admitted to these programmes is to perform tests by measuring the mid-upper arm circumference (MUAC). This is done respecting the following rules:

1. MUAC testing of all children between 65 and 110 cm (6 months and 5 years of age)
2. Selection of all children with MUAC < 135 mm (red, orange or yellow) and/or swelling, to be weighed and measured; provide an exit for those not admitted (children with MUAC ≥ 135 mm (green) with no swelling)

Mid-upper arm circumference testing

Children with nutrition-based swelling

3. Selection of children with a W/H index < -3ET or z-score[16] and/or swelling, or with MUAC < 110 mm (red)[17], for the Therapeutic Feeding Programme (TFP).
4. Selection of children with a W/H index -3 < -2ET or z-score for the Supplementary Feeding Programme (SFP)
5. Provide an exit for those not admitted: children with W/H ≥ -2ET or z-score

Weight measurement

Height measurement

These testing points must be located in front of each feeding structure; however, when these are grouped together on the same site, one testing point is sufficient.

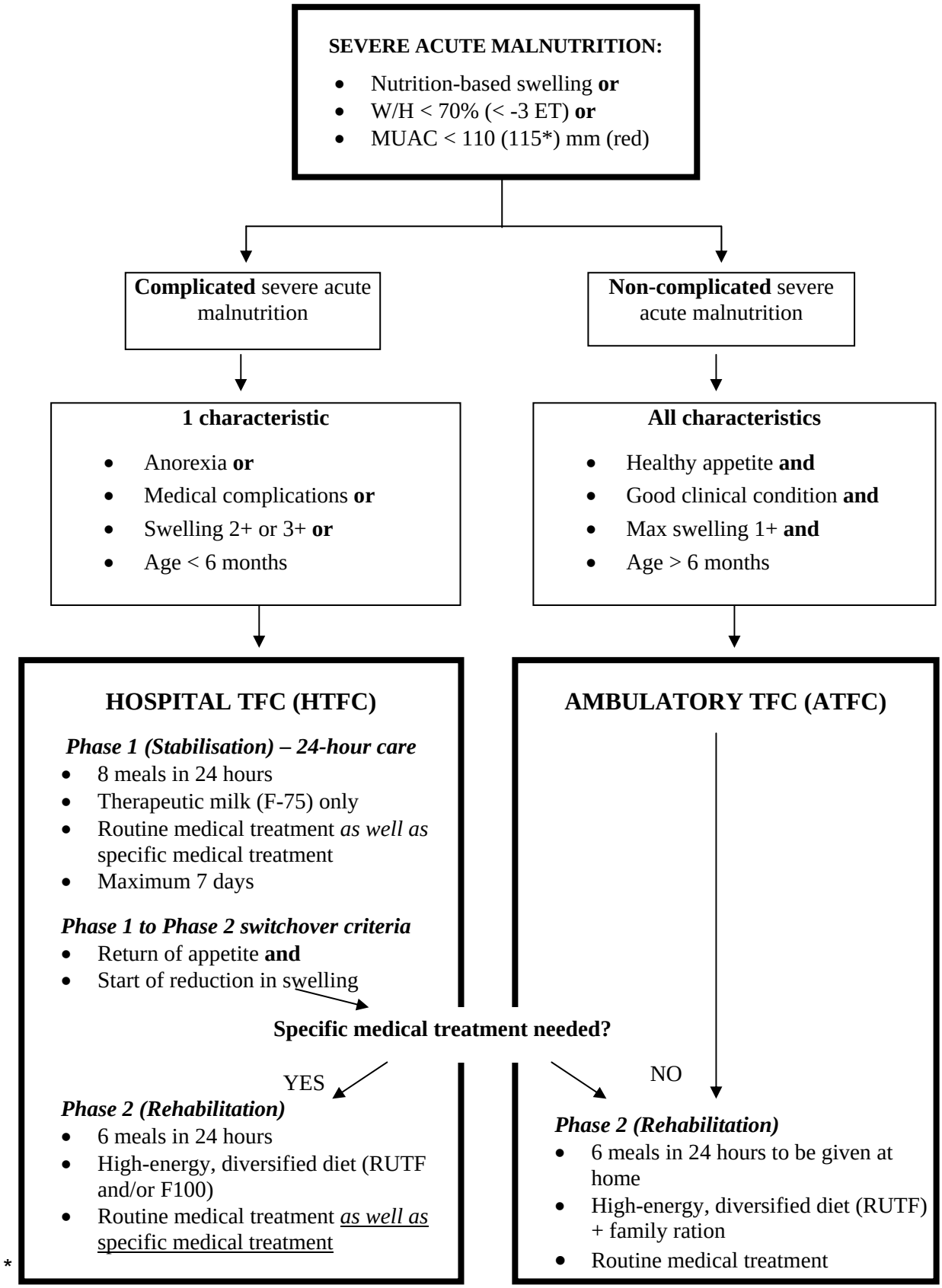
b) Care for severe acute malnutrition

- ***Evolution of care***

Up until the start of the new millennium, MSF cared for all severely malnourished patients in hospital, until a full medical and nutritional recovery; this approach had numerous drawbacks, such as obliging mothers to go home for over a month or presenting a risk of nosocomial infection[18], along with very limited cover of our programmes since this was restricted solely to geographical access. However, given that the only effective therapeutic feeding treatment was in the form of milk powder prepared using drinking water, and provided under supervision, at that time, it was impossible to treat these children at home, in the countries where we worked.
Advances in research have resulted in the development of ready-to-use therapeutic food (RUTF[19]) meaning not only that care provision is simpler for the treatment of "non-complicated" cases of severe acute malnutrition in outpatients, but also improving the cover provided by our therapeutic feeding programmes whilst maintaining a high standard of care.

[16] For more explanations about how the W/H index is expressed, see the MSF Nutrition Guide, Chapter 2.
[17] A new recommendation by the WHO has changed the threshold to 115 mm: in a transitional period, the 2 thresholds may co-exist in the field.
[18] Which is contracted in hospital
[19] Ready to Use Therapeutic Food

- ***Current care provision***



*

The average treatment length is around 4 to 6 weeks.

c) Moderate acute malnutrition

- ***Evolution of care***

Currently, care for children suffering from moderate malnutrition in emergency situations is highlighting many questions; in fact, as standard and as is still the case today in some of our supplementary feeding programmes, these children receive a mixture of flour enriched with micro-nutrients, oil and sugar, known as "Premix".

In 2006, MSFF used RUTF foods to treat moderately malnourished patients in Maradi, Niger. This approach was followed by other departments, principally in emergency situations; in addition to the huge advantage of not having to manage premix in the field, the superior nature of RUTF compared to premix in terms of weight gain and average hospital stay times for our beneficiaries is in the process of being proved scientifically. However, the cost of these RUTF foods remains a major obstacle for beneficiaries, who greatly outnumber the severely malnourished.

As André Briend rightly states[20]: *"Developing the resources to act further upstream, and begin care for the moderately malnourished are the next stages which researchers, field practitioners and governments must address." "The development of research and real political determination will be required to overcome the numerous difficulties, whether scientific, technical or financial, and rise to the challenges."*[21]

- ***Current care provision***

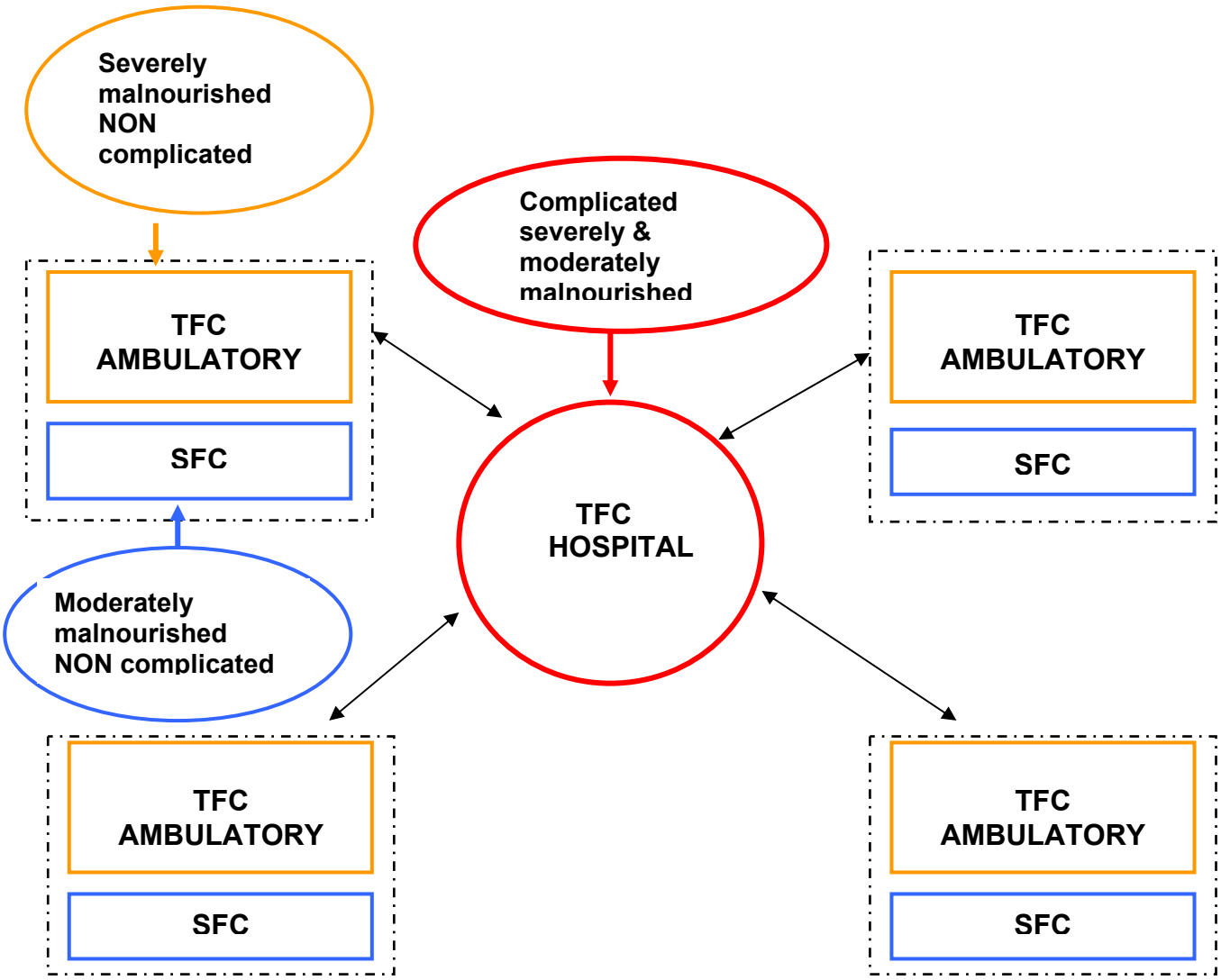
Moderately malnourished patients with medical complications are hospitalised in the pediatrics section or in a Hospital TFC, while moderately malnourished patients without medical complications are cared for as outpatients, via a Supplementary Feeding Centre, or SFC.

The average treatment time in an SFC is 2 months.

[20] Nutrition specialist, research director at the Research and Development Institute (IRD), specialist in child malnutrition in developing countries and the creator of Plumpy'nut.

[21] *"Niger 2005 Such a natural catastrophe"*, under the direction of X. Crombé and J-H Jézéquel, Editions KARTHALA, 2007. Article by A. Briend available on the CD Log.

MSF care for acute malnutrition and link between feeding structures



ATFC and SFC are generally on the same site

2. THERAPEUTIC FEEDING PROGRAMME (TFP)

2.1. The Hospital Therapeutic Feeding Centre (HTFC)[22]

2.1.1. Operating mode

- Open 24 hours a day, 7 days a week
- For severely and/or moderately malnourished patients with medical complications who need to be hospitalised
- 8 to 6 meals a day + meal for accompanying person
- Optimum 150 beneficiaries per centre
- 40 staff per centre
- Skilled staff. Night service
- Intensive care and monitoring

2.1.2. Building and circuit

- Beneficiaries are hospitalised in the pediatrics department of a hospital (feeding ward) if they are few in number.
- Beyond this, a specific structure (HTFC) is necessary.

For all the more technical aspects, please refer to the *Temporary and semi-permanent structures* guide published by MSF,, 2011 edition

In an HTFC, the total surface area must correspond to 25-30 m² per patient, including circulation and equipment *see plan in Appendix 4.1.)*

For instance: Space required for an HTFC for 100 patients (check whether or not this is consistent with the latest Shelter guide version)

Infrastructure	Space in m²
Testing + registration area	30
Consultation + pharmacy	30
Occupied shelters	4 per child[23]
Insulation	30
Washing and drying room	35
Kitchen	60 - 80
Food stock	30
Wood stock	30
Logistics building	30
Total surface area	2700

[22] In Sahel countries, and mainly in Niger, the HTFC is called a CRENI (Intensive Nutrition Education and Recovery Centre).
[23] Including accompanying person

Fencing

- Always **provide for the fencing-off of a larger area than necessary**, in case of any extensions.
- Always **fence off first** to reserve the space and avoid the settlement of new refugees, theft, etc.
- On the site itself, build clear separations between logistical rooms, technical rooms and hospitalisation rooms.
- At the entrance, mark out waiting lines with nets for crowd management and an effective working environment for staff.

Entry/Exit door

- Only install an entry/exit door for beneficiaries.
- The door must be watched over and be equipped with a small shelter to protect the watchman against sun or rain!
- Provide separate access to the technical area for vehicles.

Drainage

- Build satisfactory drainage for buildings and washrooms to prevent stagnant water collecting near to or on the site.
- Separate drainage for rainwater from that for washrooms.

Testing and registration area

The testing area will be used to detect new cases of malnutrition *(see above)*. If the child falls under one of the HTFC criteria, he/she will be registered, examined and receive appropriate care and food on-site; otherwise, he/she will be referred to the appropriate structure (ATFC, SFC, Healthcare structure or home).

Testing + registration area, Burundi 2001

Shelters

It is very important for care quality to separate phase 1 buildings from phase 2 buildings. Two assembled tents of 41 m² or a modular building of 84 m² can hold 20 to 25 children in phase 1 and up to 30 children in phase 2. These tents or buildings will be used as shelters, dormitories and also refectories for patients and those accompanying them.

- They must be laid out in a convivial way, to leave room for social interactions and a play area for children.
- These shelters must be well protected from cold, rain, dust, wind and heat.
- Provide a night light.
- Floors and walls must be easy to clean (e.g. made of plastic tarpaulin).

- If the building is semi-permanent, walls must be at least 1 metre high to protect against dust and heavy rainfall.
- Equip each bed with a mosquito net and sufficient blankets

Semi-permanent building, HTFC, MSF Sierra Leone

→ Intensive care unit

A specific location must be reserved for the intensive care centre within the structures reserved for phase 1, where between 15-20 children can receive care (the most complicated cases) 24 hours a day over the first few days of their treatment.

- Organise this unit specially in order to protect it against cold[24], rain, dust, wind and heat.
- It must be spacious and in a calm environment.
- 1 shelter for 15-20 children
- Equip each bed with a mosquito net and sufficient blankets
- Provide a night light.

→ Infant unit

Isolate these patients in a separate unit according to the same conditions as the intensive care unit. For severely malnourished children, and in particular the youngest among them (premature babies, low birth weight, etc.), **the building of a heated room** is advised, that is to say a particularly well insulated room to protect from the cold Unfortunately, tents are particularly unsuitable to protect from the cold. Because of this, a semi-permanent structure must be built as soon as possible. In the meantime, you can, in order of priority:

- *Cover children with a cap, clothes, blankets;*
- *Provide mattresses;*
- *Protect from the wind:*
    - *Avoid positioning the entrance to the tent facing the prevailing wind;*
    - *Position the TFC tent away from other tents;*

[24] Note: even in hot countries, nights can be very cold and the temperature difference between daytime and nighttime can be very significant! One of the most frequent causes of mortality in malnourished children is hypothermia.

- *Insulate the interior of the tent with natural fibre matting;*
- *Position screens in front of the entrance;*

- *Insulate the ground (floor matting) and insulate the floor (bed or bench)*
- *Insulate the roof (for instance by stretching a second roof, or matting, over the roof - remember to leave a space between both roofs.*

When building your semi-permanent structure, in order to insulate it as effectively as possible, do not hesitate to ask for advice from your LogCo and the Building Expert from the Logistics Department.

→ Unit for adolescents and adults
Separate these patients from children.

Play area
Build a play area for children who stay all day (HTFC or Day Care), adapting to local game customs.
Consult the *Guideline on home-made toys* in the hospitalisation nutrition kit (KMEDKNUTI1-).

Burundi 2001, play area

Isolation area
Ensure that there is enough space to install an isolation area, in the event of measles or any other epidemic, which is fenced-off and independent, with flooring which is very easy to wash (concrete or plastic).

Kitchen
Every healthcare structure in which meals are distributed must have its own kitchen; restrict access for hygiene and security reasons.

For security reasons, it is immediately built on a semi-permanent basis; 80 m² building.

Provide sufficient drinking water via a system of running water or buckets/tanks.

For hygiene reasons, the floor should be concreted, able to be washed and swept easily along with shutting cupboards or shelving which protect from dust.

In light of the amount of smoke produced, and the heat given off by furnaces, in order to achieve maximum air circulation, it is advisable not to fully close off the building with walls. Full-size walls with a lattice construction can be built, or else traditional walls built to half-

height. Roofing should also be used which allows smoke to escape *(see figures 13 and 14)*.

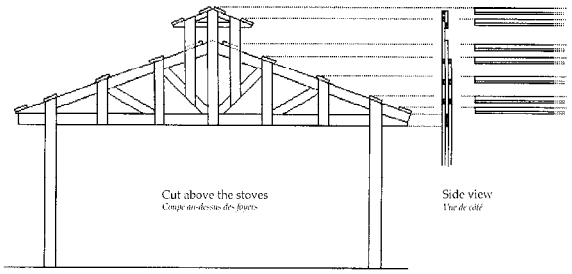


Fig. 13
Kitchen truss. The opening in the ridgecap is between 2 and 4 m long above the stoves.
Charpente pour cuisine. L'ouverture dans la faîtière est de 2 à 4 m de long au-dessus des foyers.

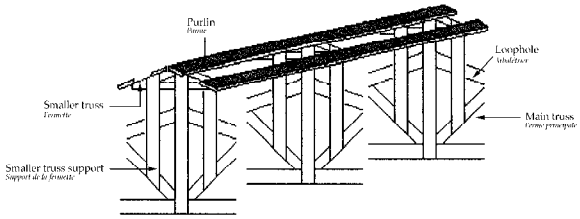


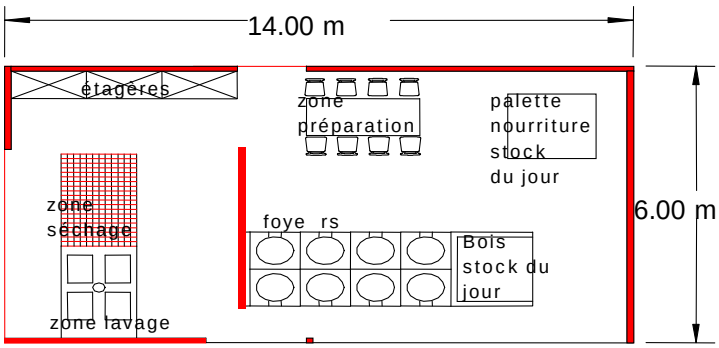
Fig. 14
Detail of the smoke evacuation for a kitchen
The smaller truss is fixed on the main truss and his length is a multiple of 2 m.
Materials: 13.5 m of plank (20 x 3 cm) for the support of the smaller framework, 6 m of plank (10 x 3 cm) for the smaller truss and 4 m purlin if 4 m long.
Détail de l'évacuation des fumées d'une cuisine.
La fermette additionnelle est fixée sur la charpente principale et sa longueur sera un multiple de 2 m.
Matériaux : 13,5 m de planche (20 x 3 cm) pour le support de la fermette,
6 m de planche (10 x 3 cm) pour la fermette et 4 pannes de 4 m de long.

Provide fire extinguishers and fire blankets.

Burundi 2001, roofing allowing smoke to escape.

Provide work surfaces, washing areas (sink with 2 basins), drying areas (draining boards) and storage spaces. The dish-washing area is around 20 m².

The non-concreted dish-drying area is around 3 m² for 100 items. It may be a mesh-covered platform or one latticed with bamboo sticks. Dishes can drain onto the ground which has previously been covered with gravel to facilitation water infiltration.



Cuisine type pour CNT / *typical kitchen for TFC*

15 m² area per furnace should be scheduled to allow cooks to work in satisfactory conditions. The food preparation area presented above is made up of 4 furnaces, covering

60 m² (one furnace should cover 25-50 children)[25]

.

In order to save firewood, we use improved hearth furnaces. We generally use 2 furnace models, one for 50-litre pots and the other for 100-litre pots.

Burundi 2001, cooking furnaces

Burundi 2001, improved furnaces

Washing area

Burundi 2001, preparation area

A kitchen for mothers may be built in the patient area; in this case, a covered surface must be made available to them. *(If such an area is not made available, people will cook all over the place, thus creating fire risks and waste problems).*

Food stock

The food stock and its management will be the subject of Chapter 9.

Wood stock

Classic or modular building of 36 m².

[25] According to the size of the furnace.

The drier the firewood, the greater its calorie content and as a result, the less is used. Freshly-cut wood containing 50% humidity has a calorie content of around 1,950 kcal per kilo. Dry wood containing 17% humidity has a calorie content of 3,700 kcal per kilo.
A very well-aired drying area must be planned, large enough to protect recently-cut timber from the rain.
The thicker the wood, the longer it will take for its inner layers to turn to carbon and produce heat.
It is advisable to use wood of 3 cm to 5 cm in diameter, and of 25 to 30 cm in length. If the wood is too large, it can be cut down many times until it reaches the desired size. It should be carefully made into piles to allow drying.

The amount of wood which has to be burnt to bring a litre of water to the boil may vary between 50 and 500 g. It depends on the wood quality and the type of furnace used. To recap, in a refugees camp, wood consumption is around 1 kg per refugee per day.
For an HTFC, wood consumption is around 1.2 kg per child per day (including those accompanying).

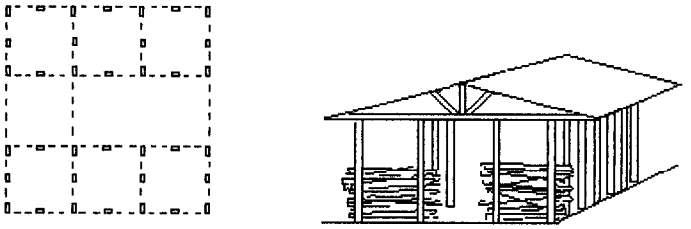


Fig. 3

Wood store. The intermediate pole serves to stabilise the wood.
The central path can be used as a working area.
Abris pour bois. Les piliers intermédiaires servent à garder le bois en tas.
L'allée centrale peut servir de zone de travail.

Burundi 2001, the wood stock

2.1.3. Water, hygiene and sanitation

2.1.3.1. Water

The objective is to provide accessible water of an acceptable quality in sufficient quantities.

Quantity

	Minimum quantity litres/day/patient	Optimum quantity litres/day/patient
HTFC	30	50

Quality

The water supplied must be of an acceptable quality, that is to say:

- **Free from pathogens**: the concentration of residual free chlorine at water supply points must be:
  - 0.2-0.5mg/l (pH < 8) after contact of at least 30 minutes
  - 0.4-1.0mg/l (pH > 8) after contact of at least 60 minutes

of a maximum of 10 E.Coli/100 ml at water supply points if chlorination is really not possible (→water filters are highly recommended!)

- **With low turbidity**: < 5NTU (<20NTU allowed in extreme emergencies)

- **With a low concentration of toxins.**

- **Acceptable for consumers**: no colour, taste or colour, and unsalted.

Treatment is thus often necessary to make it drinkable. Ideally, the water should be treated at the source (e.g. chlorination in the tank) and be subject to extra purification prior to its use in the HTFC: water to make milk, Resomal[26], SRO or porridge should be boiled or filtered just before use.

Water quality tests must be carried out at the start of a programme, and then at regular intervals, as well as when problems are suspected.

One person should be in charge of water treatment and monitoring[27].

Accessibility

In an HTFC, set up storage systems (water tanks) and independent water distribution systems. It should be made clear to staff that these are destined for centre beneficiaries and not the whole population.

Set up water **supply points** in:
- Kitchens: position the tap beside the washing area, allowing hands and dishes to be washed, meals to be prepared, etc.
- Buildings: set up taps outside buildings, in easily accessible locations. These taps will mainly be used by beneficiaries to wash their hands.
- Washing area: set up taps in washing areas to allow mothers to wash their children and clothes.

Set up **water containers** for drinking and handwashing:
- Add taps at the exit to latrines.
- These containers must be clearly marked, so that it is easy to tell the difference between drinking water and handwashing water.

Water container locations

Locations	HTFC
Medical care points	x
Occupied shelters	x
Kitchen	x
Washing area	x
Latrines	x
Waste area	x

[26] Oral rehydration solution for the severely malnourished
[27] If aluminium sulphate is used to clarify the water, pay particular attention to the concentration of residual aluminium. A high concentration of aluminium sulphate reduces food absorption.

2.1.3.2. Hygiene

Cleaning the centre

- Encourage people accompanying patients to take part in cleaning activities (e.g. distribution of chamber pots, washing of dishes and cleaning of buildings, etc.)
- Make people responsible for household task management and the supply of detergents, soap, chlorine etc.
- Clean floors each day with soap and water. Disinfect kitchens, buildings and latrines regularly with 0.2% chlorinated solution.

Patient hygiene

Build showers for adults (1 per 25 patients), for children and for staff. Bear their intimacy in mind!

Note that often, mothers prefer to wash their children outside this type of structure, which are too narrow for two people. The washing area or larger showers may a solution. It is also possible to build a sort of stone base of around 50 cm in height with a central drain. Children can stand on the base to be washed by adults[28].

- they will be drained, so as to avoid increasing the number of vectors for disease.
- floors are concreted
- male and female cabins are separated and clearly identifiable
- in chronic phase, degreaser vats can be placed before cesspools to ensure they are not clogged up (*see model in figures 15, 16 and 17)*



1, 2 and 3: Guinea 1999

[28] In some cold climates, provide hot water. Sometimes, cultural customs prefer the "sauna" or "steam bath" to the shower.

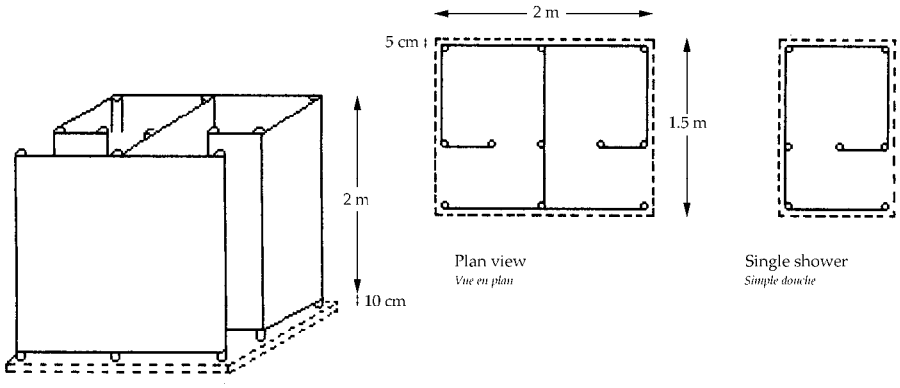


Fig. 15

Double shower. Concrete slab, wooden poles structure and plastic sheeting wall.
Materials: 11 poles of 2.5 m, 17 m2 of plastic sheeting, 0.35 m3 of concrete,
0.3 m3 of gravel for the soling and an output siphon.

Double douche. Socle en béton, structure en piquet et mur en plastic sheeting.
Matériaux : 11 piquets de 2,5 m, 17 m2 de plastic sheeting, 0,35 m3 de béton,
0,3 m3 de gravier pour le hérisson et un siphon de sortie.

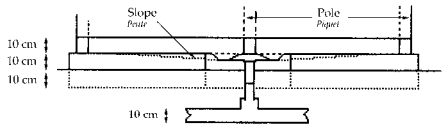


Fig. 16

Back cut of a double shower.
The waste water is poured out first in a grease trap and then to a soakaway pit.

Coupe arrière d'une douche double.
La révolte des eaux usées se déverse d'abord dans un bac dégraisseur et ensuite dans un puits perdu.

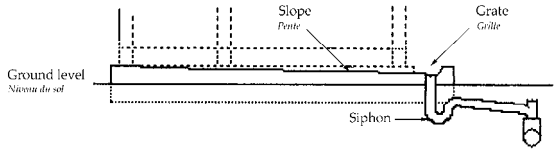


Fig. 17

Transversal cut of a shower base

Coupe transversale d'un socle de douche

Distributing soap to each patient (or accompanying person) upon admission and each week.

Clothes drying and washing area

To be built near the water supply point; it includes a cesspool to recover wastewater Its form will depend on the customs of the population, but will always be concreted.
Beside this area **a clothes-drying area** should be provided, with poles and a few metres of rope (or wooden clothes horses if necessary), as this avoids washing being spread out to dry everywhere on the ground *(see figure 18).*

Burundi 2001

Chad 1999

Angola 2001

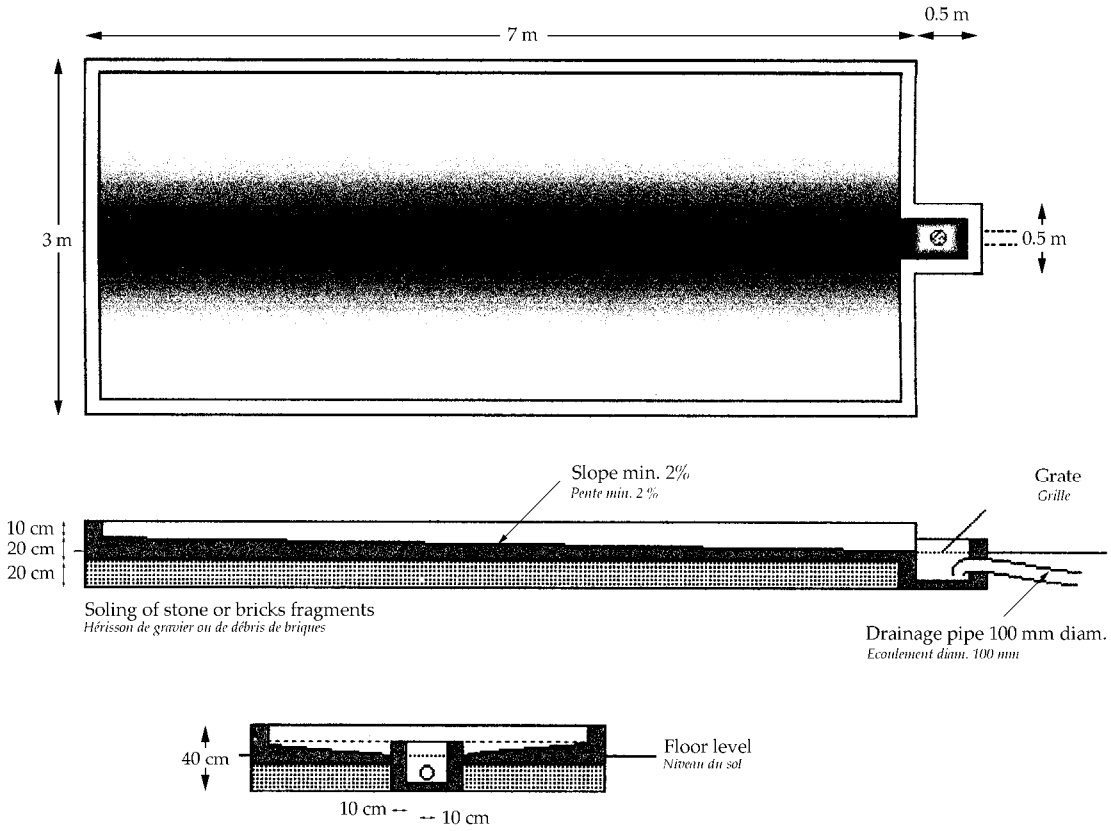


Fig. 18

Washing area. The minimum slope is 2%.
There is a clarification reservoir at the outlet with a siphon.
Materials: 4.5 m3 of stones/bricks, 4.2 m3 of concrete, 5 m2 of wooden formwork and a grate of 30 x 40 cm.

Aire de lavage. La pente minimum est de 2 %.
Il y a un bac de décantation à la sortie avec un siphon.
Matériaux : 4,5 m3 de graviers/briques, 4,2 m3 de béton, 5 m2 de planche de coffrage et une grille de 30 x 40 cm.

Handwashing

- Staff's hands are the main way infections are transmitted! Good hygiene is essential. Handwashing points must be installed in all buildings and at all locations where medical care is administered (consultations, bandaging room, etc.)
- Mothers and children must be able to wash their hands before meals.

Hygiene promotion

- In large centres, it is preferable to have a team of hygiene promoters, who will deliver hygiene messages and explain the rules for using water supply points, latrines, bins etc. to those accompanying patients, and ensure that these rules are respected.
- **The entire staff must be involved in promoting hygiene** and in educating beneficiaries.
- These hygiene promoters can be involved in health education sessions for the population.
- In small centres, this role may be held by nutritional assistants and cleaners.

2.1.3.3. Sanitation

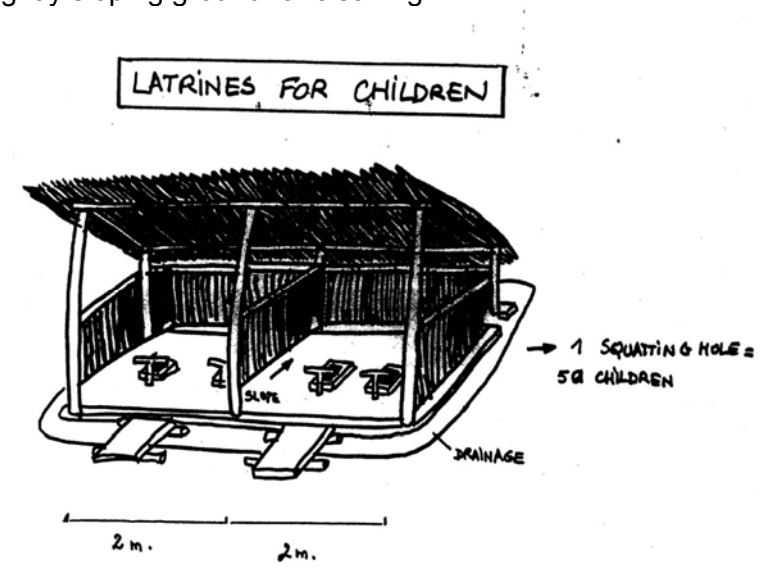
The objective of sanitation is to ensure that every sort of waste is non-infectious and/or inaccessible.

Latrines must be:

- **Sufficient in number:** 1 latrine per 20 people.
  - Provide chamber pots for children under 2 years old and pans or urinals for teenagers and adults who are unable to walk.
  - Additional latrines must also be built for staff and for the isolation room.

- **Technically appropriate** (depends on local restrictions)

- **Appropriate for users:**
  - Culturally and socially: before building latrines or other excreta disposal systems, take the population's cultural customs into consideration.
  - Separate for staff and patients
  - Preferably separated between men and women
  - A few latrines with seats and bars for reduced mobility patients
  - Specially designed latrines for children, that is to say:
    - smaller squat hole
    - height handrail for squatting children
    - open area for mother and child
    - slightly sloping ground for cleaning



Burundi 2001

Burundi 2001

- **Easily accessible:** distance from latrines 5 m < buildings < 30 m

- **Located in safe places:** (in particular to avoid the risk of sexual violence); if possible, provide night lighting

- **Handwashing materials provided:** soap and water at the exit

- **Far from water supply points** (minimum 30 metres)

- **Maintenance:** a cleaner should be in charge of latrine maintenance.

Waste disposal system

The objective is to ensure healthy no-risk selection, storing, (treatment) and final elimination of all types of waste.

A person should be in charge of waste disposal.

- **General**
  - A waste collection system must be installed in every nutrition centre, a maximum of 20 metres away from users and a minimum of 50 metres away from water supply points, as well as 30 metres away from buildings.
  - Provide 3 bins of each type per location (for rotation and replacements)
  - Install a series of bins for medical waste per 20 beds (sharps/piercing waste, softs (organic waste)).

- **Collection and elimination of sharps/piercing material.**
  - Needles, razors, scalpels, vials etc. must be collected separately, in containers that prevent recovery. Once the container is full, it must be hermetically sealed. 5 L containers (SINSCONT5C-) are recommended at the beginning of an emergency and must be destroyed by incineration.
  - In non-emergency situations, MSF recommends that sharp/piercing waste is collected in a hermetic container (SINSCONT1R-). Eliminate in a sharps pits.

- **Collection and elimination of 'softs'**
  - Provide bins of 20 to 60 litres in appropriate locations.
  - Collect this waste daily and wash and disinfect bins
  - During the first phase of the programme, a waste pit must be built. Keep this pit clean and closed to avoid any children falling into it. After the initial phase, an incinerator should be built.

- **Collection and elimination of organic waste**
  - Special bin and disposal in an organic waste pit

- **Waste area**
  - Define a waste area including the internal storage of all waste and elimination systems
  - Install fencing around this area
  - Install a water supply point within this area
  - Ensure management and supervision by a responsible, trained person
  - Ensure maintenance of this area at least once a week

- Distance > 50 m from water sources (especially if an organic waste pit is included)

2.1.3.4. Control of vectors

Ensuring good hygiene and satisfactory sanitation of the site is already a substantial part of the vector control activities.

So as to avoid:

- rodents: ensure satisfactory management and maintenance of food stocks. Avoid build-ups of waste and refuse.
- flies: cover food. Avoid build-ups of waste and refuse.
- lice: ensure sufficient water, showers, distribution of soaps, and avoid overpopulation. If there is a risk of epidemic, treat everybody systematically with the appropriate insecticide, especially adults.
- mosquitoes: avoid reproduction sites by preventing the build-up of stagnant water, by covering water tanks and cesspits, and by emptying and regularly cleaning water containers. Treated mosquito nets must be provided in regions where malaria is endemic.

2.1.3.5. Management of bodies (dead patients)

- Provide an entrance for carts and position the mortuary in a location close to this entrance to avoid having to cross the entire centre.
- Provide a 27.5 m² tent or a shelter of around 20 m² where families can take care of the deceased person.
- Provide a concrete block to allow the ground to be washed. It is not necessary to provide a stone support to clean the body unless medical needs change due to the nutrition emergency.
- Apply **the appropriate disinfection and hygiene measures** when handling and preparing bodies: wearing of gloves and handwashing
- Ensure that the handling, preparation and burial of bodies is done sensitively and **respecting the local culture**

→ For more information: consult the "Public Health Engineering Guideline, MSF, 2008" guide and/or your technical department.

2.1.4. Materials and food

Kit and materials necessary to equip an HTFC: see *Appendix 4.2.*
Food: F75, F100, RUTF, meals for the the accompanying person. Depends on protocol. *See Chapter 6.*

2.2. A word on Day Care or the Day Feeding Centre

Conventional treatment for hospitalised patients may be difficult to set up in emergency situations. When a feeding centre cannot operate at night, a day centre is the only option (phase 1 included). Patients sleep at home, come to the centre every morning and return

home every night. If patients live far away, a shelter can be provided so they can spend the night.

A day feeding centre can be organised when:

- there is insecurity at night for patients, those accompanying them and staff
- culturally, mothers cannot sleep anywhere else but in their own homes *(e.g. Afghanistan)*

Setting up a day centre allows better coverage than the HTFC but treatment quality will not be as good. As soon as possible, organise the initial phase of 24-hour treatment with the appropriate specialised food.
Smooth coordination of activities during the day is crucial in a simplified TFC, especially when time is limited.

2.2.1. Operating mode

- Open 6 or 7 days a week
- 4 to 5 meals a day + meals for the accompanying person + RUTF to take away for the night
- Optimum 250 beneficiaries per centre
- No night service

2.2.2. Building and circuit

Identical to HTFC except:

- Arrival of patients every morning: entry after bracelet check, notification in the attendance register, weight recorded;
- Occupied shelters will not be used as dormitories but only as refectories;
- Provide one meal per day for those accompanying the patients.

2.2.3. Water, hygiene, sanitation

2.2.4. Materials and food

Identical to HTFC.

2.3. The Ambulatory Therapeutic Feeding Centre (ATFC)[29]

2.3.1. Operating mode

- Once a week (opening days according to the number of children)
- Optimum number 100 to 150 beneficiaries per distribution day and per team
- Minimum 15 staff per 150 beneficiaries
- RUTF + family protection ration[30] to be taken away and eaten at home

[29] In Sahel countries, and mainly in Niger, the ATFC is known as CRENAS (= Ambulatory Education and Recovery Centre for the Severely Malnourished).
[30] This ration, generally consisting of 3.5 to 5 kg of enriched flour and 0.4 to 1 litre of oil is distributed to the family every week, with the objective of avoiding the sharing-out of RUTF.

- May or may not be mobile, may or may not be integrated in the healthcare programme (health centre, mobile clinic, independent structure, etc.)
- Not for severely ill children
- Possibility of medical referral

2.3.2. Building and circuit

In an ATFC, the total surface area must correspond to 15 m² per patient, including circulation and materials *(see plan in Appendix 4.3)*.

For all more technical aspects, refer to the *Temporary and semi-permanent healthcare structures*, MSF, 2011 edition

For instance: Space required for an ATFC for 150 patients per day (check whether this is still consistent with the latest version of the shelter guide)

Infrastructure	Space in m²
Waiting rooms (1 for new admissions and 1 for follow-ups)	1 per patient
Registration + W/H area	30
Consultation	30
Area for appetite test	40
Observation area for HTFC referrals	40
Pharmacy	30
Food preparation and distribution	30
Food stock	30
Logistics building	30
Total surface area	2250

Whether for a non-mobile or mobile structure, the ATFC circuit principles are identical:

 The layout of an ATFC must allow the logical progress of activities and patients. The circuit principle is that the patient can never make a U-turn!

 Separate new cases from follow-ups[31] :

a. Draw up a circuit for new cases:
   - waiting room: provide drinking water!!!
   - MUAC testing, provide an exit for those not admitted
   - weight/height testing, individual card, provide an exit for those not admitted
   - appetite test
   - medical consultation with temperature reading, paracheck[32], measles vaccination and full clinical examination

[31] In the event of a low turnout, new cases may be integrated into the same circuit as old cases.
[32] Rapid malaria detection test (Plasmodium falciparum)

- observation room for medical referrals*
- pharmacy*
- registration: bracelet, register,
-
- distribution of RUTF and family protection ration*

b. Draw up a circuit for follow-ups *(with bracelet)*:
   - waiting room: provide drinking water!!!
   - weight recording (height is recorded once a month) + individual card
   - appetite test for children who have not gained weight*
   - follow-up medical consultation
   - observation room for medical referrals*
   - pharmacy*
   - registration (attendance and weight) *
   - distribution of RUTF and family protection ration*

* *These services are common to both circuits (same place, same staff).*

The workload per circuit and thus the resources to be allocated to some workstations (such as measurers and consultants) will vary according to the degree of emergency, the number of beneficiaries and the time lapsed since the programme opened.

For a non-mobile structure, schedule watchmen.
For a mobile ATFC, try to store material and food on-site.

2.3.3. Water, hygiene and sanitation

Water: → Schedule 5 litres per patient per day, thus a total of 750 litres per distribution day for 150 children.
→ Schedule the storage of 1500 litres (2 days).

Install **water containers** to drink and for handwashing:
- Add taps at the exit to latrines.
- These containers must be clearly marked, so that it is easy to tell the difference between drinking water and handwashing water (add soap).

Water container locations

Locations	**ATFC**
Waiting rooms	x
Appetite test room	x
Consultations	x
Care room	x
Observation area for HTFC referrals	x
Pharmacy	x
Food preparation and distribution	x
Latrines	x

Latrines: schedule 2 latrines for children and 2 latrines for adults (with male/female separation)

Waste treatment area: 1 waste reducer and one ash pit

2.3.4. Materials and food

Kit and materials necessary to equip an ATFC: see *Appendix 4.4.*
Food: RUTF, family rations. *See Chapter 6.*

3. SUPPLEMENTARY FEEDING PROGRAMME (SFP)

Objective:
- To reduce the morbidity of moderately malnourished patients
- To prevent severe malnutrition

3.1. Operating mode

- Once a week (opening days according to the number of children)
- Optimum number 150 to 200 beneficiaries per distribution day and per team
- Minimum 12 staff per 150 beneficiaries
- Provides additional feeding[33] (1000 to 1500 kcal per day) in the form of supplemented food: RUSF[34] or RUTF; to be taken away and eaten at home
- May or may not be integrated in a Health centre / May or may not be combined with an ATFC

3.2. Building and circuit

In an SFC[35], the total surface area must correspond to 15 m² per patient, including circulation and equipment *(see plan in Appendix 4.5.)*. In addition to the structures reserved for medical and logistics services, a covered, shaded area of 2m² must be installed per patient (waiting).

For instance: Space required for SFC for 150 patients per day (check whether this is still consistent with the latest version of the shelter guide)

Infrastructure	Space in m²
Waiting rooms (1 for new admissions and 1 for follow-ups)	1 per patient
Registration + W/H area	30
Consultation	30

[33] To be eaten in addition to family meals.
[34] RUSF: Ready To Use Supplementary Food; RUTF: Ready to Use Therapeutic Food
[35] In Sahel countries, and mainly in Niger, the SFC is known as CRENAM (= Ambulatory Nutritional Education and Recovery Centre for the Moderately Malnourished).

SRO area (Rehydration)	30
Pharmacy	30
Food preparation and distribution	30
Food stock	30
Logistics building	30
Total surface area	2250

An SFC (dry rations) must be organised in such a way that it can collect all registration and monitoring data, and that food can be distributed effectively, in order to optimise patient flow, while remaining vigilant as to food losses or diversions.

Respect the logical progression of activities in the various spaces (waiting area, W/H measurement, registration, consultation and medical care, distribution of rations, etc.)
Patients can never make a U-turn!

Fencing
- Install fencing around the ground to improve centre security.
- At the entrance, post respected persons and market out waiting lines with nets for crowd management and an effective working environment for staff.

Entrance and exit doors
- To encourage patient flow, the entrance and exit doors will be in two different, opposite locations.
- All doors must be watched, with a small shelter to protect the watchman from rain or sun!
- Access to the centre will be direct for people who have already registered. Children who are not yet registered will first go to a weight / height monitoring station, before they are admitted to the centre. A direct, immediate exit will be planned for children who do not meet the criteria.

Waiting rooms
- Plan roofed waiting rooms to protect patients and those accompanying them from sun and rain.
- Make drinking water available to avoid dehydration and put someone in charge of distributing it.

Registration
- This must be located near the entrance so that attendance can be monitored.

Daily Premix stock (delete if we no longer make premix???)
- In SFCs, premix may be prepared in the nutrition centre those distributing food rations, or in a premix centre. When there are several SFCs, it is better to have a premix preparation centre (just one location and one team to supervise, less risk of food diversion).

- To make things easier, the Premix centre should be located near the central food stock, but separated from it.
- The location must be clean, and have concrete or plastic tarpaulin on the ground.
- Make water available every day for washing hands, material and the floor (with soap).

Premix Preparation, MSF Sudan

Food stock

The food stock and its management will be the subject of Chapter 9.

3.3. Water, hygiene and sanitation

Water:

Minimum quantity litres/day/patient	Optimum quantity litres/day/patient
0.3	0.5[36]

Install **water containers** for drinking and handwashing:

- Add taps at the exit to latrines.
- These containers must be clearly marked, so that it is easy to tell the difference between drinking water and handwashing water (add soap).

Water container locations

Locations	**SFC**
Waiting rooms	x
Consultations	x
SRO area	x
Pharmacy	x
Food preparation and distribution	x
Latrines	x

[36] 5 litres if the waiting time is long

Latrines: schedule 2 latrines for children and 2 latrines for adults (with male/female separation)

Waste treatment area: 1 burner and one ash pit

3.4. Materials and food

Kit and materials needed to equip an SFC: see *Appendix 4.4.*
Food: Premix or RUTF. *See Chapter 6.*

4. NUTRITION SUPPORT FOR MEDICAL PROGRAMMES

Pregnant and breastfeeding women, and patients (particularly those suffering from specific chronic illness or acute illness) have increased nutritional needs and are particularly vulnerable to malnutrition. During periods of insecurity or food crisis, these people are often unable to meet their increased nutritional needs.

4.1. Objectives and principles

Objectives:

- Meet specific physiological needs and prevent deterioration of the nutritional status of vulnerable people.
- Promote patient recovery.
- Support patients' families in terms of their food requirements.
- Provide nutrition education to patients and their families.

Principles:

- Nutrition support for medical programmes is part of prevention or treatment (hospital, tuberculosis, AIDS, etc.)
- Food supplements must be adapted to the specific nutritional needs of patients; protocols have thus been developed with food supplements which exist currently on the market, and validated by MSF. It should be noted that this field is constantly evolving, and that research and development of new specific nutritional products for these patients has been carried out over the past few years.
- The admission and discharge criteria are not necessarily based on anthropometrics.

4.2. Pregnant and breastfeeding women

Due to their increased food requirements (both in quality and quantity), pregnant and breastfeeding women are particularly vulnerable to malnutrition. Malnutrition increases the risk of maternal complications during pregnancy and birth, as well as mediocre consequences for the foetus (delayed growth, low birth weight, death of newborns).

Principles

- During serious food crises or famines, all pregnant and breastfeeding women may be admitted for nutritional support.
- Nutritional support is given as soon as the pregnancy is known, and ends six months after giving birth.
- These women should receive prenatal care alongside nutritional support.

- Feeding programmes for children take priority over feeding programmes for pregnant and breastfeeding women; for practical reasons, distributions are often organised using the infrastructures of existing programmes (SFP, TFD).
- Malnourished pregnant and breastfeeding women must be referred to the appropriate programmes (TFP or SFP)

4.3. Hospitalised patients

Generally, hospitals seldom have sufficient resources to adequately feed patients and those accompanying them.
As a result, ensure that:

- All hospitalised patients receive a full and balanced food ration (minimum 2100 kcal enriched with vitamins and minerals) or supplementary food in addition to the food ration provided by the family or institution. This ration must be diversified (including cereals, vegetables, oil, etc.), acceptable and easy to digest.
- Rations care given to those accompanying if necessary.

In order to do so, you will have to build or overhaul a kitchen corresponding to accepted standards *(see point on HTFC Kitchen)*.

4.4. Specific illnesses

Many infections, particularly measles, shigellosis, tuberculosis, trypanosomiasis, visceral leishmaniasis and AIDS have serious negative nutritional consequences, given that they increase the metabolism, decrease appetite and sometimes reduce nutrient absorption. The combination of malnutrition and these illnesses increases the mortality risk.
Patients suffering from these pathologies require a food supplement which is rich in micro-nutrients.

5. ENVIRONMENTAL ISSUE

MSF's strategy in terms of medical nutrition support has undeniably positive consequences in terms of overall health, but it does create an environmental issue in terms of the packaging of food supplements distributed.

Whether regarding the plastic sachets used to distribute Premix in SFCs, or the packaging for therapeutic milks in HTFC, or worse still, RUTF packaging, these distributions over several years add up to millions of sachets, packets and containers distributed by projects.

Nutriset[37] packaging manufacturers have yet to find a formula which combines biodegradability of contents with maintained product quality.

What are the "solutions"?

For Premix distribution, plastic sachets can be replaced by plastic buckets with a lid, which are reusable. This means that mothers must be informed to come back with the empty bucket the following week, which will be replaced by a clean, full bucket. Thus two buckets should be scheduled per beneficiary. This alternative is very expensive, however.

[37] Company producing F75, F100 therapeutic milk and Plumpynut.

As regards Plumpynut packaging, MSF recommends the collection of empty sachets by ATFCs for incineration[38]. This practice, which also attempts to restrict as much as possible the sale of Plumpynut at local markets, should be applied systematically on all sites.

[38]It should be noted that the use of the Montfort with dual chamber combustion is still to be given priority, since its mode of incineration (compared to single incinerators) limits harmful environmental effects.

CHAPTER 5. FOOD PROGRAMMES AND THEIR LOGISTICAL IMPLICATIONS

The food aid programmes set up by MSF are emergency programmes. In a crisis or famine situation, the main objective is to rapidly distribute sufficient quantities of appropriate, quality (healthy and nutritious) food under satisfactory conditions. Food aid always represents substantial amounts of food and thus a high cost; as a result, the logistical preparation and organisation of distributions is essential, and all the resources implemented require rigorous planning, since the failure of one element may have serious consequences for the quality of the intervention in the field.

Food aid programmes require a prior assessment of the nutrition and food security situation *(see Chapter 2)*.

After assessment, all care given to beneficiaries is defined according to the needs, capacity of intervention, and medical and feeding referral structures. Beneficiaries (target population) are defined, the food ration is determined, and the distribution method and locations are chosen.

The first part of this chapter presents the different food programmes. The second part outlines the process of targeted feeding distribution ("TFD", blanket feeding) in practice.

1. FOOD PROGRAMMES

1.1. General Food Distribution (GFD)

A GFD is the key intervention to ensure health and survival of a population undergoing a food crisis or famine.

Objectives

- To cover the immediate basic food requirements of an entire population and avoid famine.
- To prevent deterioration in nutritional status and death.
- To restore and maintain usual means of subsistence.

Principles

- The decision to begin a GFD is based on food security indicators for the population.
- Ration types: full (or partial) rations; dry rations (or in exceptional circumstances, cooked rations). If full ration → 2100 kcal per person per day (with 10-12% energy > protein, 17% energy > lipids). This ration is adapted to the size of the family, and is generally made up of cereals, vegetables, vegetable oil, sugar, salt, and sometimes pre-cooked enriched flour.
- Distribution systems: via local government, traditional chiefs, the elders of the community and/or directly to families or individuals, etc.
- Frequency: weekly, fortnightly, or monthly.
- The duration depends on the stage of food security (e.g. the crisis has passed or the lean season is yet to come): the programme will continue until food security is

guaranteed.

It should be noted that MSF very seldom carries out general distributions because this is the mandate of the World Food Programme (WFP). However, **MSF is responsible for identifying this requirement, and for ensuring quality control, of the quantity and fairness of distributions.**

1.2. Targeted Food Distribution (TFD)

Targeted food distribution (a.k.a. Blanket Feeding Programme) is a short-term intervention set up in response to a current or anticipated food crisis within a large population. Here, it is defined as food distribution whose objective is to rapidly increase the availability of food for families, normally reaching them via children under 5 years old.

Objectives

- To prevent deterioration in the nutritional status (preventive).
- To provide a partial ration to vulnerable families (generally with young children), when food accessibility is not sufficient, or General Food Distribution (GFD) is not adequate.
- To rapidly increase food availability/accessibility over a limited period.

Principles

- The start of the intervention is based on the population's food security situation.
- TFD is an emergency intervention addressing an inadequate general distribution of food, thus its implementation and extension depend on the GFD; information about GFD insufficiencies must be sent to the organisations concerned. In the absence of rapid improvement, lobbying activities must be initiated.
- Although rations are distributed via an appointed family representative, they aim at supporting the whole family.
- Children under 5 (or rather, under 110 cm)[39] are chosen most often, since they are easy to identify; in this case, all children under 5 in a population receive a set ration regardless of the size of their family and their nutritional status.
- Alternatively, a more specific sub-group can be targeted (for instance all children under 3 years old, or all children with a MUAC under 135 mm, or all beneficiaries of feeding programmes).
- According to the size of the needs identified and the capacity for intervention, other vulnerable groups can be targeted and/or included: children under 10 years old (130 cm), pregnant and breastfeeding women, the elderly, the disabled, ill adults, etc.
- There is not registration[40], no weight or height measurement, nor any individual follow-up of beneficiaries.
- Dry rations and take-away rations must provide a minimum of 500 kcal pppd.

Note:

Distributions whereby food is only to be consumed by children (all those under 3 years old, for example) are also possible; if this occurs, they must be given food which meets their specific nutritional requirements (e.g. Plumpydoz)[41].

[39] Children's age is often not known in the countries where we work.

[40] By registration, we mean the writing-down in a register of the name of the family representative and the number of family members along with their address + distribution of a ration entitlement card.

[41] See MSF Medical Catalogue - Volume 2 A - SFOSRUSFP3P

1.3. Other distributions

Depending on the food situation, family rations may be distributed to patients admitted to feeding programmes or specific medical programmes (AIDS, TB, etc.) There are 2 main categories:

Family ration distribution given on discharge

Most of the time, given when exiting the programme. They are designed to inject food into the family, thus restricting risks of relapse and as a result, re-admissions.

• Ration: Full or partial ration for 1 or 2 months according to the food context and capacity to supply. *Example (for 1 month): 25 kg of Unimix + 5 litres of oil.*

Distribution of protection rations

For instance, in ambulatory feeding programmes where children receive weekly food rations (e.g. 14 sachets of Plumpynut per week), family rations may be distributed to avoid the sharing of RUTF with other family members and thus "protect" the ration destined for the malnourished child; distributions generally occur on a weekly basis.

• Ration: Mostly a partial ration of 500 kcal pppd. *Example: 5 kg CSB + 1 litre of oil per family.*

2. TARGETED FOOD DISTRIBUTION IN PRACTICE

The distribution structure and method presented here are taken from those distributions must commonly carried out by MSF-OCB:

- Distribution for 1 month
- Admission criteria: all children < 5 years old (height < 110 cm)
- Systematic MUAC testing

The specific features of the most individual cases will be presented at point 2.7.

2.1. Strategic points to determine

2.1.1. Number of beneficiaries

Essential before any distribution, the number of potential beneficiaries must be estimated, in order to work out the necessary quantities to distribute, but above all to ascertain the feasibility of a given distribution, and to allow operational choices to be made: admission criteria, frequency of distributions, choice and number of distribution sites, site configuration.

• *Estimating the number of beneficiaries:*

In most situations where we operate, available population figures are rare, not up to date and not very reliable. Information sources are generally figures from administrative divisions (districts, municipalities, villages, etc.) released by the administrative authorities or healthcare divisions (healthcare centres or areas, etc.), census carried out by states or by private organisations such as United Nations agencies, or recent vaccinations. For these reasons, it is necessary to diversify information sources and to cross-match them. A good estimate of the number of beneficiaries may be achieved from the latest nutrition survey carried out on-site in respect of the target population.

In the event that no figures are available, and the number of potential beneficiaries remains unknown or inaccurate, a rapid count of the target population must be carried out - this is known as mapping[42]. However, a distribution programme must never start before a reliable estimate has been made as to the number of beneficiaries.

Note: It is assumed that the number of children under 5 represents around 20% of the target population.

• *Number of beneficiaries by distribution / population covered:*

Bearing in mind that generally, distribution should not last more than 6 hours:

1 entrance/1 circuit site:

- Maximum reception capacity per day: 3,500 or 3,000 beneficiaries with systematic MUAC measurement.

1 entrance/2 circuit site:

- Maximum reception capacity per day: 7,000 or 6,000 beneficiaries with systematic MUAC measurement.

[42] Mapping technique, see Epicentre methodology

Note: for initial distributions: population figures are often uncertain, distribution teams lack experience, authorities and populations are unfamiliar with the system, so care must be taken; plan for fewer beneficiaries per day.

2.1.2. Food rations

The amount of food rations distributed depends on:

- the quantity and composition of previous general ration distributions, where applicable
- what people already have and what they need additionally in order to maintain a basic level of health
- our distribution logistics capacity

The **minimum additional amount** must be **500 kcal pppd** (= ¼ of individual nutrition requirements). An average family of 6 people should receive at least 3,000 kcal per day. This ration will be multiplied by the number of days to be covered (= a family ration).

Ration calculation:

Ration **=** Average number of people in the family **X** 500 Kcal **X** Number of days between each distribution

Ration example for a family of 6 people for 1 month: 25 kg of CSB and 5 litres of oil.
This will also be multiplied by the number of "target" members in the family.

For instance: If we choose children under 5 years old as the target vulnerable population for a TFD, a family made up of 2 children under 5 years old will receive 2 family rations, thus for example 50 kg of CSB and 10 litres of oil per month.

The different foods should be:

- easy to prepare by families (enriched pre-cooked flour like Unimix or CSB; high-energy biscuits like BP5)
- easy to transport by beneficiaries
- easy to manage by the organisation
- fortified with micro-nutrients (enriched flour, BP5, micro-nutrient mix[43])
- oil must be distributed with flour to ensure appropriate calorie consumption

2.1.3. Frequency and periodicity of distributions

	Every 10 days	***Every month***
	Ration of 5 kg of Unimix/CSB + 1L of oil	*Ration of 25 kg of Unimix/CSB + 5L of oil*
Benefits	Smaller supply and storage capacity required	Less frequent organisation
	Less food to carry for beneficiaries	Less repackaging
	Better food management by the family	Less frequent travel by beneficiaries
	Less risk of having food stolen	

[43] For instance: QB-Mix®, Top-Nutri®

Drawbacks	More frequent organisation	Larger supply and storage capacity required
	Substantial repackaging	Large amount of food to be carried by beneficiaries
	Ecological impact if sachets made of plastic!	Higher risk that food will be stolen if insecurity
		More difficult food management by the family

Other points to take into account: the size of the geographical area to cover + MSF capacity to travel (transport of people and food).

Temporary
Between two and four months at most[44], while waiting for the situation to improve (recovery of food independence, improved malnutrition rates, etc.) or for other bodies (WFP, organisations involved in food aid, government, etc.) to get organised.

The target population, ration and frequency of distributions must be determined by the mission's Medical Coordinator <u>in partnership with Coordination</u> and validated by the head office Nutrition Expert, after approval from the Unit's general medical expert. We will always try to be as pragmatic as possible.

2.2. Specific points

Systematic MUAC measurement
Systematic measurement of the mid-upper arm circumference (MUAC) for children between 6 months - 5 years (65 to 110 cm) will allow trends to be identified, and to monitor the evolution of the nutrition situation (percentage of severe, moderate, and at-risk cases in terms of the total number of children seen) as well as to identify malnourished children so as to direct them to the site's medical station and then to MSF feeding centres.

Associated medical activities
Distributions are the only opportunity to see all children under 5 years old, in addition to the usual medical and nutritional referrals, vaccinations and systematic treatments can be organised; however, these additional activities must not hinder the flow of food distribution to beneficiaries.
• **Medical and nutritional referrals**
The medical expert performs triage on ill and/or malnourished children, and organises referrals to the appropriate medical or feeding structure.
Systematic treatments
If distribution has been ongoing for some time, systematic treatments can be carried out (Vitamin A, Albendazole, malaria treatment, etc.)
• **Vaccinations**
Vaccinations (e.g. measles) can be integrated with distributions. Site circuits must be adapted, and this should take place over 2 days (one day for boys, one for girls) if there is a substantial number of beneficiaries *(see Specific Cases point)*
Note: completing vaccination cards takes time: as a result, distributions with integrated vaccination can only handle lower numbers of beneficiaries (e.g. 2 entrances/2 circuits site: distribution with integrated vaccination can only see 5,000 beneficiaries per day, instead of 7,000).

[44] The distribution period will often correspond to the lean season we will try to cover.

Distribution of non-food products
Distributions of non-food products (soap, kitchen kits, blankets plastic tarpaulins, jerrycans, etc.) may be organised without weighing down distributions too much; however, they should be restricted to a single product.

Beneficiary data (optional!)
Knowledge about beneficiary status (residents, the displaced, refugees, new arrivals) and places of residence allows, among other things, to assess the actual distribution coverage, the effectiveness of the population's mobilisation and to identify any access problems. This data associated with nutritional status allows our understanding of the environment to be refined, and may allow identification of the most affected areas.
Other data: boy/girl ratio
Collection of this data is not systematic if the beneficiaries are known in depth; if this is not the case, this must be implemented quickly, as soon as the initial distribution, while in changeable situations, it must be implemented regularly.

Raising awareness within the population
Distribution is not actually useful unless all the beneficiaries come along, hence the importance of prior awareness-raising. This may be delegated in part to the authorities and will deal with introducing MSF, the objective of the programmes, admission criteria and the dates and times of distributions.

Security
Distributions generally bring together several thousand people, mainly mothers and their children, within limited boundaries. Crowd management is delicate and has substantial risks which may have dramatic consequences. **Involvement of the civil authorities is compulsory**, with clear and accurate explanations of the goal and procedure for distributions, as well as each person's responsibilities are the fundamental conditions for successful distributions *(see paragraph below: authorities and their responsibilities)*.
Distributions must take place in calmness and trust, the structure of the site presented in this chapter is open, spacious, with neither barriers nor high walls; the site limits and the distribution circuit are marked out with nets (orange building site type), people wait outside and are free to move around, which limits stress.

A few rules:
- Sufficient quantity for all beneficiaries (schedule a 10% margin).
- Distributions must start early so as to restrict waiting time and avoid the hottest times of day.
- Short distribution length: 6 hours, ideal distribution end: before 2 p.m.
- No queue-jumps or preferential treatment.
- Maximum one accompanying person per child.

Visibility / fluidity / space
One of the principles is to have an overview of the site both inside and outside, which allows distribution managers to monitor the distribution procedure, correct any problems, and regulate the flow immediately. Another sizeable advantage if that the people waiting can see the whole site, so they have a better understanding of it.
In the proposed site diagram, boundaries and passages are marked out with tape. The spaces are vast, passages may be long but not too wide (maximum 1 metre) to help guide beneficiaries clearly. The site must seem almost empty during distribution. Queues must be limited, at all times circulation can be regulated by blocking off the entrance temporarily.

People enter in small groups (10-20), and only stay a few minutes on site, a regular, continuous flow is the key to a short distribution.
To achieve fluidity, it is important to position people at strategic locations who can facilitate circulation, their task being to direct or accompany beneficiaries.

Marking
Ethically dubious and arguable, beneficiary marking is necessary for distributions without registration; it allows the team to check who has already received food and avoids duplicate distributions (fraud).
Marking is carried out upon exit, by dipping the whole hand into a small bucket or pot of diluted gentian violet: 1 coffee spoonful (5 g) of crystallised gentian violet per litre of water, 1 litre for around 1000 markings. Marking is temporary (1 or 2 days).
Forbidden: gentian violet marking in the mouth or ears.

Information / pressure
From the very beginning of an intervention, it is necessary to inform, and publicise the situation (data collection, statistics, reports), nutrition surveys and massive testing are generally persuasive and can allow awareness to be raised about the seriousness of the situation or put pressure on food aid actors (UN agencies, funding bodies, local or international NGOs, governments).

2.3. Organisation/Preparation

Organising a distribution affects all logistical domains (supply, transport, storage, etc.)
On the one hand, it requires close cooperation and communication between field teams, capital and head office, as well as between the medical, logistical and administrative teams.
On the other, a distribution programme is never set in stone, its organisation requires continuous monitoring and regular adjustments.

Necessary information
Estimated consumption
- Number of beneficiaries estimated per day per site.
- Ration/distribution/beneficiary.
- Estimated intervention length (in days) per site.
- Consumption is re-estimated after each distribution.

Distribution schedule
- Distribution dates and places

Points to be determined
- Quantity of food products required
- Repackaging
- Buffer stock/programme/product.
- Supply type: international order, purchase, gift, loan.
- Means of transport: air, road, etc., number of vehicles.
- Logistical support: fuel stock, mechanic, etc.
- Storage / premises: location, size, etc.
- Human resources: team composition, recruitment, etc.
- Sundry logistics equipment and materials

Planning / organisation

- Supply management (orders, purchases, gifts) and delivery dates
- Supply calendar per site with estimated quantities (to be reassessed after each distribution)
- Vehicle and driver schedules
- Provide alternative solutions (plan B)

Repackaging

For repackaging of CSB/Unimix, see *Specific cases* point.

In most cases, oil must be repackaged, since the containers received are frequently 25 litres, or even 200 litres!

This packaging should preferably be prepared in advance; doing so on-site is possible, but it makes distribution more arduous.

In addition, you must also ensure strict hygiene conditions (cleanliness of premises and utensils, glove-wearing, water supply point with soap for handwashing, etc.)

Oil repackaging, Niger, 2006, MSFF

2.4. Setting up distribution

After organising supply to site and logistical organisation of the programme (stores, recruitment, training, etc.), notification of populations must be organised and a site must be chosen; it is essential **to involve the civil authorities** and/or community representatives.

2.4.1. Site location

The most important choice is how close it is to populations, if possible at the centre of the coverage area (20 km catchment: 4-5 hours' walk). In densely populated areas (urban areas), simultaneous distributions may be organised, so sites should be as far apart as possible.

The following must also be taken into account:

- Safe, free access for populations: military activities, roadblocks or checkpoints, mines, etc.
- Access for road-based supply regardless of season (bridge, ford, condition of roads), which is safe (mines, risks of banditry and attacks).
- Air access, where appropriate: runway or drop zone.
- Population density: calculate the ratio between the estimated population and surface area covered (catchment).

- Distance between 2 distribution sites: minimum 40 km between 2 sites to avoid overlap of 2 coverage areas.

2.4.2. Site choice

Choosing a site is done in partnership with the authorities.
Preferably, choose a site on the outskirts of a town, on a wide, open site; a football field is good for average-sized distributions, and is the minimum size necessary (120 m by 60 m).
Avoid proximity to markets, military camps, and find out if there are mines close by.
Water requirements: 0.3 to 0.5 litres per beneficiary per day.
Provide enough shaded areas.

2.4.3. The authorities / their responsibilities

Working with the authorities (preferably civil authorities) is essential, and their satisfactory cooperation is fundamental.
Meetings must be prepared in advance and will deal mainly with their involvement, their responsibilities (to inform populations, to ensure security and to give us access to competent people, etc.)
To do so, distribution must be explained in detail: beneficiaries, criteria, rations, distribution organisation and procedure, with site plan to help, as well as organisation and operation inside the site, each person's role, the circuit taken by beneficiaries and non-beneficiaries, respect for spaces, the principle of medical and nutrition referrals, etc.
The interior of the site is under MSF responsibility, the exterior of the site is under their responsibility.
MSF commits to provide enough food for all beneficiaries.

Crowd management (arrival, waiting, regulation of those entering the site)
This is the responsibility of the authorities, but a few rules must be laid down:
Heads must be present for the start-up and smooth running of the distribution.

- People involved in crowd management must be from the civil population, not carry arms (or batons) since it is not a threatening force. They must have a respectful attitude (helping and directing people).
- Distributions must take place in a good atmosphere; it must be reiterated that the distribution must take place in a calm and orderly way, with no aggression or violence. If there are incidents or jostling, distribution will be immediately interrupted.
- The local team may be composed of twelve or so people (for 1 entrance/1 circuit distribution), with 2 or 3 people managing the crowd directly (respected and recognised people), who are posted in the buffer zone between the waiting area and the site entrance, with others around the site, posted at doors and corners.

Note
This type of open distribution is counter-intuitive in terms of security reflexes (a minimum number of people controlling the site, rather symbolic site boundaries, etc.) It may be difficult to convey this, since often the initial reaction from authorities and indeed ourselves is to reinforce teams, which in our experience is counter-productive. To give an idea of the scale, a crowd of 15,000 people moving equals 400 tons moving, thus it is impossible to stop even with a large security force. A little teaching and persuasion is needed. It is important to convey the message that MSF has neither the necessary legitimacy nor skills in terms of maintaining order, and that the primary principle of these distributions is self-discipline from families, which on their part involves a degree of explanation to their populations.

Informing the population
The authorities are in charge of mobilising the population but do not hesitate to inform populations directly ourselves (by visiting the villages concerned and meeting local representatives).
Information given: introduction to MSF, admission criteria, planned dates and places of distributions.

Distribution site
Determine a site with authorities, if there is no satisfactory location, request that a site be prepared (clearing, leveling).
Also examine nearby storage possibilities.

2.4.4. The distribution team

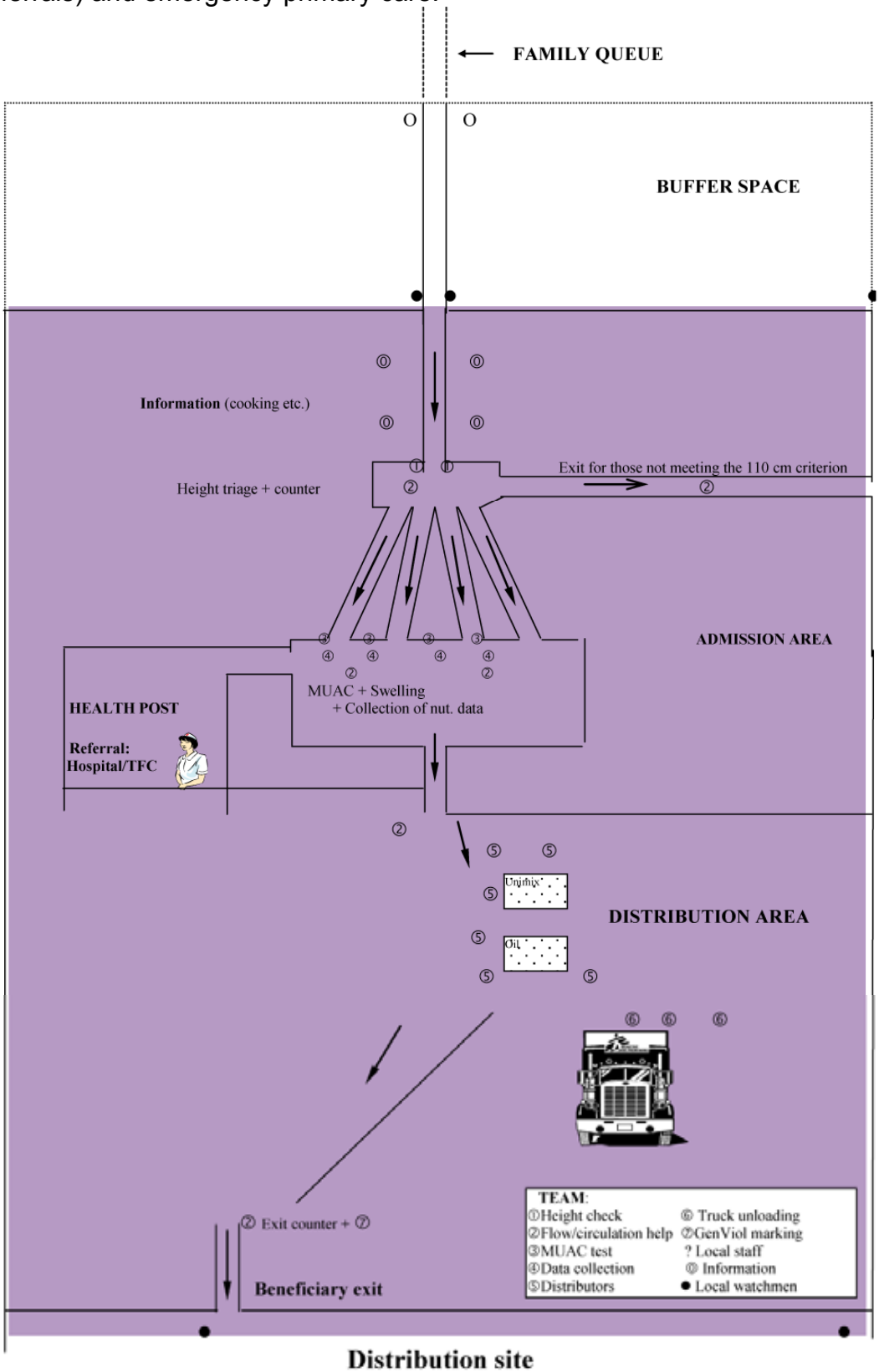
Note: The following figures are given for indication only; the composition of teams and distribution between the MSF team and the local team may vary and be adapted to suit the context. For reasons of effectiveness, it is simpler to work with the same team (trained, experienced, neutral).

Between 40 and 50 people are required for distribution, comprising the MSF team of around 30-35 people including 1 logistician responsible for general organisation and 1 doctor or nurse responsible for medical cases and referrals. The local team is made up of around 12-15 people including 3 crowd management managers.
It is often preferable to rely on local teams for crowd management.

Training/Briefing
This is a very important step which must not be omitted, each person must understand his or her role.
The MSF team must receive training, especially the team positioned at the mid-upper arm circumference check point (using MUAC, nutrition swelling check and finding ill children). Briefings/training sessions for an initial distribution must be carried out the day before the distribution in small category-based groups (height check team, MUAC check team, marking team, data collection team, distribution team, flow control team, etc.)
A few minutes prior to starting a distribution, it is essential that each person at their post be given a final quasi-individual rapid briefing; this in-situ briefing is much more communicative, allowing for last-minute fine-tuning, and to ensure that each person understands their task, and gets to know their team better.
• **The local team**
Like the MSF team, the local team must receive a briefing, in particular the people involved in crowd management.
• **The managing team**
Managing a distribution requires experienced people.
- Logistics manager
He is the conductor, setting the pace, and is the 'owner' of the distribution. In addition to the responsibility for general organisation, during distribution, the logistics manager must remain available, and keep an eye on the distribution as a whole: waiting area, crowd management by authorities, quota of entrances, fluidity, distribution point, respect of spaces, etc.

- The medical manager

He supervises the central distribution sector: admission criteria (height, MUAC measurement and nutritional swelling), triage of ill children (medical and nutritional referrals) and emergency primary care.



Distribution site

Distribution: 3,000 beneficiaries, a single day
Beneficiaries: whole family with child under 5 (< 110 cm)
Ration: 25 Kg of Unimix flour + 5 litres of oil
Team: MSF team: ①,②,③,④,⑤,⑥,⑦ ; 'local' team: O,●, ⓪. See also description on previous pages

2.5. Distribution of distribution site, 1 entrance/1 circuit

- ***Route / teams and materials***

For a better understanding, follow the descriptions with the site plan on the previous page. The acronyms and numbers in brackets below are defined in the key at the bottom of the plan.

- ***Site exterior***

Waiting area
Open land, families arrive gradually and form a queue. Crowd management is the authorities' responsibility. It is essential to organise a queue as soon as a few people have arrived; it will encourage new arrivals to join the queue and the "first come, first served" principle will be respected.

Boundary around the site
7 "local" people (•)
- 1 at each exit (3 people)
- 1 at each corner (4 people)

Mainly supervisory role.

***B*uffer space**
Empty space between the distribution site and the waiting area; the principle of this space is to keep a distance between the crowd and the actual site.
2 -3 recognised, respected people (O) let the families enter in small groups.
This space must remain absolutely empty, and families enter the site directly without stopping.
Organisation is monitored, and entrances are regulated.

A single entry
The only point by which to enter the site, the entrance must remain free; 2 "local" people (•) are posted outside.

- ***THE SITE***

Under the complete responsibility of MSF.
The MSF team of around 30 people + 4 "local" people

At the entrance to the actual site
3-4 "local" people (⓪) who explain how to prepare Unimix/CSB and can give other information.

1st entrance triage point.
1 door: height check
Children go under a height gauge (horizontal bar, height 110 cm).
- 2 people at the door (①) check height with a manual counter for the initial count of children under 5 years of age.
- 1 person directs ②either to the 1st exit (children > 110 cm) or to one of the 4 passages (children meeting the criterion < 110 cm).

Materials: 110-centimetre stick, 1 manual counter.

1st exit

Children not meeting the 110 cm criterion
- 1 person (②) in the passage to help or accompany to the exit.

MUAC testing
4 doors: mid-upper arm circumference (MUAC) measurement and nutritional swelling check. ***Please note: this is only to be done for children between 65 and 110 cm[45]!***
10 people: 2 people at each door + 2 people standing by.
1 person (③) at each door measures the arm circumference and checks if there is nutritional swelling.
1 person (④) on each door notes MUAC colours or swelling using a statistical tally sheet.
2 people (②) a little further on, direct and help mothers and children.
Materials: 110-centimetre stick, with notches at 65 cm, MUAC bracelets, MUAC/swelling tally sheets.

Medical station
Nutritional or medical referrals (registration, weight/height), rehydration point, small feeding store.
- 1 or 2 people including 1 person from the community who speaks the local language(s).

Materials: medical chest, anthropometrics material (height gauge, scale), nutritional products: mats, Plumpynut and BP5 biscuits; light shelters (e.g. shade nets), drinking water, etc.

Distribution area
Distribution of the family ration.
Food products are handed over directly to the accompanying person[46]. If he or she is unable to carry the majority of the ration, an MSF carrier must accompany them to the site exit.
- 6 people (⑤) (3 for distribution of bags of Unimix/CSB and 3 for oil)
- 1 person (②) directs beneficiaries to the exit.

Exit for beneficiaries
- 1 person (②) at the exit for a 2nd count (number of beneficiaries).
- 1 person (⑦) marks beneficiaries with diluted gentian violet.

Material: manual counter, gentian violet, protective apron.

Supply
Depending on the storage and transport possibilities, the truck(s) are unloaded gradually.
- 3 people (⑥) + driver

If girls'/boys' day
- 1 person posted at the entrance before the height gauge checks whether boy or girl.

Preferably a woman is chosen for this check.

Beneficiary data
2 possible options:
- the team recording the nutritional status can also record the data
  Benefit: we know the origin of the beneficiary and their nutritional status.
  Drawback: really slows down the pace of distributions.

Or

[45] One of the 4 lines can be assigned solely to those < 65 cm.
[46] For a 25 kg bag, put it directly onto the shoulder to make it easier for beneficiaries to walk.

- an additional team can be assigned solely to collecting data; in this event, the team is also placed prior to the distribution point. Recommended for distributions without systematic MUAC measurement.

2.6. Implementation, chronology

Preparation prior to departure
Preparations are carried out the day before: loading of food products, distribution materials, medical and feeding materials, preparation of vehicles (fill up with fuel, etc.) and site assembly *(see below)*.
Ensure that the team has been informed and will be ready at the time of departure, generally very early (5-6 a.m.); bring drinking water for the team and perhaps a picnic

Site assembly and organisation
Start by marking out the external boundary with the netting. Vehicles are parked inside, and nobody is supposed to come in during the installation.
Only one person is responsible for organising the distribution channel, helped by 3-4 people (with tape, pegs and cattails). They position the pegs to set boundaries marking passageways and the different areas *(see plan)*. The spaces must be wide, and passageways may be long but not very wide (maximum 1m).
Straight passages, firmly planted pegs and taught tape are all part of the feeling of an organised distribution, and as such are reassuring. To make straight lines, start with the 2 end points, stretch out the tape and then insert the intermediate pegs.

Start early
Starting distributions very early has many advantages:
• Respect for those waiting.
• Few people already on-site when the teams are implemented.
• Morning coolness, the crowd is not in the sun at the hottest time.
• Time for a second supply if there is a huge crowd.
• Families can return home during the day.

Arrival on site
Contact managers, organise teams (each person's post, briefing, etc.), check whether the local team is complete, final briefing/rapid instruction is given.
A distribution cannot begin before the teams are at their posts with the necessary materials.

Starting a distribution
Once the teams are settled at their posts, distribution can only start after consultation with those managing the crowd. The population gathered in the waiting area must be organised in a line at a minimum distance of 10 m from the site entrance (buffer space). A distribution begins when the crowd is calm; distribution is temporarily interrupted if there is a minor incident, or permanently interrupted if it becomes impossible to carry out the distribution in a calm, secure atmosphere.
Before starting the distribution, the MSF manager may briefly remind the village leaders about the distribution procedure, admission criteria, security rules and make clear that there is enough food for all beneficiaries. Greeting mothers and children before starting is important to establish a first friendly contact.

End of distribution
At the end of the distribution, some people are tempted to try and return for a second helping; in this case, a wide area is cordoned off around the last people still to receive food, where nobody is allowed to enter.

Site dismantling
Dismantling starts with the internal installations, and the external nets remain in place until the vehicles are loaded - nobody is supposed to enter the site during the dismantling process. Remember to clean the site before leaving.

Local team
Pay them a daily rate.

Number of beneficiaries and consumption
A quick check on the amounts distributed must be made, comparing the number of beneficiaries counted on exit (2nd count) and the actual amounts consumed. Figures must correspond, along with stocks and stock sheets.
A final check can be performed after analysing and compiling statistics (severe, moderate and at risk).

Collection of nutrition data
Using the MUAC/swelling tally charts, the percentage of severely and moderately malnourished children along with those at risk of malnutrition can be calculated.

Distribution report
A brief report after each distribution must be made:
Number of beneficiaries
Number of children seen
Number of children referred
Number of rations distributed
Notes about how the distribution took place (duration, difficulties, incidents, etc.)
Notes for the next distribution (possible developments, number of beneficiaries, names of local representatives and managers who took part in the distribution, etc.)

List of materials necessary
The logistical materials necessary for a distribution depends on the site identified (presence or absence of shade), stock type (tents or hard-walled structures or trucks) and the number of expected beneficiaries, but here is an example of the materials for a site of around 4,000 beneficiaries.
It should be noted that the vast majority of these materials can be reused from one distribution to the next. Only the boundary tape must be considered more as s consumable item, although it may be used for 2 sites.

Logistical materials
- 500 concretised iron pegs, 10 mm, length 1.10m
- 10 hammers
- 2 boundary tapes, white/orange (1 = 500 m) (MSF code: PSAFTAPE2BF)
- 15 nets, 1 x 50 m, per roll (PSAFNETB1R5)
- 4 multi-use tents, 42 m² (CSHETENM42-)
- 2 dispensary tents, 27.5 m² (CSHETEND27-)
- 3 manual counters (ALIFCOUN1M-)
- 3 rolls of plastic sheeting, 4 x 60 m (CSHEPLASWS4)
- 2 shade nets, 80%, 4 m x 50 m (CSHENETS80-)

- 5 containers of 120 L, food-grade plastic + lid (CWATCONT12L)
- Water distributors, foldable, 20L with tap (CWATCONT20F)
- 10 tables
- 20 chairs
- 10 beakers
- Refuse bags 100L
- Basic materials: 1 small roll of wire, 1 pair of wire clippers, 1 MSF adhesive tape

Material for healthcare station
- Wooden pediatric height gauge, 1.30 m (EMEQMEAA3P-)
- Salter 0-25 kg scale (EMEQSCAL25)
- Trousers for Salter scale (EMEQTROU5-)
- Metal medical chest for emergencies
- Feeding products: Plumpy-nut and BP5 biscuits
- rehydration salts (Resomal, ORS), chlorinated drinking water
- mats

Materials for systematic MUAC testing
- 20 mid-upper arm circumference bracelets, MUAC (EMEQBRAB1-)
- 1 x 110 stick with notches at 65 cm

Marking materials
- Gentian violet (crystals, 25g, fl: DEXTGENV1C2): 1 coffee spoonful per litre of water
  → 1000 markings = 1 litre of diluted gentian violet
- 4 small buckets for gentian violet
- Examination gloves
- Protective aprons

Materials to collect data
- Clipboards, feeding tally sheets, pencils, etc.
- Drinking water in water distributor

2.7. Specific cases

2.7.1. Distribution with feeding admission criteria

It will be even more difficult to estimate the number of beneficiaries if the admission criterion is all children under 5 years old (< 110 cm) with MUAC red, orange, yellow or swelling! Information sources may be the last nutrition survey, or better, the results of a screening (MUAC and swelling) to be done before the actual distribution with appropriate awareness-raising. Future beneficiaries will then receive a bracelet allowing them to access the distribution site[47].
This screening may also take place upon distribution (saving time) if very good knowledge of the number of beneficiaries, if the distribution site is not too far from where the target populations live (displaced persons' camp, for instance) and if there is good road access for food supply.

[47] See the CD Log, Blanket Capitalisation Report for Niger 2005, Renzo Fricke

2.7.2. Distribution with Unimix/CSB repackaging

Packaging of family rations of 5 kg of Unimix/CSB in plastic sachets is done preferably in advance; on-site packaging can be done, but this makes distribution more difficult.

• **Hygiene:** The packing of food products requires strict hygiene conditions (cleanliness of premises and utensils, glove-wearing, water supply point with soap for handwashing, etc.)

• **Quality of plastic bags[48]:**

Plastic bags must bear a 5 kg weight in order to be transported by truck or by beneficiaries without the risk of breaking. Locally, it is often difficult to find sufficiently solid plastic bags, and you must take care in terms of availability. It is also essential to perform resistance tests so as to avoid losses, the doubling-up of bags is often necessary *(see characteristics below).*

• **Packaging for transport and storage**

5 kg sachets are packed four-at-a-time into empty Unimix/CSB bags of 25 kg thus allowing easier handling and satisfactory stacking.

Plastic bags for distribution

Local purchase:

In many situations, it is very difficult, if not impossible to find "food-grade" quality plastic bags for packing 5 kg rations; as far as possible, try to adhere as closely as possible to the characteristics below.

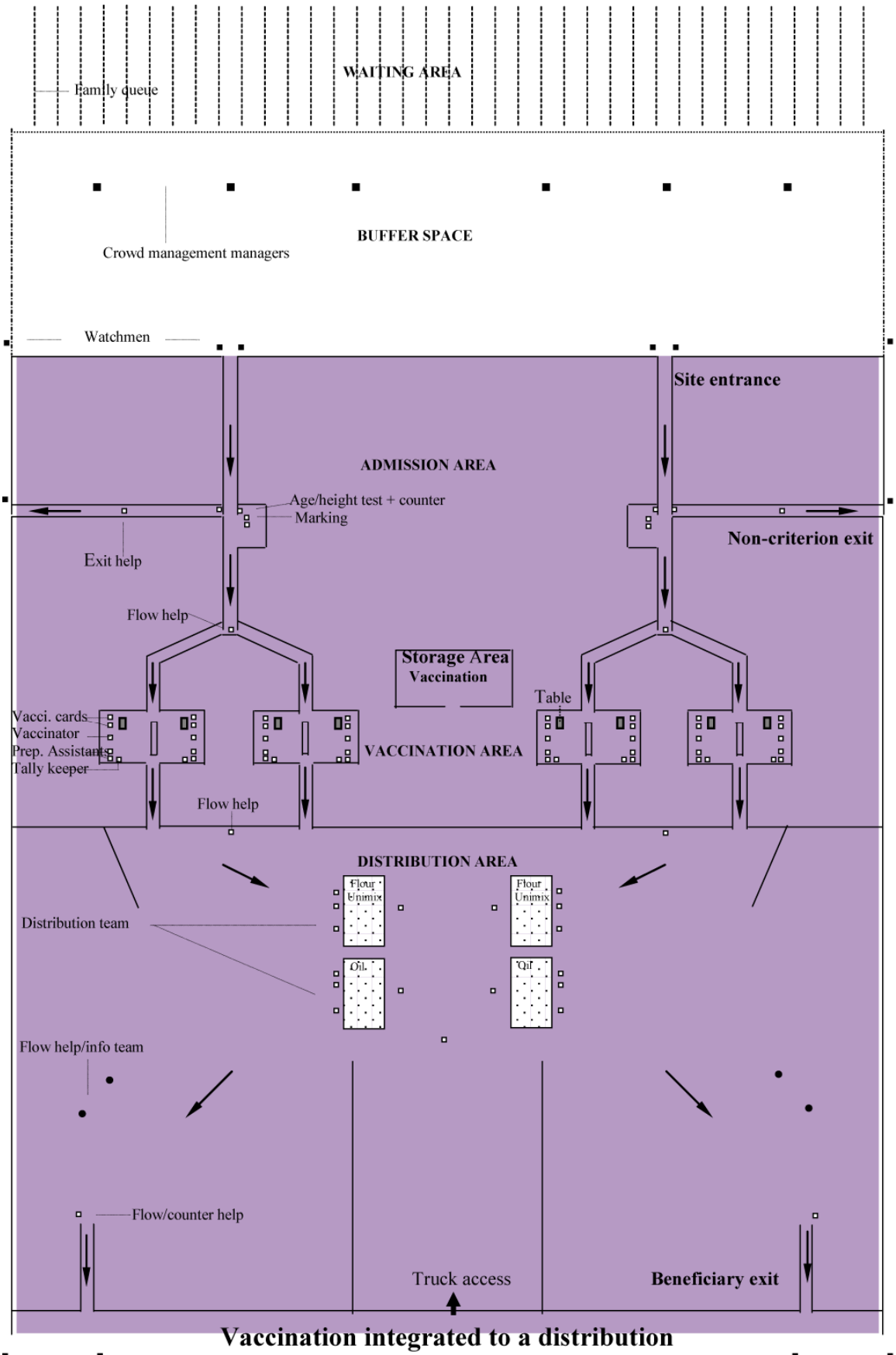
Characteristics:

- Materials: high-density polyethylene (HDPE) or low-density polyethylene (LDPE) (most common material for "plastic bags").
- Appearance: opaque, preferably white, or else black.
- Bag type: heat-sealed bags with or without handles, preferably with handles (easier to tie and transport).
- Thickness: minimum 20 microns (for a 5 kg flour load).
- Size: width 26 cm, height (including handles) 45 cm, side bars 6 to 8 cm.
- Desired marking: "fit for food use", "suitable for food" or "for contact with food" (small square symbol with a glass and a fork).
- Primary packaging: in rolls (generally without handles) or in bundles
- (generally with handles).
- Secondary packaging: taped-up boxes (important for protection against dust).
- Usual packing: 2000 to 5000 units (according to thickness).

2.7.3. Distribution with integrated vaccination

See circuit below.

[48] Plastic buckets are a valid alternative to plastic bags. They are more resistant and greener, and have the advantage of being reusable for beneficiaries. This alternative is very expensive, however.



Vaccination integrated to a distribution

Vaccination/distribution: max. 5,000 beneficiaries per day
Vaccination teams: 2 staff, 8 teams = 16 vacci. card staff, 8 vaccinators, 16 prep. assistants, 8 tally keepers
Distribution team: 3 staff (2 logs + 1 doc), 33 misc. MSF staff ( )
Local team: 6 local staff ( ), 4 'information' doctors ( ), 12 watchmen ( )

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Appendix 2.1. Preliminary Research

Type of information	Level of aggregation	Source	Observation/Objective	Interpretation
GENERAL INFORMATION				
number of inhabitants	national	official document	date of the census	
	regional	official document reg. administration	if possible down to the village	necessary for the field study and proposals for action
ethnic groups	reg.	official document reg. administration	- number of inhabitants - dominant economic activity in each group: agriculture, livestock farming, fishing, etc.	importance of each group in the total population of the region
geographic map	nat.	official document		
	reg.	central administration (ministry of mines)	if possible down to the village	necessary for field study
diet	reg.	official document locally	limited to the basic foodstuffs of meals (grains, root vegetables, legumes, meat, fish)	
political events: safety of the population, conflict areas, peace agreement, etc.	nat. reg.	official or unofficial media international organisations NGOs	- risk to safety - effect on the regional economy	-possibility of conducting the study - possibility of travelling on the main roads - source of breakdown - resumption of economic activities foreseen
context of the evaluation: - lean period/ harvest period (forecasts) - rainy season/dry season - traditional and religious holidays	reg.	ministry of agriculture	develop a general calendar with the usual months of the lean period, harvest, rainy season(s) , religious and traditional holidays (fasting, marriage, etc.)	- possibility of access to the region during the rainy season - opportunity to conduct the study in case of optimistic harvest forecasts
health status: - crude death rate and infant mortality rate - malnutrition levels: study results, monitoring system - epidemics: measles, cholera, maladies diarrheal disease - nutritional deficiencies	reg.	ministry of health reg. health personnel NGOs	probable effect on the nutritional situation	- determine the areas or population groups affected - evaluate the gravity of the situation
food security of the population	nat. reg.	alert system charged with follow-up of the food situation NGOs	become aware of food security	- learn the vulnerable areas or population groups - evaluate the gravity of the situation - understand the causes of the malnutrition - assess the recommendations for action

Type of information	Level of aggregation	Source	Observation/Objective	Interpretation
				and their application
information needs	reg.	international organisations NGOs	- lack of information for those involved	
FOOD AND MONETARY SUPPLY				
production data: cultivation of basic foodstuffs (grains and root vegetables)	nat.	ministry of agriculture official document FAO representation	know the production figures (in T), the areas (in ha) and the yields (in kg/ha)	comparison of data for recent years
production data: cultivation of basic foodstuffs (grains and root vegetables)	reg.	ministry of agriculture official document reg. agriculture personnel	- know the production figures (in T), the areas (in ha) and the yields (in kg/ha) Average daily yield: information generally limited outside the principal foodstuffs	- comparison of data for recent years (assessment of the trend) - evaluation of production in kg/person (trend) - subdivision of the region according to a qualitative assessment of harvests (from poor to good) if figures are unavailable
food balance (quantitative balance of the basic foodstuffs): production + stocks+ imports/demands for consumption + exports	nat. reg.	ministry of agriculture official document FAO representation	- assess the balance between supplies and demands Average daily yield: does not generally take account of secondary grains or root vegetables and gathered products	- comparison of data for recent years (trend) - evaluation of supplies in kg/person - knowledge of the official reserve stocks
livestock farming	reg.	ministry of livestock farming official document reg. livestock farming personnel	- type of livestock - variation of livestock holdings over recent years - unusual movements of breeders - animal deaths (origin) - state of the pastureland and sources of water	understand the possible difficulties of breeders and the appearance of adaptive strategies
production data for fishing, if practised	reg.	ministry in charge of fishing official document reg. fishing personnel	- production in kg/person	- comparison of data over recent years
economic activities: - subsistence/ cash agriculture (production data), rainwater/ irrigated - seasonal migratory/ sedentary livestock farming - fishing - craftsmanship - labourer/unskilled worker - other	reg.	official document planning ministry locally NGOs	know the relative importance of the economic activities	rapid preparation of the food study by subdividing the region into homogeneous areas or populations
ACCESSIBILITY				

Type of information	Level of aggregation	Source	Observation/Objective	Interpretation
prices of basic foodstuffs and livestock	reg.	ministry of statistics, agriculture or livestock farming official document locally	knowledge of the prices in several markets in the region	- comparison of prices over recent months and recent years in the same period - determination of unusual highs or lows
marketing flows of the basic foodstuffs	reg.	ministry of agriculture locally	evaluate the quantities available, taking account of productions of the usual supply areas in the region studied	diagnose any possible supply shortage
population movements (influx and departures)	reg.	HCR-WFP locally	understand the origin of the movement: seasonal and distress migration, migration of refugees	appearance of adaptive strategies
aid projects: - type of aid: free food aid, food for work, etc. - location - quantities envisaged - distribution problems (transport) - targeting	nat. reg.	donors NGOs	if distribution carried out, verification of the targeting	effect on the food situation

Annex 2.2.

Rapid food and nutrition assessment
Assessor's handbook

A/ Information to be recorded + comments
B/ Blank sheet for recording information + agricultural calendar

A/ Information to be recorded + comments

1. POPULATION

➔ Population figures

– Total number of persons affected – Total number of displaced persons – Date when first displaced persons arrived? – Are people still arriving? – Number who arrived last week – Number who arrived the previous week – Number of residents affected – Information on the breakdown of the population: women, men, children < 5 years old, adults, and old people

- Population displacements are a crisis indicator. They should not be confused with temporary seasonal migration.
- The resident population are often put under stress and destabilised when displaced persons arrive ; they too may be in need and should not be forgotten.
- A rough estimate of the breakdown of the population is useful for calculating medical and nutritional needs. A displaced population composed principally of women, children and old people is at high risk of malnutrition.

➔ Vulnerable groups

– Do the authorities or other parties discriminate against particular population groups? – Are old people, handicapped people, unaccompanied children, women heads of household, etc., ignored by the authorities ?

Food insecurity and hunger do not affect the entire population in the same way. Some groups are at a higher risk than others :
- Children under 5 years old (especially those between 6 and 24 months) ;
- Pregnant women and nursing mothers ;
- Marginalised groups: women or old people alone, handicapped people (in some cultures), unaccompanied children, street children, homeless, etc.

2. CONTEXT

➔ Causes of the crisis

– Natural or human catastrophe, or both – Brief history of the crisis, its origin and the principal events leading to the present situation

- Natural catastrophes : repeated droughts, floods, earthquakes, insect plagues, livestock epidemics, etc.
- Human catastrophes : war, political instability, economic crises, etc.

➔ Security

– What is the overall security situation? – Can people move freely, over what distance, at night? – Are certain groups particularly at risk? – Is food a source of insecurity (at individual, family or programme level)?

- Security determines people's behaviour and their ability to take charge of their own lives. If certain groups or the entire population are in a state of insecurity, their liberty of movement is restricted, which in its turn affects their access to markets, fields and productive resources.
- Food can become a security problem during military or political crises, since it is a valuable commodity.

➔ Environment and context

– Rural, urban or camp – Climate : dry, wet, rainfall, night temperature, etc. – What are/were the principal resources : livestock, agriculture, fishing, wage earning, trade, etc? – What are living conditions like (shelter, crowds)? – Have people fled from a rural or urban area ; a dry or wet area ; what were their main occupations? – What have they brought with them (food, kitchen utensils, livestock, etc.)?

- People's location and origin can influence the effects of the crisis and their capacity to develop adaptation mechanisms (e.g., it may be easier for people to find income-generating activities in urban, rather than rural, areas ; conversely, a displaced urban population may have difficulty in developing adaptation strategies in a rural area).

- Displaced people arriving with no possessions are in immediate danger of nutritional deterioration because they have nothing to sell in exchange for food.

3. INFORMATION ON HEALTH AND NUTRITION

To be completed by a medically qualified person !

➔ Mortality

– Crude mortality rate /10,000/day (CMR)
– Mortality rate < 5 years /10,000/day (U5MR)
– Specific mortality rates (depending on context)

The crude mortality and under 5 mortality rates are key indicators for determining the gravity of a situation :

- CMR 0.6/10,000/day = stable situation in developed countries
- CMR 1/10,000/day = severe situation ; > 2/10,000/day = critical situation
- U5MR 2/10,000/day = severe situation ; > 4/10 000/day = critical situation

➔ Morbidity/Epidemics

– Incidence of bloody and non-bloody diarrhoea, respiratory infections, malaria, measles, etc.
– Proof of epidemic(s)
– Measles immunization coverage

- Epidemics of measles and shigellosis have a direct impact on the nutritional status of a population.
- If all children are not protected against measles, a campaign must be organized immediately.

➔ Malnutrition

– Visible cases of adult malnutrition?
– Increases in hospital admissions of malnourished children, PNT or PNS?
– Global Acute Malnutrition and Severe Malnutrition in children < 5 years or in other age groups (including oedema)
– If figures are available : current trends for PB (MUAC), P/A or P/T?

- Visible malnutrition in adolescents and adults is a clear indicator of serious food crisis or famine.
- Put in the results of the rapid nutritional assessment : a high percentage of PB below 110 mm is a clear indicator of the severity of the situation.

➔ Health and nutrition activities

– Are health facilities accessible and functioning? Distance? Type of facility? Accessibility (payment, discrimination, etc.)?
– What are the current nutrition programmes?
– Who is in charge of these programmes?
– Is there sufficient capacity (coverage, quality)?
– What is planned for the near future, number of feeding centres and number of beneficiaries?

Information on health centres in existence, on access to them and their habitual functioning is necessary to decide on intervention requirements and plans.

4. WATER AND PURIFICATION

➔ For the general population

– Has access to an adequate water supply (quantity, quality) changed from what is normal?
– Do people buy water? If so, what does it cost?
– Distance and time to reach water access points (< 30 minutes queuing)?
– Latrines: Presence? Condition? Number of users (more or less then 20 persons/latrine)?

- In the first days of an emergency, the minimum quantity of water required for survival (drinking and cooking) is 7 litres/person/day. As quickly as possible, 15 to 20 litres/person/day should be available.
- At least one hand pump for 500-750 people, one tap for 200-250 people, should be available.
- Minimum 20 people per latrine.

➔ In health facilities and feeding centres

- Sources of water ? Quality ? Quantity ?
- Waste disposal ?
- Number of latrines ?

Do not forget to test the water and purification system in health facilities !

5. FOOD SAFETY

➔ People's eating habits

– Composition of the standard meal today (indicate type of product and quantity in gr/pers)?
– Composition of the standard meal in a normal situation
– Are people eating food to which they are not accustomed?
– How many meals/day were given to children yesterday? Is this the same number as before the crisis?
– Cultural or religious taboos ?
– Food preparation practices ?
– Price and availability of kitchen utensils ?
– Until what age are infants habitually breastfed? How are children habitually weaned? Have breastfeeding practices practices changed recently? How?

Above all, do not hesitate to lift the lids of cooking pots !

- Standard meal : keep to basic foodstuffs : cereals, root vegetables, beans, milk, fish, meat, etc.

- The current diet compared to **that of the same season** in a normal year provides information on the severity of the food crisis for the resident population, and on the risk of micronutrient deficiencies or the risk of food poisoning (toxins in uncultivated food, badly washed cassava or aflatoxin caused by bad storage).

- Information on breastfeeding will help in deciding how to deal with malnutrition in infants. In countries where bottle feeding is a standard practice, it is important to obtain information on the availability and accessibility (price) of infant formula, and on the availability of water (quantity, quality, price).

➔ Food availability, access and markets

– Are there reserve supplies at household, community and regional level ?
– How do families store food supplies ? What state are they in – quality and quantity ?

- National, regional and village food reserves : some countries have set up buffer stocks to be made available quickly in cases of food shortage. Different strategies are possible at national and regional level. The authorities may decide to stock markets with low-priced food, "work for food" programmes can be set up or food can be distributed to population groups considered as particularly vulnerable.

– Family food reserves : loft, buried, in bags in the house, etc. ?

– Change in provenance of food eaten now : personal reserve, market, picked, food aid, gifts (parcels), borrowed ?
– Resources used to obtain food consumed ?

– The provenance of food helps in determining the level of food insecurity :
- Food aid only : serious food crisis or famine.
- Change from consuming own produce to buying in the market : may be an indicator of food crisis.
- Food picked in the wild (if not customary for the people): food insecurity or crisis.

– Resources used to obtain food consumed : selling livestock, tools, goods, work, etc.

Market
– What types of food are sold in the market ?
– Market conditions : busy, empty, similar to a normal year ?
– Price changes for some essential foodstuffs and commodities ?
– Comparison between current prices and those of the same time in a normal year.
– Are non-productive goods (jewellery, furniture, etc.) increasingly offered for sale ? Is this unusual for the season ?
– Are productive goods (tools, seed, major part of livestock, farm, etc.) being sold ?
– Are markets accessible to the entire population?
– Are means of cooking available ? If so, describe them (wood, fuel product, etc.).

– The availability of food and basic commodities on the market provides valid information on the state of food insecurity. For example :
- An empty market with only a few, dear, food items may be an indicator of serious food crisis or famine.
- Less local food and sold at a higher price (than at the same time in other years) may be an indicator of food crisis.
- Food aid sold cheap in the market may indicate that beneficiaries lack essential goods (soap, cooking pots, shelter, etc.) or need to vary their food, or that the food is not acceptable.
- In pastoral areas, livestock sold cheap and cereals sold dear are an indicator of seasonal food insecurity or food crisis (the ratio "livestock versus cereals" is much worse than at the same time in a normal year).

• Many situations involve problems of access to, rather than availability of, food, which means that markets can be very busy but for various reasons people have no access to food.

– The sale of non-productive or productive goods is an important factor indicating the state of food insecurity.

– Access to the market gives displaced people the opportunity to vary their food and to have access to essential non-food goods.

Food production

➔ ***Draw up or complete the agricultural calendar***

For agricultural communities :
– How do this year's harvests compare with those of a normal year ?
– How many months' consumption cover a normal harvest ; the current crop ? ?
– Did planting turn out as hoped, and what type of harvest is expected ?
– Is seed available for the next growing season (price) ?

For pastoral people :
– Type of livestock (region, village, family)?
– Size of herds ?
– Health of livestock (epidemic ?)
– Can dead livestock be seen along the roadside ?
– How do livestock slaughter, mortality and growth rates compare with those of a normal year ?
– What is the meat/basic cereals price ratio ?

	Janv	Fev	Mars	Avril	Mai	Juin	Juillet	Août	Sept	Oct	Nov	Dec
Température	H	…			Période très chaude				Température diminue : journée c + fraîches			H
Pluie/Sec				Saison sèche			Saison des pluies= hive					
AGRICULTURE				PERIODE DE SOUDURE (minimum 4 mois si récolte suffisantes)								
-*millet*						Semailles				Récoltes		
-*sorghum*	Récolte					Semailles				Récoltes		
-*haricots*						Semailles					Récolte	
-*arachide*							Semaille			Récoltes		
ELEVAGE				Migration vers le sud ou vers trouver herbe. Ce sont surtout l hommes qui parten			Retour bétail avec l pluies			vaccination		
Chameau							Naissances ???					
Vache							Naissances , surtout en juillet et en août					
Chèvre										Naissances, srt en		
Mouton							Naissances, srt en ac					
Quand les enfants meur plus?												
Food stock plus faible				moins de lait disponible								

You will find a blank agricultural calendar form at the end of the sheet for recording information.

- Quality of harvests : collect information on previous years', current and next harvests categorising them as “bad”, “average” or “good”. Compare years to assess the quality of the most recent, current and next harvests. Estimate if the current or next lean season is longer or begins earlier than usual. Understand the possible difficulties facing farmers : drought, flooding, predators, lack of manpower, lack of seed, tools, etc. Decide how the land will be accessed, especially by displaced people or others.

- Seed : it is of crucial importance that seed be available and accessible (affordable price) for the next growing season. In cases of serious food crisis or famine, when families are obliged to eat or sell their seed or when the price of seed on the market is too high, growers will not be able to plant in time and future crops will be damaged.

- Livestock : lack of food for livestock will oblige herdsmen to slaughter part (food insecurity or food crisis) or all (serious food crisis or famine) of their livestock. This will cause the price of meat to fall on the market. Dead livestock along the roadside or in the bush is an indicator of major distress (serious food crisis or famine). When herdsmen can no longer slaughter their livestock (no market or animals too weak), the animals die and are abandoned. When figures from veterinary services or EWS (Early Warning System) are available, comparing current birth, death and slaughter rates with those of a normal year help in determining the state of the crisis : food insecurity or food crisis. It should be noted that recovery time (to build livestock up again) is much longer – several years – in pastoral communities than in agricultural communities.

➔ Activities

– Are new activities being developed (hunting, fishing, etc.)?

New activities may temporarily alleviate the effects of the crisis. At times of food insecurity, they are usually temporary. During food crises or famines, when families have lost their entire capital, these changes can become permanent and threaten their future autonomy.

➔ Migration

– Have temporary migrations – in search of food, temporary work or pasture – increased ?
– Indicate the state of pastures and water sources ; indicate non-habitual migratory patterns by herdsmen and their herds ; understand possible difficulties faced by stockbreeders and their adaptation strategies.

A distinction needs to be made between habitual and non-habitual migration. Knowledge of the regional context is necessary to interpret the significance of different movement patterns.

- In every society, movements of large numbers of people in search of food for immediate survival (stress migration) indicate famine.
- In rural populations, when more families, or family members, than usual migrate, an imminent crisis is likely.
- In pastoral societies, when families or family members are obliged to move further than usual in search of pasture or water, a food crisis is likely.

➔ Purchasing power

– Are wages stable ? Lower ?
– What is the trend for purchasing power ?

Urban people and wage earners are very sensitive to increases in the cost of essential goods and market employment. A net decrease in purchasing power is an indicator of economic crisis. In urban areas, food insecurity is often more difficult to assess, given the great disparities within the population. The role of the grey economy can be significant but quite difficult to assess.

➔ General Food Distribution (GFD)

– Who is in charge of distribution ?
– Number of beneficiaries
– Is distribution fair ? Are some groups excluded ?
– What in theory is the ration?
– Date, content and quantity of the most recent distribution
– Organization of distributions (chaotic, violent, etc.)
– Are there current or anticipated breaks in food supply (pipeline, transport etc.) ?
– When is the next distribution planned ?
– Is there any suspicion that food is being diverted ?

In time of food crisis or famine, GFD is a key factor in maintaining the health of the population.

6. OPERATIONAL INFORMATION

This information is necessary to decide on strategy, drawing up of the programme and the scale of intervention.

➔ Accessibility

– Major constraints experienced by the people and by agencies working in the region – Geographical accessibility of the affected region : means of communication available (road, rail, water, air) – What is the tonnage capacity ? Time ? – Means of communication

• Information must take account of access to people in need having due regard to the condition of available roads, the availability of a landing strip, and other means of transport and their capacity.

• Security problems in the area must be taken into account as they will affect the maximum number of expatriates and the team's freedom of movement in the region, including in the evening and at night.

➔ Other agencies

– Which other humanitarian agencies are involved and what are their activities ?

It is essential to know which other humanitarian agencies are operating in the region and their activities to avoid duplication of programmes and thus ensure better coverage of the population at risk.

➔ Resources

– Possibility of obtaining food and/or equipment locally (WFP, local market) – Constraints and opportunities in the field of human resources (qualified local staff, usual pay rates, maximum number of expatriates) – Are appropriate buildings or health facilities available for possible use as feeding centres ? – Which sources of energy (type, voltage, frequency, interruptions in supply) ? – Storage capacity (type, state, facilities) ? – Telecommunication facilities available ?

• Food and equipment : The possibility of buying equipment and food locally, in the region or in the capital should be taken into account for the organisation of purchasing and logistics. The advantages and constraints of buying locally should always be taken into consideration, with the aim of supporting the local economy. When buying food, great care should be exercised, as buying food in areas enduring food shortage may aggravate the shortage by increasing prices and reducing other people's access to food. If buying food locally is possible, strict criteria (quality, packaging, labelling, etc.) must be respected.

- Qualified human resources : The presence or absence of qualified local staff is important when programmes are being drawn up. In a region with almost no qualified staff, treatment protocols have to be simple, training time increased and more external staff recruited.

- Existing infrastructures : a list of possible locations (health facilities, buildings, etc.) where feeding centres could be opened is important to plan logistic requirements and the time necessary for setting up feeding centres.

B/ Blank sheet for recording information + agricultural calendar

Rapid assessment of the food situation made at ..... on ..... / ..... / .....

Informations requises	Réponses
1. POPULATION	
Population figures Total number of persons affected – Total number of displaced persons – Date when first displaced persons arrived? – Are people still arriving? – Number who arrived last week – Number who arrived the previous week – Number of residents affected – Information on the breakdown of the population: women, men, children < 5 years old, adults, and old people	
Vulnerable groups – Do the authorities or other parties discriminate against particular population groups? – Are old people, handicapped people, unaccompanied children, women heads of household, etc., ignored by the authorities ?	
2. CONTEXT	
Causes of the crisis – Natural or human catastrophe, or both – Brief history of the crisis, its origin and the principal events leading to the present situation	
Security – What is the overall security situation? – Can people move freely, over what distance, at night? – Are certain groups particularly at risk?	

– Is food a source of insecurity (at individual, family or programme level)?	
Environment and context – Rural, urban or camp – Climate : dry, wet, rainfall, night temperature, etc. – What are/were the principal resources : livestock, agriculture, fishing, wage earning, trade, etc? – What are living conditions like (shelter, crowds)? – Have people fled from a rural or urban area ; a dry or wet area ; what were their main occupations? – What have they brought with them (food, kitchen utensils, livestock, etc.)?	
3. INFORMATION ON HEALTH AND NUTRITION (to be completed by a medically qualified person)	
Crude mortality rate /10,000/day (CMR) – Mortality rate < 5 years /10,000/day (U5MR) – Specific mortality rates (depending on context)	
Morbidity/Epidemics – Incidence of bloody and non-bloody diarrhoea, respiratory infections, malaria, measles, etc. – Proof of epidemic(s) – Measles immunization coverage	
Malnutrition – Visible cases of adult malnutrition? – Increases in hospital admissions of malnourished children, PNT or PNS? – Global Acute Malnutrition and Severe Malnutrition in children < 5 years or in other age groups (including oedema) – If figures are available : current trends for PB (MUAC), P/A or P/T?	
Health and Nutrition activities – Are health facilities accessible and functioning? Distance? Type of facility? Accessibility (payment,	

discrimination, etc.)? – What are the current nutrition programmes? – Who is in charge of these programmes? – Is there sufficient capacity (coverage, quality)? – What is planned for the near future, number of feeding centres and number of beneficiaries?	
4. WATER AND PURIFICATION	
For the general population – Has access to an adequate water supply (quantity, quality) changed from what is normal? – Do people buy water? If so, what does it cost? – Distance and time to reach water access points (< 30 minutes queuing)? – Latrines: Presence? Condition? Number of users (more or less then 20 persons/latrine)?	
In health facilities and feeding centres - Sources of water ? Quality ? Quantity ? - Waste disposal ? - Number of latrines ?	
5. FOOD SECURITY	
Eating habits – Composition of the standard meal today (indicate type of product and quantity in gr/pers)? – Composition of the standard meal in a normal situation – Are people eating food to which they are not accustomed? – How many meals/day were given to children yesterday? Is this the same number as before the crisis? – Cultural or religious taboos ? – Food preparation practices ? – Price and availability of kitchen utensils ? – Until what age are infants habitually breastfed? How	

are children habitually weaned? Have breastfeeding practices practices changed recently? How?	
Food availability, access and markets Food stocks – Are there reserve supplies at household, community and regional level ? – How do families store food supplies ? What state are they in – quality and quantity ? Provenance of food – Change in provenance of food eaten now : personal reserve, market, picked, food aid, gifts (parcels), borrowed ? – Resources used to obtain food consumed ? Market – What types of food are sold in the market ? – Market conditions : busy, empty, similar to a normal year ? – Price changes for some essential foodstuffs and commodities ? – Comparison between current prices and those of the same time in a normal year. – Are non-productive goods (jewellery, furniture, etc.) increasingly offered for sale ? Is this unusual for the season ? – Are productive goods (tools, seed, major part of livestock, farm, etc.) being sold ? – Are markets accessible to the entire population? – Are means of cooking available ? If so, describe them (wood, fuel product, etc.).	

Food production ➔ ***Draw up or complete the agricultural calendar*** *(see blank form below)* *For agricultural communities* : – How do this year's harvests compare with those of a normal year ? – How many months' consumption cover a normal harvest ; the current crop ? ? – Did planting turn out as hoped, and what type of harvest is expected ? – Is seed available for the next growing season (price) ? *For pastoral groups* : – Type of livestock (region, village, family)? – Size of herds ? – Health of livestock (epidemic ?) – Can dead livestock be seen along the roadside ? – How do livestock slaughter, mortality and growth rates compare with those of a normal year ? – What is the ratio meat price/basic cereals ?	
Activities – Are new activities being developed (hunting, fishing, etc.) ?	
Migration – Have temporary migrations – in search of food, temporary work or pasture – increased ? – Indicate the state of pastures and water sources ; indicate non-habitual migratory patterns by herdsmen and their herds ; understand possible difficulties faced by stockbreeders and their	

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adaptation strategies.	
Purchasing power – Are wages stable ? Lower ? – What is the trend for purchasing power ?	
General Food Distribution (GFD) – Who is in charge of distribution ? – Number of beneficiaries – Is distribution fair ? Are some groups excluded ? – What in theory is the ration? – Date, content and quantity of the most recent distribution – Organization of distributions (chaotic, violent, etc.) – Are there current or anticipated breaks in food supply (pipeline, transport etc.) ? – When is the next distribution planned ? – Is there any suspicion that food is being diverted ?	
6. OPERATIONAL INFORMATION	
Accessibility – Major constraints experienced by the people and by agencies working in the region – Geographical accessibility of the affected region : means of communication available (road, rail, water, air) – What is the tonnage capacity ? Time ? – Means of communication Other agencies – Which other humanitarian agencies are involved and what are their activities ?	

Resources – Possibility of obtaining food and/or equipment locally (WFP, local market) – Constraints and opportunities in the field of human resources (qualified local staff, usual pay rates, maximum number of expatriates) – Are appropriate buildings or health facilities available for possible use as feeding centres ? – Which sources of energy (type, voltage, frequency, interruptions in supply) ? – Storage capacity (type, state, facilities) ? – Telecommunication facilities available ?	

Agricultural calendar

	January	February	March	April	May	June	July	August	September	October	November	December
Temperature												
Rain/Drought												
AGRICULTURE												
-												
-												
-												
-												
BREEDING												
-												
-												
-												
-												
Availability of milk												
Consumption of meat												

Update
MSF- OCB Rapid Food and Nutrition Assessment
Somali Region, Ethiopia

Team: ..... (Nurse.EP.Support),
.....(Log.Assessment.Co),
.....(MD),
.....(Nurse)

Staff: .....(Nurse), ...(Nurse),
.....(Translator), ...(Translator)

Area assessed: **BARE District,** **Afder Zone** 03-04/02/2006

Objectives

Carry out a rapid food and nutrition assessment among the populations living in the drought affected areas in the Somali Region, Ethiopia, in order to estimate/define the:

- Malnutrition rates among children from six months to under five years old,
- Health status of the population and the Mortality rates,
- Water availability,
- Level of food insecurity,
- Migration patterns and population concentrations.

Methods

- Interviews with key persons (Administration, Elders, Health Centres),
- Interviews with families,
- Observations,
- Rapid assessment with MUAC among children with the height from 65 cm to 110 cm (= 6 months to under five years old).
  The MUAC is registered in two separate height/age groups:
  - 65 cm - 84,9 cm (6-23 months),
  - 85 cm - 110 cm (24-59 months).

Background

The Somali region is a semi desert area. Its population estimated at 4,2 millions inhabitants is mostly rural and comprises a majority of pastoralists, but also agro-pastoralists groups. In seven zones of the region, the local economy relies heavily on the two rainy seasons : Gu' (from mid-March to May) and Deyr (October to November). In between these seasons the region experiences two dry seasons Hagga and Jilaal. However, the Somali region is characterised by recurrent drought, erratic and unreliable rainfall, lack of basic services and poor infrastructure posing great risks for both human and livestock survival.

The Deyr season of 2005 has produced very few rainfalls much below the normal average. Consequences have been visible since November with a significant fall of market prices for cattle, water shortages, depletion of pastures, loss of cattle and migration of herds inside Ethiopia but also from Kenya and Somalia.

Date:	03-04/02/2006
District:	**BARE**
Zone:	**AFDER Zone**
Areas assessed:	BARE town, ELDUB kebele (50 km South of Bare), DABAB kebele (25 km East of Bare) SIRSIRI kebele (25 km South of Bare) DENADIN kebele (24 km West of Bare)

1. Population

1.1 Population figures

- Bare district consists of 48 kebeles and has a total population of 110.250
  Bare town has a population of 11.000 and the 7 kebelas within 1-10 km from Bare town has population of 5.000.
- Approximately 5.000 displaced have arrived to Bare town since one month because of the draught. The displaced are coming from the South and still arrive with an increasing number.
- The population figures are coming from a head counting during a food distribution for four years ago. The population figures do not seem reliable and it is very difficult to obtain population figures for the assessed kebelas.
- The households in the kebeles are dispersed over large areas. A part of the population, often whole families, has left the kebeles in search of water and grazing land. While some families are moving around in the bush around the kebeles.

1.2 Vulnerable groups

- The displaced that has arrived to Bare town consists mainly of women, children and elderly. They are staying with the resident families or have built a shelter next to the houses of the resident families.

2. Context

2.1 Causes of crisis

- Draught since two years. A little rain fell in some parts of the region in April 2005.

2.2 Security

- Stable; no reports of security incidents.

2.3 Environment and background

- Climate: Arid.
- Main resources: Pastoralists with some small scale agriculture activities.
- Livestock has decreased significantly in number and no harvest since July 2005.
- Living conditions: Shelters widely dispersed, except for some concentration of in the centre of Bare town.

3. Health and Nutrition information

3.1 Mortality

- There are four cemeteries in Bare town. It is difficult to identify the fresh graves in the cemetery in Bare town due to the sand that dries up quickly in the hot and dry climate. Four adult graves and one child grave could be identified as recent, within the last week.
- The health post in Bare is keeping a record of the mortality in Bare town, they report no excessive mortality. 10 deaths have been recorded since two months: 2 pregnant women with complications at delivery, 4 malnourished children, 2 adults with watery diarrhoea, 1 adult with bloody diarrhoea and 1 adult with malaria.
- No excessive mortality reported by the elders and the households in the community.

3.2 Morbidity/Epidemics

- Main pathologies are: Watery diarrhoea, malaria and respiratory tract infections.
- Sporadic cases of bloody diarrhoea have been reported, but no increase.
- One case of measles has been detected in the HP (the child had crossed the border from Somalia). Another 15 cases of measles have been reported from one area in the South bordering Somalia.
- Unicef and DPPC are planning to start a measles vaccination campaign in the Bare district next week. Target population: 19.000 children from 9 months to < 5 years old.

3.3 Malnutrition

- No visible cases of adult malnutrition.

- Some cases of malnourished children identified during the rapid MUAC screening, see the result in table below.

- **Result of Rapid MUAC Assessment in BARE district:**

Total: BARE District	Total	65 - 84,9cm	85 - 110cm
TOT POPULATION	110250		
TOT CHILDREN SCREENED	544	115	429
TOT CHILDREN MUAC > 135	391	63	328
TOT ENFANTS MUAC 135 – 125	106	22	84
TOT CHILDREN MUAC 125 – 110	40	24	16
TOT CHILDREN MUAC < 110	1	1	0
TOT OEDEMES	6	5	1
% SEVERE ACUTE MALNUTRITION	**1,3**	**5,2**	**0,2**
% MODERATE ACUTE MALNUTRITION	**7,4**	**20,9**	**3,7**
% GLOBALE ACUTE MALNUTRITION	**8,6**	**26,1**	**4,0**

- The screening with MUAC was carried out systematically from house to house in Bare town (465 children), Dabab kebele (25 children), Eldub kebele (13 children) and Sinciri kebele (41 children). Please see excel sheet annex for more detailed information: "Bare.MUAC.03-04.02.2006.
- More children should have been found according to the population figures. The screening teams have a good coverage in the areas that have been assessed. No excessive mortality is reported or observed. The only possible explanation that can be given to the small number of children that was found is either that the population figures are overestimated or that part of the population has left with their animals in search of water and pasture. Denadin kebele was also visited, but there were no children present.
- The overall impression is that the children still have a relatively good health and nutritional status.
- The children in the age group from 6 months to <2 years seems to be more vulnerable and the malnutrition rates are higher in this age group. Although the mothers says that they are breastfeeding their children until they are 2 years old.
- The MUAC results do correspond well to the clinical status of the children.
- The malnutrition rates for the children between 65 cm to 110 cm in Bare district are:
  - Severe Acute Malnutrition: 1,3%
  - Moderate Acute Malnutrition: 7,4%
  - Global Acute Malnutrition: 8,6%
- No available data for MUAC or W/H trends in the HP.

3.4 Health and nutritional activities

- There is a total of 8 HP (health posts) in Bare district:
  6 of the HP are closed, some due to the migration of the population in the villages and some of them have never been open since the construction.
  3 HP in the district are open: Bare, El Har and Washako. But none of them are making consultation for the moment because they all have a rupture of drugs.
- The Health Bureau in Jijiga supplies the District with drugs. The next supply is supposed to take place in one month. But the District has problems finding suitable vehicles to go all the way to Yiyiga to pick up the supplies.
- The HP in Bare has an EPI programme.
- Staff Bare HP: 3 junior nurses, 1 lab.techn, 1 junior midwife and 2 PHC-workers.
- Severe cases are referred either to the HC in Cherrati (~160 km) or to the hospital in Gode (240 km).
- No private clinics or pharmacies, meaning that the population in the district has almost no access to health care at all.
- No nutritional activities in the HP.

4. Water and sanitation

- Bare town has 8 wells and 1 water pump. The water in the wells is a bit salty.
- No queuing or crowding at the water points.
- The water in the wells is free. The water from the pump costs 7 Birr/Drum of 200 litres and 1 Birr/jerry-can of 20 litres.
- Some of the kebeles have no wells or other water points. These kebeles has a water tank that is supplied with water trucking by ICRC, which is the case for Dabab kebele. The tank is supplied every three days, which allows every family to take around 14 litres of water per day (2-3 litres of water/person/day). If there is a rupture of water in the tank, the population goes to Bare town to fetch water. To go there and come back takes 24 hours.

- The big majority of the households does not have latrines and defecate in the surroundings.

5. Food security

5.1 Diet

- Before the population used to eat: rice, spaghetti, sorghum, maize, bread, meat and milk. Nowadays the population is eating mainly: wheat, millet, sorghum, tea and sugar.
- Before the population used to eat 3 meals per day. The number of meals has been reduced 1-2 meals per day. While some families says that some days they eat no meal and only drink tea with sugar (which is less expensive and helps to keep away the feeling of hunger).
- The infants are usually breastfed until they have reached the age of 2 years old.

5.2 Food availability, access and markets

5.2.1 Food stock

- No food stocks available at household, community or district level.

5.2.2 Food origin

- Few households that are better off are eating food from own reserve. Some households have small quantities of food that they received from a food distribution that took place one week ago. The majority of the households buy some staples on the market in Bare, or from traders from Somalia, with money the gain from gathering. The residents say that they share some of their food with the displaced in Bare. The sellers at the market gives occasionally some credit for buying food. Some people also exchange their belongings for food, mainly non-productive assets.

5.2.3 Market

- The animal market is not operational since two months. The population used to sell their livestock to traders from Somalia, but now there are no market fro selling since the livestock are weak.
- Some traders have closed their shops in the market because the business is not good since there is no money in the community.
- The market is rather poor and only modest quantities of the most common food and non-food items are available.
- Most of the staple food is bought from traders in Somalia. Some of the staples, like the wheat, the sorghum and the millet are in bags destined for food distributions and not for selling.
- The prices of staple food have increased significantly since two months, while the prices for livestock has decreased.

Quantity:	Food item:	Prices now in Birr:	Prices before in Birr:
1 can (same size as Nido)	Wheat	3,5	1,5
1 can	Millet	3,5	2
1 can	Sorghum	5	1
1 can	Sugar	7	4
3 litres	Oil	35	25
1 can	Brown beans	9	4
1 can	Milk	6	1
1	Goat	50	200
1	Cow	500	3000
1	Camel	1000	4500

5.2.4 Food production for agricultural communities

- The population normally plant when they rain starts to fall and the harvest can be expected three months later. Only a little rain fell in April 2005 and the harvest in July was scarce and did not last long.
- The next rain is expected in April. The households have no seeds for planting.

5.2.5 Food production for pastoral populations

- The rain allowed some grass to grow, which enabled the livestock to have some fodder up to three months ago. Now there are no more pastures to find for the livestock. Some pastoralist are migrating in search of food for their animals. While the population in Bare town give their livestock, mainly goats and donkeys, dry grass that has been gathered in the bush. Some families have slaughtered the adult goats and keep only the small goats that eat less quantities of food. Some families share their family meals, like millet, with the remaining goats.
- The dominating livestock are normally goats, sheep, cows, donkeys and camels. The more fragile livestock like the cows and the sheep are dying and very few remain in the area. The goats have also started dying and the population fears that the goats will only live for one or two months. The camels are more resistant to draught and might survive for another two-three months according to the population.
- The number of livestock has decreased significantly in number. Some have migrated and many are reported dead because of lack of food and water. Relatively few livestock are visible in Bare and the surrounding kabelas. But no dead livestock on the roads or in the villages has been observed.
- The population do not eat the remaining livestock, they say that they are to skinny and there is not much meat on them. They are not able to sell any of the live stock either, but sometimes they trade them in the market for some staple food.

5.3 Activities

- The population that does not have their own reserve. They are gathering firewood, grass, gum and incense oil that they sell on the market in order to get some money to buy staple food. (1 kg of gum = 3 Birr, 1 kg of incense = 3 Birr)
- There are some wild animals around like small antelopes, squirrels, monkeys, wild pigs and birds. In general hunting and consumption of wild animals are not accepted by the religion and the major clans would consider anyone who hunts as an outcast. Some inferior clans are hunting. The team that went to assess Aldub kebele were proposed some antelope meat.

5.4 Migration

- Many families from Bare have left with their livestock to go to Laba Shilindi in Afder zone. Some of them are coming back due to lack of pasture, water and outbreaks of diseases among animals and human beings. (Laba Shilindi is located 35 km from Cherrati and will be assessed in the coming days.)
- Families from the assessed kebeles are reported to have left with their livestock either to Bare, to the North towards Gode or to Somalia. Some families starts to come back to their village of origin since there are no pasture to find anywhere for the animals.
- The families that have arrived to Bare are mainly coming from the areas South and East of Bare.
- The kebeles in the South are going to the North. The villages in the South are empty, the mobile schools are closed and the wells dry. Some of theses families are returning to Bare because the wells between Bare and Gode are dry and there is no pasture in the areas. The livestock are no more capable of travelling long distances because of lack of water.

5.5 Purchasing power

- The purchasing power has decreased significantly.

5.6 General food distribution (GFD)

- One food distribution took place in Bare last week. The food came from the federal government and they were supposed to have received 2200 kintal. However only 1700 kintal arrived, some was deviated on the way to Bare. They were supposed to distribute 15 kg/person to 70.000 persons. Instead they distributed only 1-2 kg/person to 9.000 persons. The distributed food consisted mainly of sorghum, some beans and very little oil.

6. Operational information

6.1 Accessibility

- The road between Gode and Gosgusdusbok is in a good condition (distance 180 km). The road between Gosgusdusbok and Bare is in a very bad condition (distance 65 km). It takes 7-8 hours to go from Gode to Bare. The road between Gode – Hergele – Bare would be easier for a truck to take.
- The kebeles in the Bare district are widely dispersed and some of them might be difficult to access.

6.2 Other actors

- ICRC has a water project in Bare district. No other actors are present in the district.
- SC-UK has done a nutritional survey in Bare.
- WFP have done an assessment in Bare.
- Unicef and DPPC are planning to do a measles vaccination campaign in Bare district. Target population are children between 9 months to under five years old, in total 19.000 children.

6.3 Resources

- Not possible to acquire food or material locally.
- No skilled HR available locally.
- No suitable buildings that can be used for feeding centres.
- No storage facilities available.
- The administration has a radio and a telephone.

7. Other information / Comments:

- A drought and a nutritional crisis with high mortality rates affected Bare district in 1992. MSF/H was running a nutritional program in Bare that time. The authorities and the population seem to be quite stressed and afraid about the current situation. They say that they remember well the signs before the previous nutritional crisis in 1992 and that the current situation resembles the situation that was two months before that crisis. By other words, they fear that they might face the same nutritional crisis in one to two months from now.

8. Conclusions

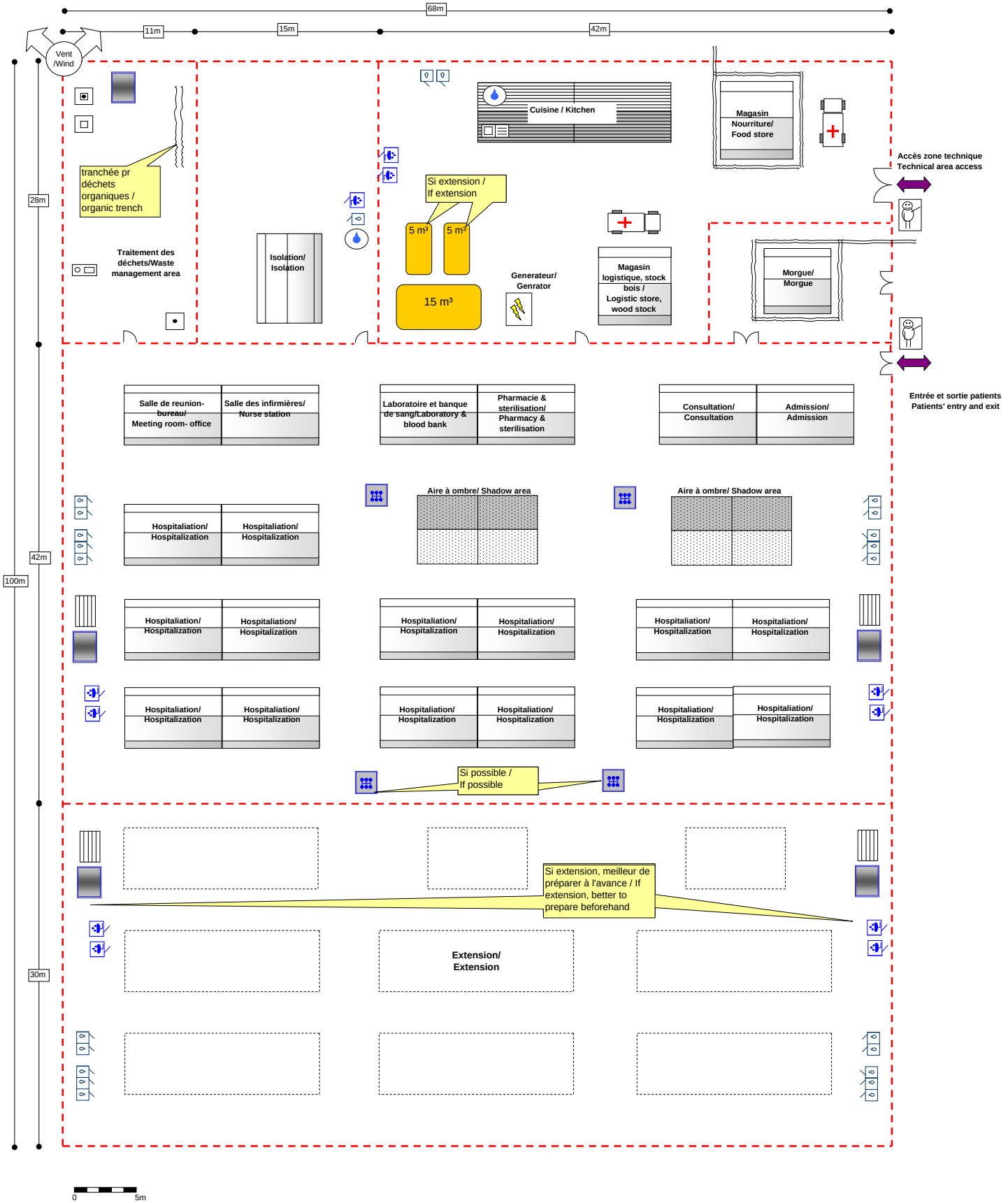
- There is a serious food insecurity in Bare district and the food availability and accessibility is greatly reduced.
- There is no pasture for the livestock. The fodder for livestock is finished since three months.
- The livestock is not in a good condition and some have started to die. The prices of the livestock have decreased significantly and it is even getting difficult to sell the livestock on the market.

- There is no water for the livestock in the area anymore and many pastoralists has migrated towards Laba Shilindi or the North towards Gode. Some of them have returned since there are no water or pasture to be found anywhere.
- The prices of staple food on the market have increased significantly.
- The population has developed coping mechanisms such as collection of firewood, gum, incense and grass in the bush. The items are sold in the market in order to buy staple food for consumption.
- There is a serious water shortage in the district and the population in some kebeles has limited access to water in sufficient quantities.
- The population in Bare district have no access to healthcare at all since the health posts are either closed or non functional because of rupture of drugs.
- No excessive mortality is reported.
- No evidence of any epidemic.
- A total of 544 children between 65 cm to 110 cm were screened with MUAC in Bare district and the malnutrition rates for the children are:
  - Severe Acute Malnutrition: 1,3%
  - Moderate Acute Malnutrition: 7,4%
  - Global Acute Malnutrition: 8,6%
- The overall health and nutritional status of the population seems still to be relatively good. But if the current situation continues the health and nutritional status of the population could rapidly deteriorate.

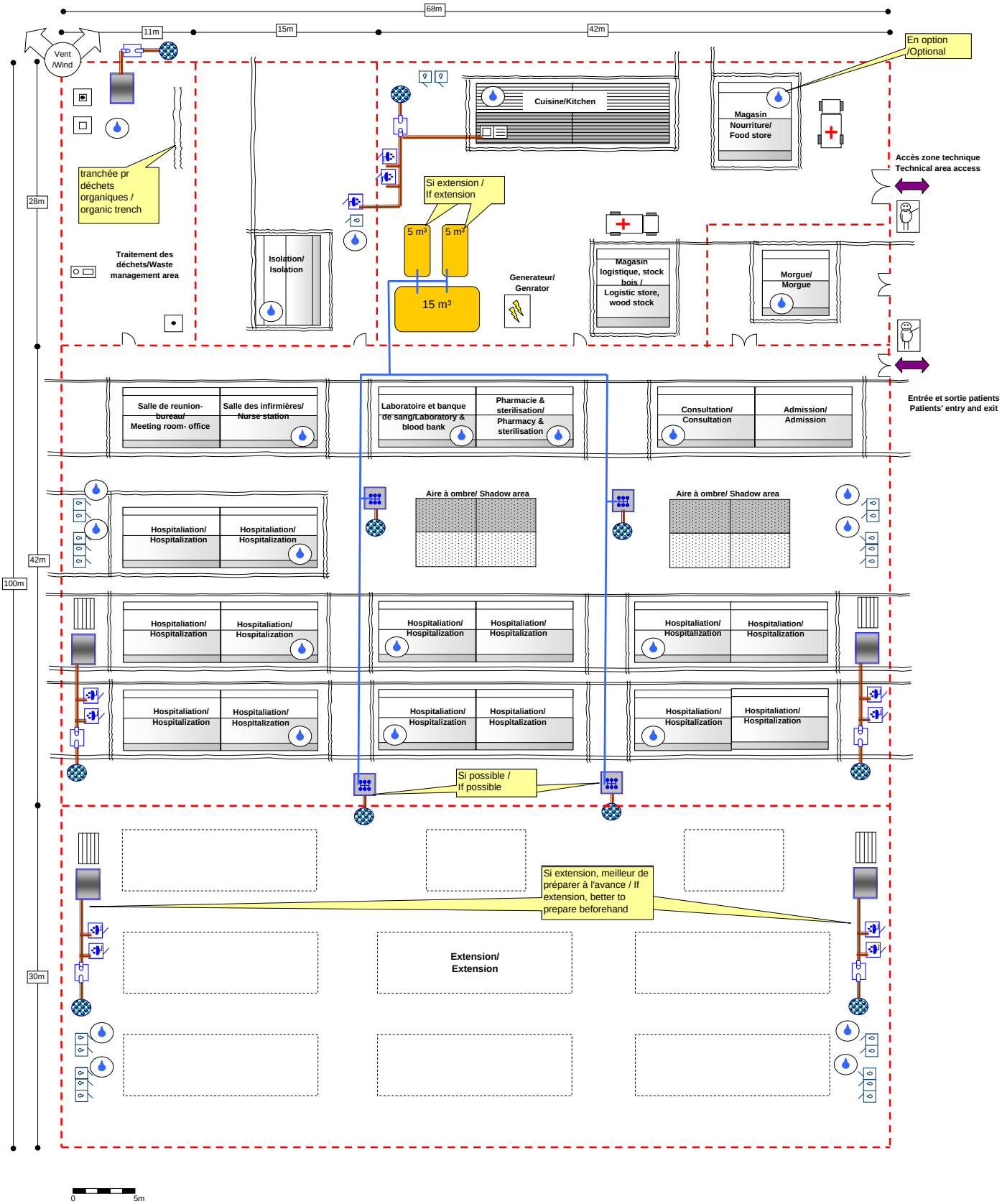
9. Recommendations

- Lobby to WFP to start immediate regular food distributions to the whole population of Bare district.
- Support the health post of Bare with distribution of drugs and medical material in order to guarantee some access to health care for the population.
- The assessment team should return to Bare in a couple of weeks to monitor and follow up the situation.
- MSF should get prepared when it comes to material, drugs, therapeutic food and national medical HR, in case the situation deteriorates and a nutritional intervention should be necessary.
- In case a nutritional intervention would be necessary; the proposed activities are: TFC 24/24 h in Bare town, ambulatory TFC and SFC. As long as there are no GFD, a blanket feeding to the under fives and the pregnant and lactating mother, might also be taken into consideration.

Compiled by , Nurse EP, 06/02/2006



CENTRE DE NUTRITION THERAPEUTIQUE HOSPITALIER INPATIENT THERAPEUTIC FEEDING CENTRE	Capacité : 120 Enfants + extension: 120 enfants Capacity: 120 Children + extension: 120 enfants 30m2 / benef.



Eau et assainissement / Water and Sanitation **CENTRE DE NUTRITION THERAPEUTIQUE HOSPITALIER** **INPATIENT THERAPEUTIC FEEDING CENTRE**	Capacité : 120 Enfants + extension: 120 enfants Capacity: 120 Children + extension: 120 enfants 30m2 / benef.

Appendix 4.2.

Kit and materials necessary to equip a Hospital Therapeutic Feeding Centre

1/ NUTRITION HOSPITALISATION KIT, 50 patients/3 months (KMEDKNUTI1-): reference Guide of Kits, Medical and Logistic

Note: for the complete listing of the contents of the kit or of the modules, refer to the catalogue for the year in progress. We only list below the essential components of the kit and their use.

This kit is made up of various parts allowing 50 severely malnourished children to be weighed, measured, registered and fed[1] for 3 months:

KMEDKNUT4M- 1 ANTHROPOMETRIC Kit
KMEDMNUTI11 1 REGISTRATION Module
KMEDMNUTI12 1 EQUIPMENT Module
KMEDMNUTI13 1 RENEWABLE MEDICAL MATERIAL Module
KMEDMNUTI14 1 MEDICAL DEVICES Module

The modular design of the kit allows orders to be adjusted depending on:
- the existing material on-site
- an increase in the target population (ordering additional modules)

For the list of related items, refer to the catalogue for the year in progress.

2/ To help you estimate needs, a **LIST OF MATERIAL AND EQUIPMENT PER UNIT** is provided below.

Admission/Registration/Waiting room

List of Articles	HTFC 50 patients	Additional needs (if kit ordered)	Comments
Table	1	X	
Chair	3	X	
Bench	2	X	
Container (120 litres) with spigot for drinking water + cover 1for the waiting room and 1 for admission	2	X	
Water container for hand washing	1		
25 kg Salter scale, without trousers	2		
(Salter scale) trousers (set of 5 trousers)	1		
Frame for fixing the scale or rope	2	X	
Baby scale	1		
Pediatric height gauge	2		
Weight/Height card, Z-score	2		
Brachial Circumference Bracelet (MUAC)	25		
Attendance book/registry	2		
Stationery: pencils, ballpoint pens, markers, eraser, ruler, notebooks, etc.	Several		
Scissors	2		
Calculator	1		
Red identification bracelet	200		
Individual HTFC card	150		

[1]Specialised food is to be ordered separately!

Milk card	150		
Adolescents/Adults			
Reference table for adults	1	X	
Reference table for adolescents	1	X	
Adult scale- 100 kg	2	X	Catalogue ref EANTSCAL2A
Adult height gauge	1	X	Catalogue ref EANTMEAA5P
Brachial Circumference Bracelet (MUAC)	6		
Identification bracelets, large	100	X	

Consultation Room

List of Articles	HTFC 50 patients	Additional needs (if kit ordered)	Comments
Table	2	X	
Chair	3	X	
Bench	1	X	
Cupboard with padlock (1 for medications and 1 for materials), or metal chest	2	X	
Examination table	1	X	
Clock	1	X	
Stationery: ballpoint pens, scissors, notebooks, etc.	Several		
Board (for written information)	2	X	
Container with spigot for drinking water	1	X	
Container with spigot for hand washing	1	X	
Cup	5		
Spoon	5		
Waste bin	1	X	

Feeding Materials

List of Articles	HTFC 50 patients	Additional needs (if kit ordered)	Comments
5 kg kitchen scale	1		
50 kg Salter scale	1		Ref catalogue EANTSCAL50
10 litre casserole with cover	1		
20 litre casserole with cover	1		
50 litre casserole with cover	1		
100 litre casserole with cover	1	X	PCOOCOOP10A
Mixer, spoon, wooden	2		
Large ladle	2		
Large whisk	3		
Plastic pail with cover, 10 litres	6	X	3 are in the kit, to be supplemented.
Plastic bowl for washing up, 10 litres	2		
Plastic bowl for washing up, 20 litres	2		
Transparent plastic measuring cup, 1 litre	4	X	2 are in the kit, to be supplemented.
Transparent plastic measuring cup, 2 litres	4	X	2 are in the kit, to be supplemented.

Water container with spigot, 20 litres	2		
Mechanical timer – Alarm clock	1		
Matches	YES	X	
Firewood, coal	YES	X	
Plastic cup (500 ml)	100		
Teaspoon (5 ml)	120		
Tablespoon (20 ml)	5	X	
Plastic bowl (500 ml)	100		

***Note*: if a certain type of feeding material is not in the kit or is insufficient in quantity and you cannot buy it locally, you can still order it: see logistics catalogue ITC II. ALIF/PCOO**

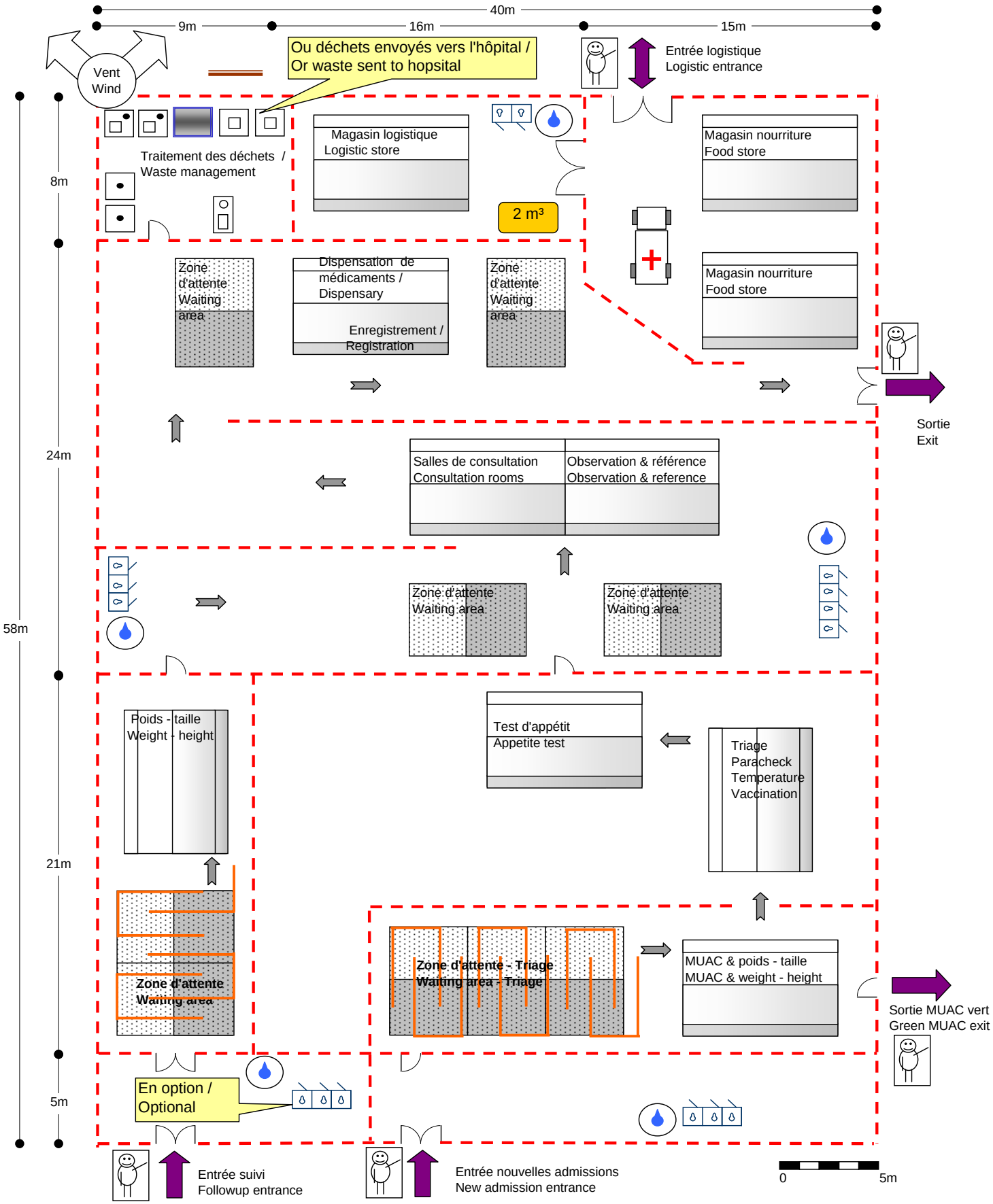
Furniture and Materials for the Rooms and Waiting Rooms

List of Articles	HTFC 50 patients	Additional needs (if kit ordered)	Comments
Bench	3	X	
Chair	5	X	
Table	5	X	
Covering	150	X	
Impregnated mosquito net	150	X	
Mattress or mat (*)	70	X	
Chamber pot	6		
Cupboard	1	X	
Water container with spigot for drinking water	6	X	
Container with spigot for hand washing	5	X	

(*) Plan for more if the mat is given to the patient upon discharge

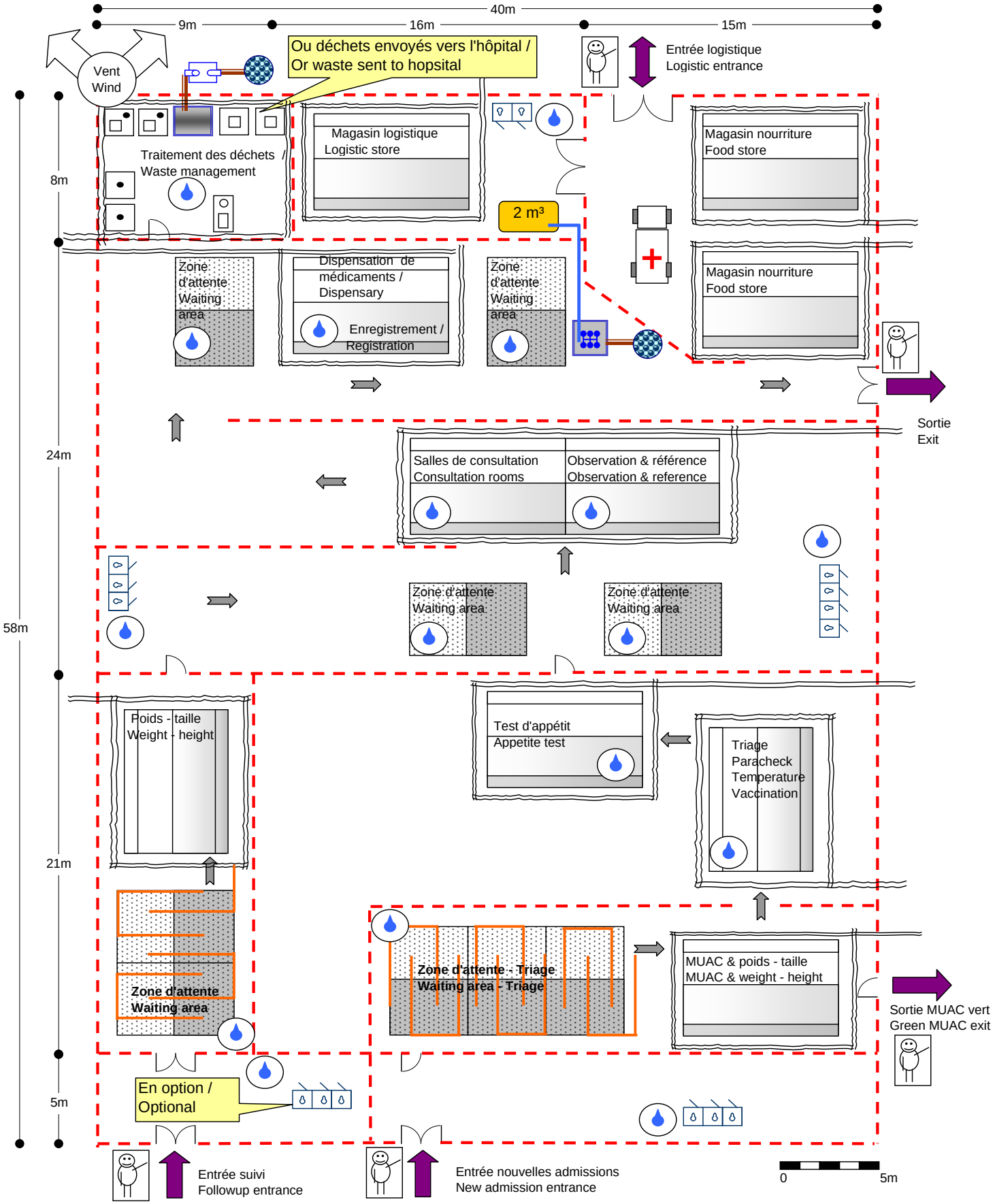
Cleaning materials + Various items

List of Articles	HTFC 50 patients	Additional needs (if kit ordered)	Comments
Broom	2	X	
Scrub brush	2		
Plastic pail	6	X	
Bar of soap	150	X	
Waste bin	10	X	
Powdered soap	4 kg	X	
Dishcloths	10	X	
Household gloves	2	X	
Hurricane lamp	2		
Pocket lamp	2		
Batteries for pocket lamp	16		
Plastic boots	2	X	



Centre de nutrition thérapeutique ambulatoire
Ambulatoty therapeutic feeding centre

Capacité : 150 bénéf./jour
Capacity: 150 benef./day
15m2 / benef.



Eau et assainissement / Water and Sanitation

Centre de nutrition thérapeutique ambulatoire

Ambulatoty therapeutic feeding centre

Capacité : 150 bénéf./jour
Capacity: 150 benef./day
15m2 / benef.

Appendix 4.4.

Kit and materials necessary to equip an ATFC or SFC

1/ AMBULATORY NUTRITION KIT, 500 patients/3 months (KMEDKNUTO1-): Reference Guide of Kits, Medical and Logistic

Note: for the complete listing of the contents of the kit or of the modules, refer to the catalogue for the year in progress. We only list below the essential components of the kit and their use.

This kit is designed for treatment of 500 malnourished children in an ATFC or SFC for 3 months (sufficient for **5** sites for 3 months[1]) and is composed of:

KMEDKNUT4M- **3** ANTHROPOMETRIC Kits
KMEDMNUTO11 1 REGISTRATION Module
KMEDMNUTO12 1 EQUIPMENT Module
KMEDMNUTO13 1 RENEWABLE MATERIAL Module

The modular design of the kit allows orders to be adjusted depending on:
- the existing material on-site
- an increase in the target population (ordering additional modules)

For the list of related items, refer to the catalogue for the year in progress.

2/ To help you estimate needs, a **LIST OF MATERIAL AND EQUIPMENT BY UNIT** is provided below.

Admission/Registration/Waiting room

List of Articles	5 ATFC or 5 SFC 500 patients	Additional needs (if kit ordered)	Comments
Table	**5** (1 x 5)	X	
Chair	**15** (3 x 5)	X	
Bench	**30** (6 x 5)	X	
Container (50 l) with spigot for drinking water: 1 for the waiting room and 1 for admission	**10** (2 x 5)	X	
Container (100 l) with spigot for hand washing	**5** (1 x 5)	X	
25 kg Salter scale, without trousers	**10** (2 x 5)		
(Salter scale) set of 5 trousers	**5** (1 x 5)		
Paediatric height gauge	**10** (2 x 5)		
Weight/Height card, %	**10** (2 x 5)		
Brachial Circumference Bracelet (MUAC)	**150** (30 x 5)		
Attendance book/registry	**5** (1 x 5)	X	
Stationery: pencils, ballpoint pens, markers, eraser, ruler, notebooks, etc.	Several		
Scissors	**5** (1 x 5)		
Calculator	**5** (1 x 5)		
Identification bracelet	**1000** (200 x 5)		
Individual card	**1000** (200 x 5)		

[1]Sufficient in any event for the anthropometric materials, but highly dependent on the number of recipients per site for the registration and equipment modules...to be checked +++!

Adults/Adolescents			
Reference table for adults	**5** (1 x 5)	X	
Reference table for adolescents	**5** (1 x 5)	X	
Adult scale - 100 kg	**10** (2 x 5)	X	Catalogue ref.EANTSCAL2A
Adult height gauge	**5** (1 x 5)	X	Catalogue ref.EANTMEAA5P
Brachial Circumference Bracelet (MUAC)	**100** (20 x 5)		
Identification bracelets, large	**500** (100 x 5)	500	

Consultation Room

List of Articles	5 ATFC or 5 SFC 500 patients	Additional needs (if kit ordered)	Comments
Table	**10** (2 x 5)	X	
Chair	**15** (3 x 5)	X	
Bench	**5** (1 x 5)	X	
Cupboard with padlock (1 for medications and 1 for materials), or metal chest	**10** (2 x 5)	X	
Examination table	**5** (1 x 5)	X	
Stationery: ballpoint pens, scissors, notebooks, etc.	Several		
Container with spigot for drinking water	**5** (1 x 5)	X	
Container with spigot for hand washing	**5** (1 x 5)	X	
Cup	**25** (5 x 5)		
Spoon	**25** (5 x 5)		
Waste bin	**5** (1 x 5)	X	

Feeding Materials

List of Articles	5 ATFC or 5 SFC 500 patients	Additional needs (if kit ordered)	Comments
0-25 kg Salter scale	**5** (1 x 5)		
50 kg scale	**5** (1 x 5)	5	Catalogue ref. EANTSCAL50
Plastic mixer	**10** (2 x 5)	10	(*)
Plastic pail with cover, 10 litres	**50** (10 x 5)	40	
Plastic bowl for washing up	**5** (1 x 5)	5	
Plastic container, 100 – 120 litres[2]	**10** (2 x 5)	10	(*)
Transparent plastic measuring cup, 1 litre	**10** (2 x 5)		
Transparent plastic measuring cup, 2 litres	**5** (1 x 5)		
Water container with spigot	**10** (2 x 5)	X	
Plastic bag for packing the family ration or premix, 5 kg volume (**)	**4000** (800 x 5)	4000	PPACBAGG5-
1 litre plastic bottle or small plastic bags for family ration of oil	**700** (140 x 5) **4000** (800 x 5)	700 4000	Only for ATFC
Tin opener	**5** (1 x 5)	X	
Plastic gloves, pair	**10** (2 x 5)	X	

[2]A drum cut in half lengthwise and fixed on a support at working height can also be used.

Resistant plastic apron	**20** (4 x 5)	20	

(*) Only for SFC with Premix!
(**) or 1200 small reusable pails with covers. If they cannot be bought locally, PCOOBUCK08L

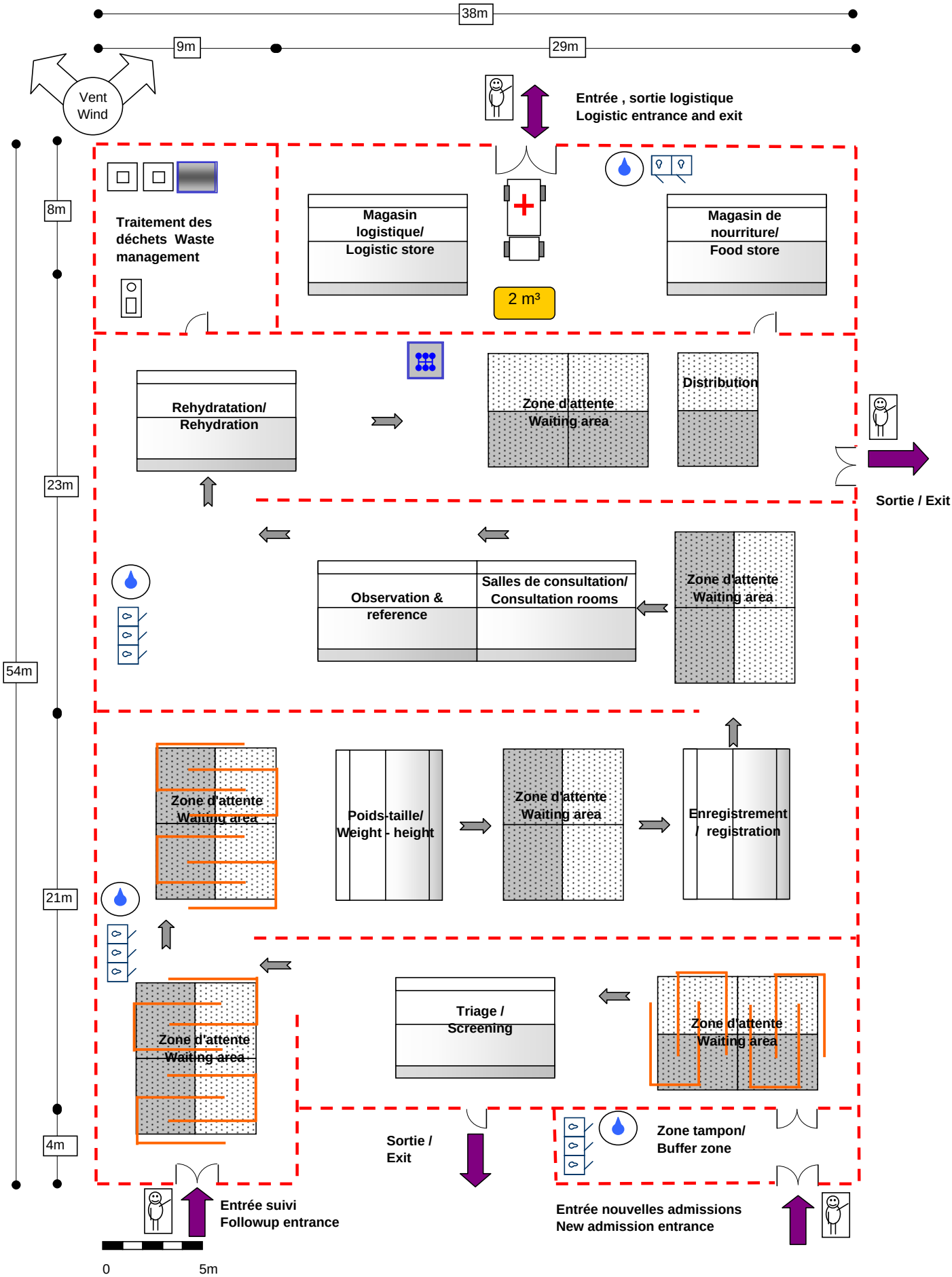
Note: if a certain type of feeding material is not in the kit or is insufficient in quantity and you cannot buy it locally, you can still order it: see logistics catalogue ITC II. ALIF/PCOO

Furniture and Materials for the Rooms and Waiting Rooms

List of Articles	5 ATFC or 5 SFC 500 patients	Additional needs (if kit ordered)	Comments
Bench	**50** (10 x 5)	X	
Chair	**20** (4 x 5)	X	
Table	**15** (3 x 5)	X	
Mattresses or mats for observation room and appetite test room	**100** (20 x 5)	X	For ATFC only
Cupboard	**5** (1 x 5)	X	
Water container with spigot for drinking water	**15** (3 x 5)	X	
Container with spigot for hand washing	**15** (3 x 5)	X	

Cleaning Materials + Various articles

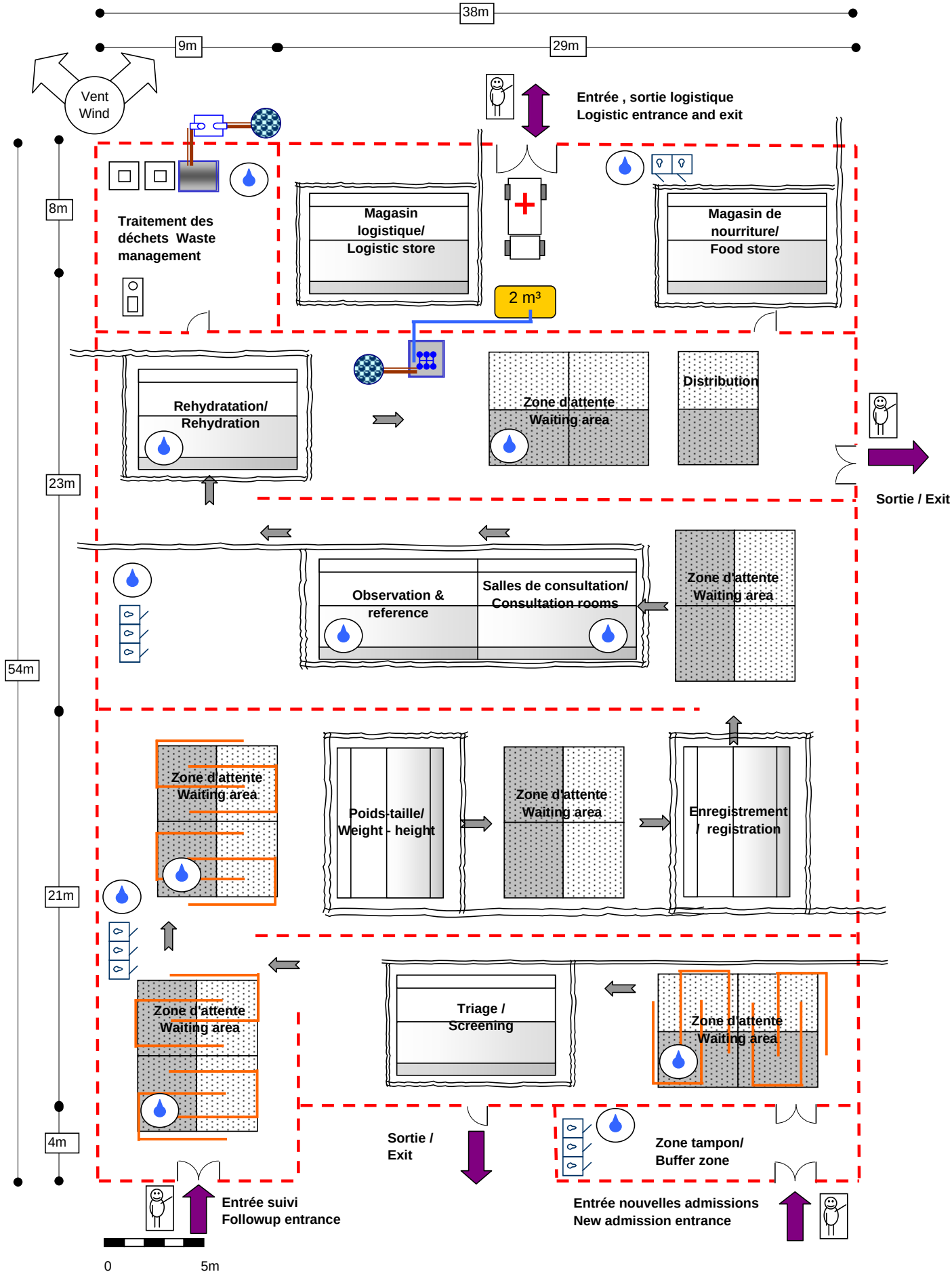
List of Articles	ATFC or SFC 500 patients	Additional needs (if kit ordered)	Comments
Broom	**10** (2 x 5)	X	
Scrub brush	**10** (2 x 5)	X	
Pail	**10** (2 x 5)	X	
Bar of soap	**50** (10 x 5)	X	
Waste bin	**20** (4 x 5)	X	
Dishcloth	**25** (5 x 5)	X	
Household gloves	**10** (2 x 5)	X	
Hurricane lamp	**5** (1 x 5)	X	
Pocket lamp	**10** (2 x 5)	X	
Batteries for pocket lamp	**40** (8 x 5)	X	
Plastic boots	**10** (2 x 5)	X	



Centre de nutrition suplémentaire (circuit ration sèche)
Supplementary feeding centre (dry ration circuit)

Capacité : 150 - 200 enfants /jour (max 300)

Capacity: 150 - 200 children /day (max 300)



Eau et assainissement / Water and Sanitation **Centre de nutrition supplémentaire (circuit ration sèche)**
Supplementary feeding centre (dry ration circuit)

Capacité : 150 - 200 enfants /jour (max 300)

Capacity: 150 - 200 children /day (max 300)