

## B.1 The History of Three Point Five Square Metres

Of all the numeric indicators commonly used as guidelines in humanitarian shelter response, it is the indicator for covered shelter space that is perhaps the most often quoted – three and a half square metres per person. However, a lack of awareness of where this and other indicators came from has played a part in limiting discussion on the appropriate use of this indicator across all forms of shelter and reconstruction response.

The development of principles and designs for humanitarian shelter started in the early 1970s, when failures to provide adequate support to displaced people in camps resulted in public-health catastrophes, and the reduction in disease-related fatalities was seen as the key improvement to be prioritised above all else. Wanting to avoid repetition of disasters in Biafra and Bangladesh, Fred Cuny and others working for a variety of NGOs, referred back to their own personal experiences in minimum-existence standards for low-cost public housing in Europe and north America, as well as emerging research in non-emergency sites-and-service slum-upgrade projects in Latin America.

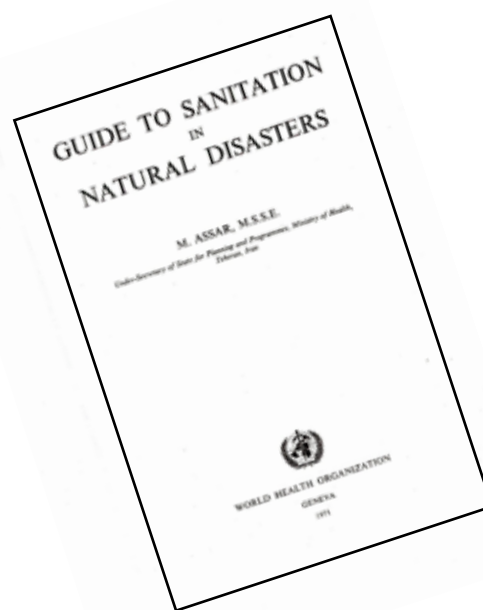
Lessons learnt from the first attempts at community-focused camps in India and Nicaragua, demonstrated that the designs must remain very localised, in order to be culturally acceptable to the inhabitants. At the same time though, there remained the life-and-death challenge of ensuring that everyone in a camp, or in need of shelter support, had the equitable minimum sufficient necessary to actually live. The need to solve this problem was seen as more urgent because with every major humanitarian crisis from the 1970s onwards, the failures of response were made worse by the exponential increase in newly-formed NGOs coming into the field, and the diminishing prospects of giving any sort of personalised guidance to inexperienced organisations or managers.

Cuny and his associates found a short booklet, published for the World Health Organisation in 1971, and written by an under-secretary for the Ministry of Health in Iran, called "*Guide to Sanitation in Natural Disasters*". Here was a seemingly ready-made list of minimum numeric standards specifically for shelter and camps, and with the overriding objective of ensuring adequate public health in disaster situations. For the most part, the booklet does not deal with shelter specifically, but in its list of standards for shelter, lies the standard for covered shelter space – 3m<sup>2</sup> per person for tents in tent camps, and 3.5m<sup>2</sup> for buildings. The booklet also offers other shelter standards which have not been adopted more widely since, including one for the actual cubic metres of volume space (rather than just flat floor area), but the author gives no references or evidence to support the shelter numbers. The justifications given for each standard in the booklet come consistently from a public health perspective (the one

reason given for these shelter spatial requirements, is air ventilation, rather than other possible concerns such as climate control, privacy or storage of belongings).

By 1979, with the overwhelming numbers of refugees crossing the borders from Cambodia into camps in Thailand, and institutional fears for the breaking of the principle of "Do No Harm" by another wave of new field organisations, UNHCR regional offices asked Cuny and others to facilitate a series of workshops, with the express purpose of making humanitarian response globally more efficient. Major outputs from these 1980 workshops included the creation of the system of UN 'lead agencies' for each major sector of humanitarian response, the drafting of the first specific book published for emergency responses (UNHCR's Handbook for Emergencies) – and the adoption of a system of numeric minimum standards as control mechanisms, including a number of the standards borrowed from the WHO publication, which included the standard of 3.5m<sup>2</sup>.

During those workshops, there was a debate about the conundrum of applying global standards, when situations and needs were often so vastly different. The analogy used in these debates was once again from the medical perspective – how can doctors have a rigorously universal recommended dosage of medicine on the one hand, and yet still be able to successfully adapt that dosage to each patient's needs on the other? Despite these reservations, the numeric standards were incorporated into the Handbook for Emergencies in 1981, and fifteen years later, despite opposition from some NGOs, had even wider adoption with the first draft publication of Sphere (see [www.sphereproject.org](http://www.sphereproject.org)).



This document written in 1971 is possibly the first published reference to numerical planning figures for humanitarian emergencies.



**"...In the Shelter section [of The Sphere Handbook 2011] of the chapter on Shelter, Settlements and NFIs there are a total of 32 Key Actions, and 10 Indicators, but it is the 3.5m<sup>2</sup> (which is after all now just part of a Guidance Note) which still gets more attention.."**  
 Photo: Joseph Ashmore

The first draft of Sphere, in 1998, has only one standard for individual shelter, called 'Housing Standard 1: living quarters' for which the first indicator, and the only indicator with a numeric measurement, was, 'The covered area available per person averages 3.5-4.5m<sup>2</sup>.' As Sphere now clarifies, sometimes this indicator will not be appropriate. There will be situations where 3.5m<sup>2</sup> per person cannot be met, for example when there are insufficient resources to provide this amount of living space. In such circumstances a pragmatic decision may need to be taken to provide a basic level of shelter for many, rather than meeting the minimum standard for only some. Providing shelter in a cold climate presents another dilemma - 3.5m<sup>2</sup> per person can be difficult to heat at a time of scarce fuel, or environmentally damaging in an area where using timber for construction leads to deforestation. By the 2004 edition of Sphere, there was a major shift in emphasis, with the guidance notes expanded to include 'Duration', under which Sphere stated that 3.5m<sup>2</sup> may be appropriate in the first instance, that 3.5m<sup>2</sup> may be incrementally achieved over time, and that an argument may be made for providing less than this, based upon the shelter norms of the affected or neighbouring populations.

In the latest 2011 edition<sup>1</sup>, the Indicators as a section, with all their exact numbers, have been moved further down the page, and their prominence has been replaced by a new section called 'Key Actions'. For the standard on Covered Living Space, both the Key Actions, and for the first time the Guidance Notes, highlight the livelihoods potential provided by adequate shelter. The editions of Sphere subsequent to 2000, have highlighted the qualitative aspects of the standards (compared to what Sphere terms the numeric indicators), and have increasingly emphasised both the incremental process, and the need for localised adaptation of these standards. However, the numeric indicators, despite being pushed progressively further down the page, still exist, and still exist in the project proposals and evaluations for many humanitarian organisations.

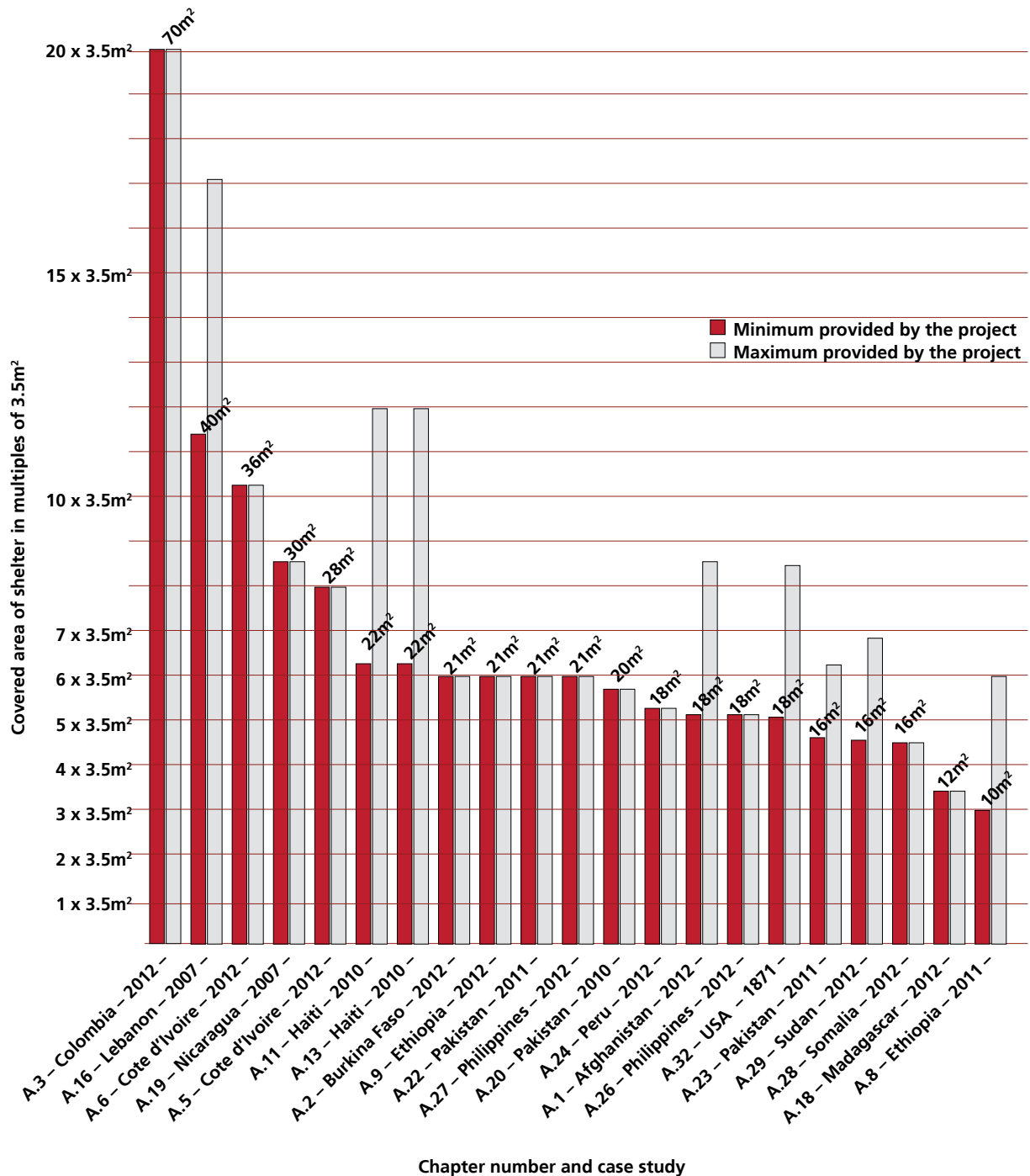
The situation becomes more complex if, as in many cities in both developed and less developed regions, the Sphere minimum standards are better than local living conditions. A further complication, and one which highlights the gap in humanitarian standards in general in not going beyond the individual household, is illustrated by the post-tsunami response in Aceh. Adherence to 3.5m<sup>2</sup> was a contributing factor in a rapid post-disaster spread of the urban area, through the construction of low-density shelter settlements, into marshlands which would have otherwise provided much of the natural protection for the city, from floods and tsunamis.

In order to determine what is essential it would be more appropriate to apply measures that reflect what shelter does other than just contribute to public health. Shelter can have more impact on areas of humanitarian intervention such as protection and livelihood creation, and indicators that reflect these aspects of shelter impact need to be developed. It would be sensible to reflect these aspects of shelter provision in guidelines for shelter living space. It is telling that for the six Core Standards in Sphere 2011 there are a total of 62 Key Actions, and 27 Indicators, and in the Shelter section of the chapter on Shelter, Settlements and NFIs there are a total of 32 Key Actions, and 10 Indicators, but it is the 3.5m<sup>2</sup> (which is after all now just part of a Guidance Note) which still gets more attention.

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<sup>1</sup> Sphere Project, *Sphere: Humanitarian charter and minimum standards in humanitarian response, 2011*

## Reported covered living areas of the shelters in the case studies in this book.



Smaller shelters are often constructed after an assessment of local and host population standards, as well as what is practically possible. Shelter size is not necessarily a good indicator of the quality of a shelter programme, and reflects a diversity of issues, including varying needs, permanency, budgets, logistics constraints, host standards, and official policies.

Note: Covered areas are often reported based on external wall dimensions and not the internal usable space. For example, a 6mx3m shelter with 20cm thick mud block walls will often be reported as being 18m². Practically the usable covered living space will be lower (5.6mx2.6m = 14.5m²).