

RAMESSES

The Reuse of Available Material, Energy, Structures and Supplies for Emergency Shelter

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The president of Médecins Sans Frontières, Dr. Unni Karunakara, described Mogadishu “as dotted with plastic sheets supported by twigs, sheltering groups of weak and starving people.” (Guardian.co.uk, Saturday 3 September 2011)



Hundreds of thousands of destitute refugees in Somalia and Northern Kenya could benefit from a better solution to the problem of access to emergency shelter.

The shelter must address both the immediate needs of the refugees in terms of protection from the elements and personal security – and the more intangible demands of providing a space within which dignity and self-determination can be nurtured and restored. The design must meet these requirements within the constraints imposed by available material, the political and cultural environments, and the trauma of the displaced individuals.



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SEA²M³

Learning from the traditional Somalian aqal, we have designed and built a full-scale prototype dome-shaped structure with a diameter of about 4m and a height of about 2m. The frame is constructed from bamboo strips lashed together with sisal twine in the form of a geodesic dome covered with traditional dermooyin (woven grass mats or canvas) serving as the breathable skin.

The current UNHCR tent, not popular with the refugees because it is too hot, is fabricated in Pakistan, shipped from Karachi to Kuwait, flown to Nairobi and driven to Dadaab (red arrows on map); the supply lines for RAMESSES are much shorter (green arrows on the map).

We use a tarp for the floor—attached to the frame to accommodate standing water during the rainy season. For the walls, an integrated umbrella has plastic flaps that can be rolled down to cover the exterior breathable skin when it rains. In the dry season, the umbrella, with flaps stowed, is supported 20 to 40 cms above the main structure to provide shade and reduce the internal temperature.

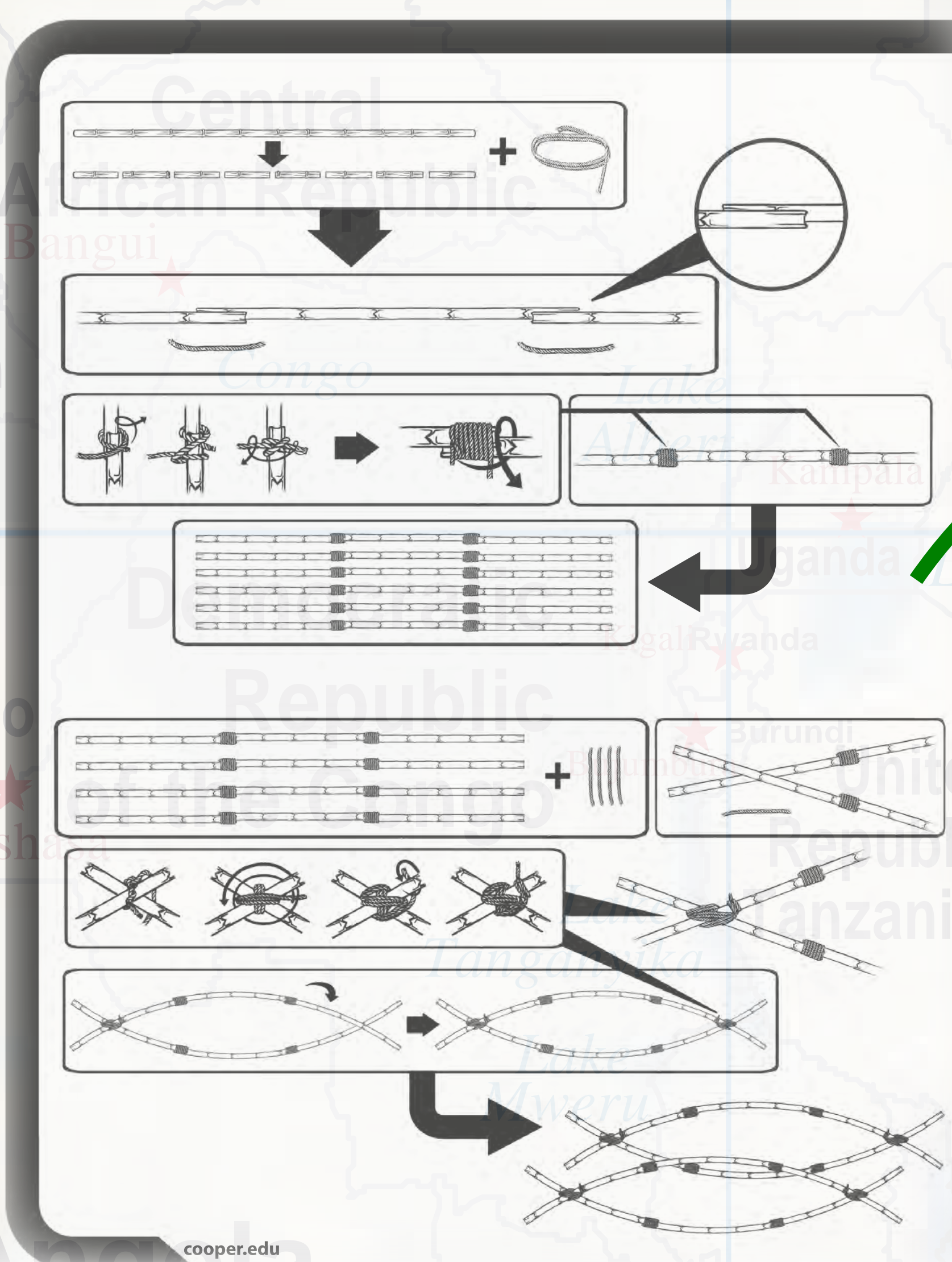
We propose two forms of implementation, each with a complete set of instructions in the form of pictograms (see below):

1) Materials are supplied in a standalone kit ready for immediate assembly.

2) Materials provided in a kit as is and must be cut to fit.

With the exception of the tarps, the structure is constructed from biodegradable materials—sourced from regions as close as possible to the point of end use.

RAMESSES shelters are built on-site providing local assembly and a more comfortable shelter.



Bamboo
Sisal
Grass Mats
Tarps

