

The Reciproboo Shelter Kit (RSK)

this is not a product

**it is a new method
for building shelters**

that anyone can use



the problem with building a shelter



NEPAL



BOLIVIA

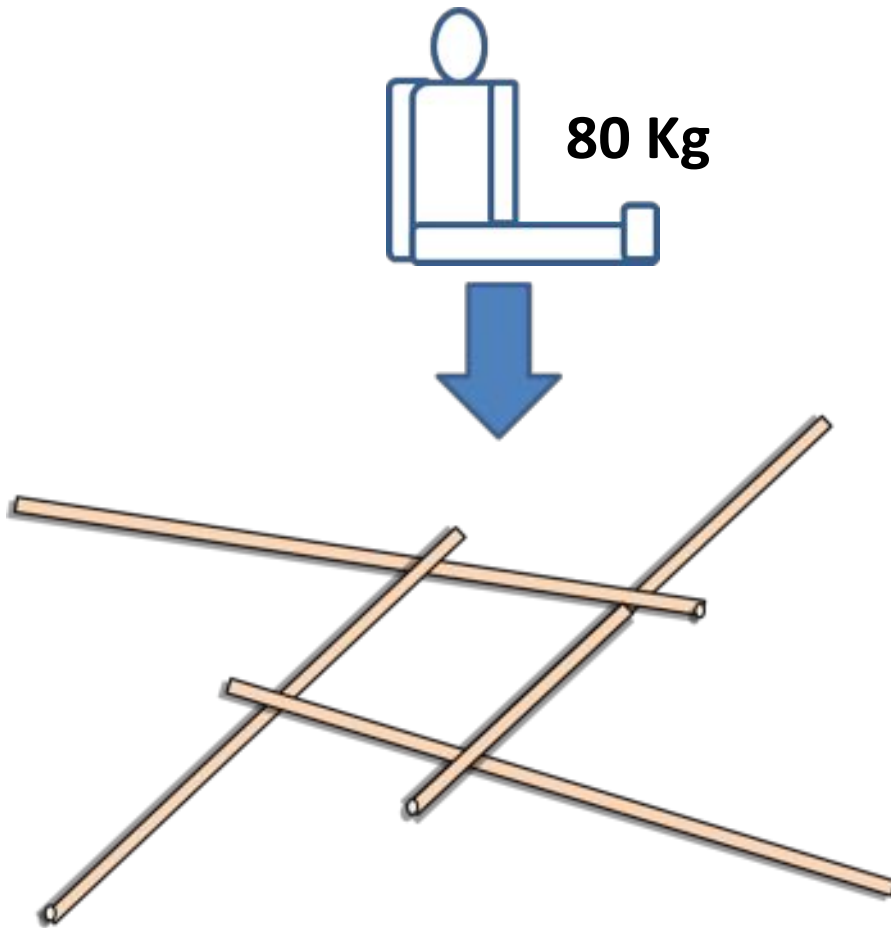
when given a tarpaulin

building the roof
is difficult



HAITI

the reciprocal frame solution



poles are overlapped in turn to create a very strong self supporting reciprocal frame

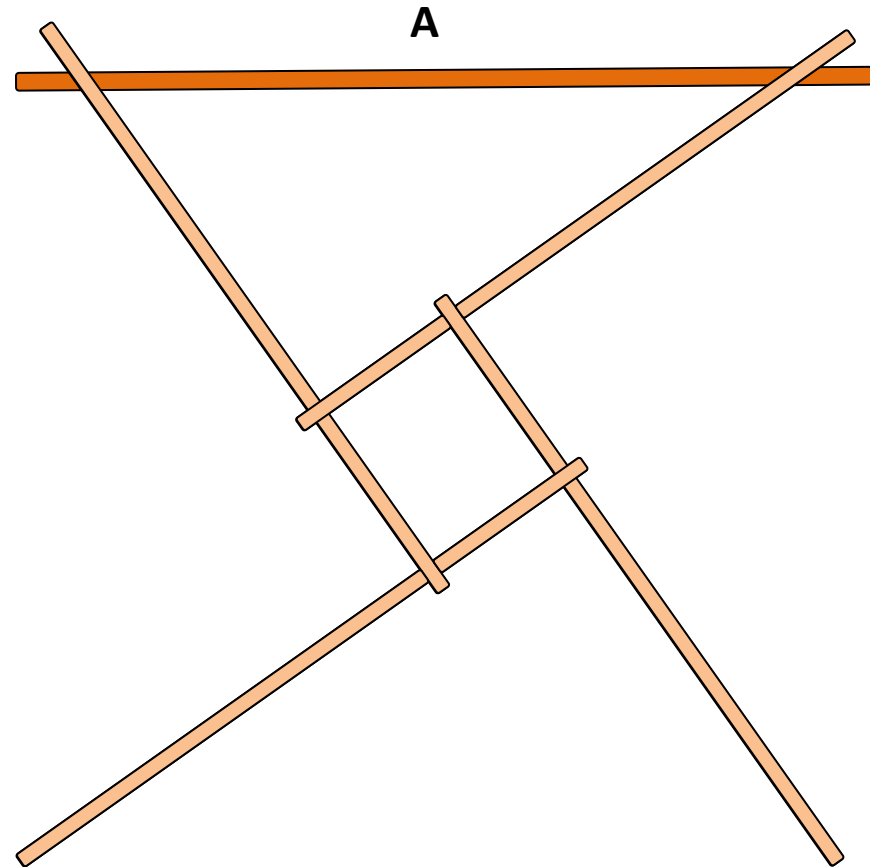
in this example each pole supports 20kg

- ✓ **Simple**
- ✓ **Strong**
- ✓ **Efficient**

the simple roof design

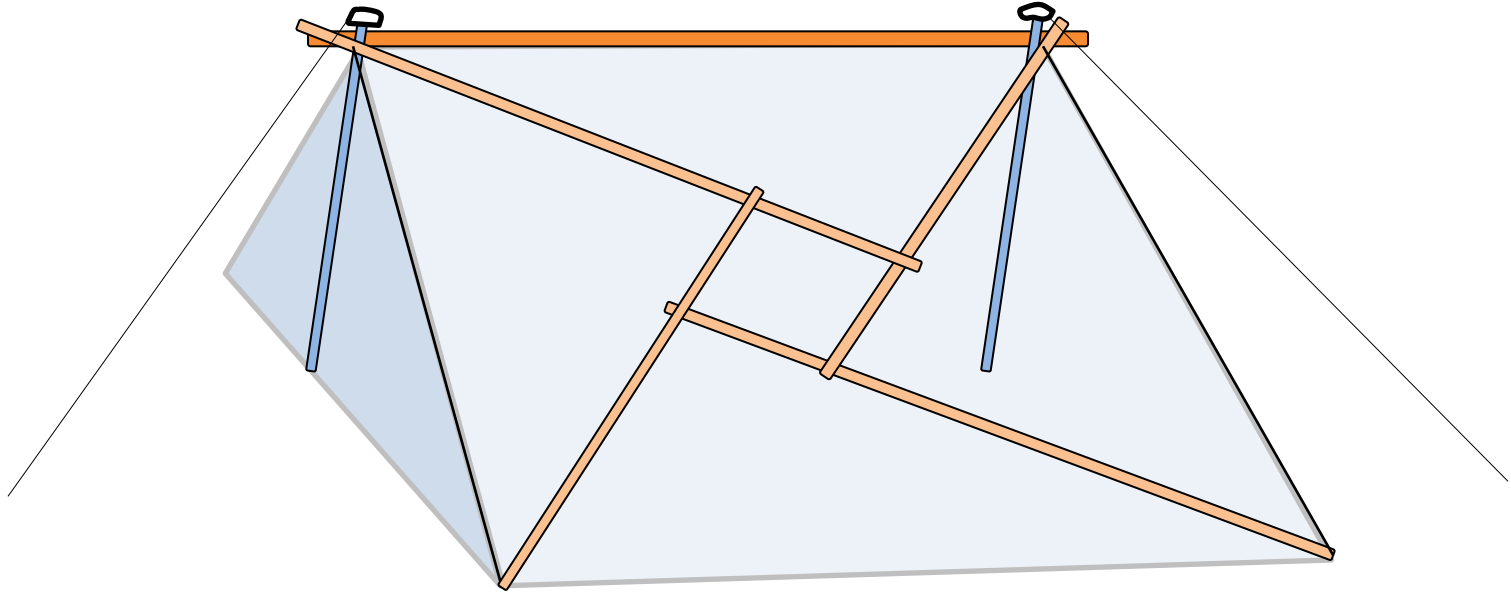
ridge pole “A”
locks in frame
stability

- ✓ Simple
- ✓ Strong
- ✓ Efficient



! look out for this frame in
every slide from now on

basic emergency shelter complete



- ✓ **Simple**
- ✓ **Strong**
- ✓ **Efficient**

**7 bamboo poles
+ ropes
+ lashings**

research on basic emergency shelter

University of Galway

- strength testing

UWE

- high speed wind tunnel tests

- ✓ Simple
- ✓ Strong
- ✓ Efficient



chief technician video

“ the structure is fine, the structure is holding out really, really good”

the RSK uses 33 % less bamboo

- ✓ Simple
- ✓ Strong
- ✓ Efficient

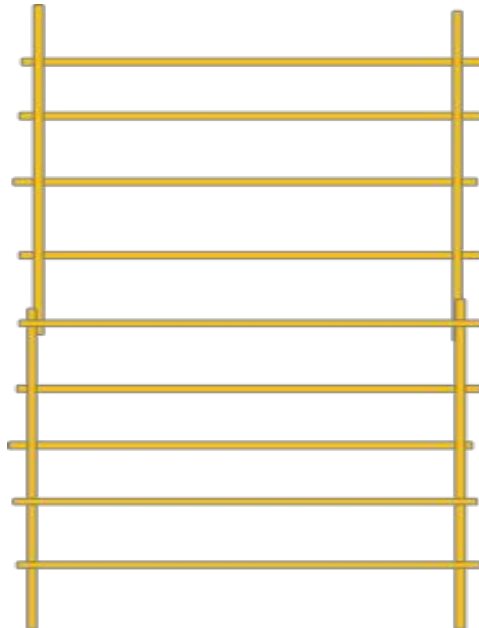


conventional shelter

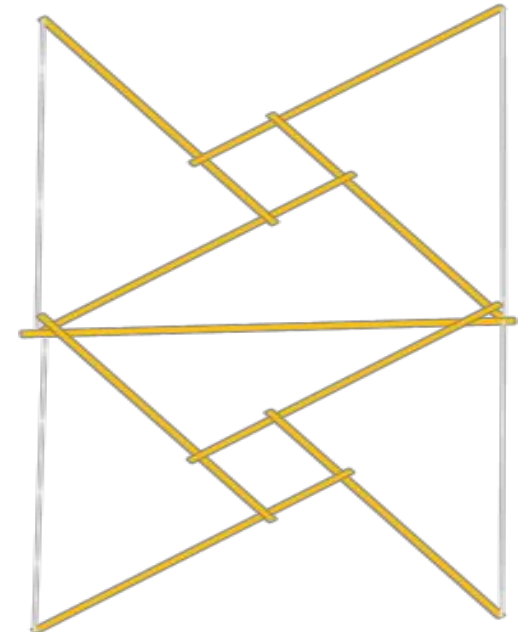


reciprocal shelter

33% less
transportation
costs



150 ft of bamboo



90 ft of bamboo

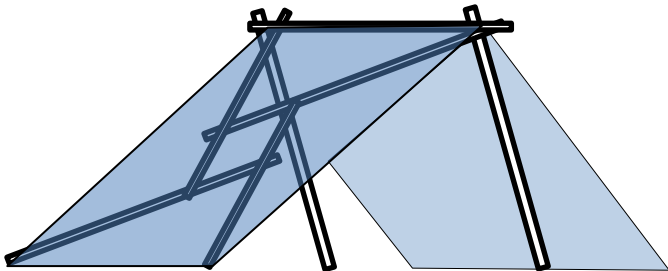
Nepal workshop 2013



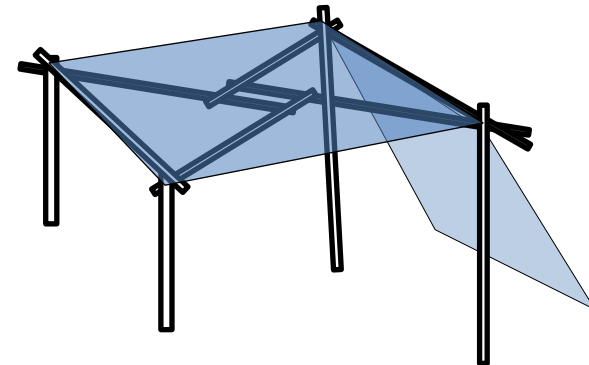
basic emergency shelter



elevated shelter



- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ **Adaptable**



Nepal workshop 2013

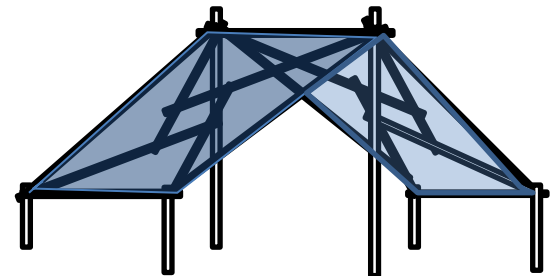
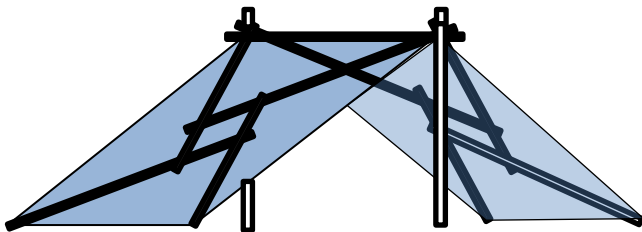


double shelter



double elevated shelter

- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ Upgradeable



Coventry University workshop 2014

- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ **No skills needed**



**basic emergency
shelter built on a
steep incline**

Myanmar Red Cross workshop 2015

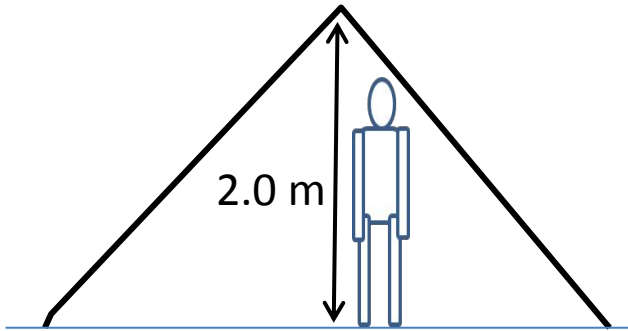
**the IFRC shelter Kit
used with the reciprocal frame
for the first time**



- ✓ rope
- ✓ wire
- ✓ handsaw
- ✓ machete
- ✓ shovel
- ✓ tarpaulins 6m x 4m

Myanmar 2015 - the basic emergency RSK

7 bamboo pole kit



Floor = 4m x 3.8m > 15 sq.m



Frame : £6.00

Total kit : £17.00

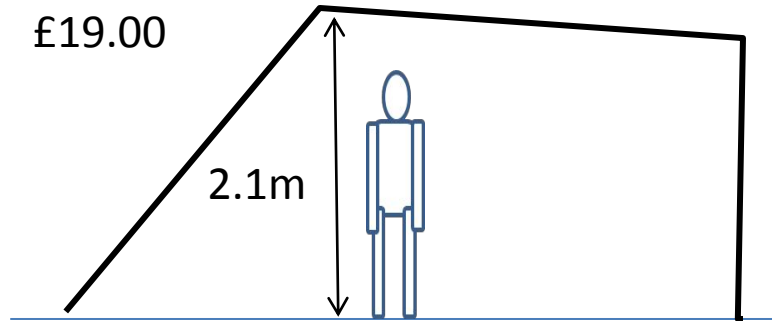
- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ **Economical**

the elevated RSK

a cooler shelter

10 to 12 bamboo pole kit

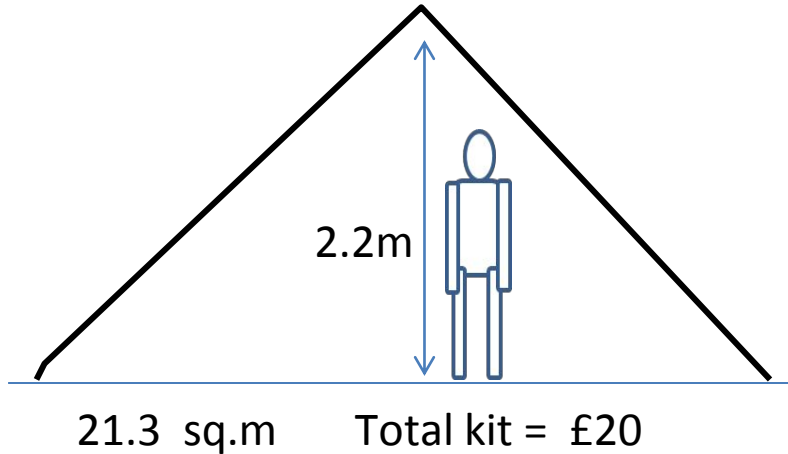
Total kit = £19.00



- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ **Supports insulation**

Myanmar 2015 - the double RSK

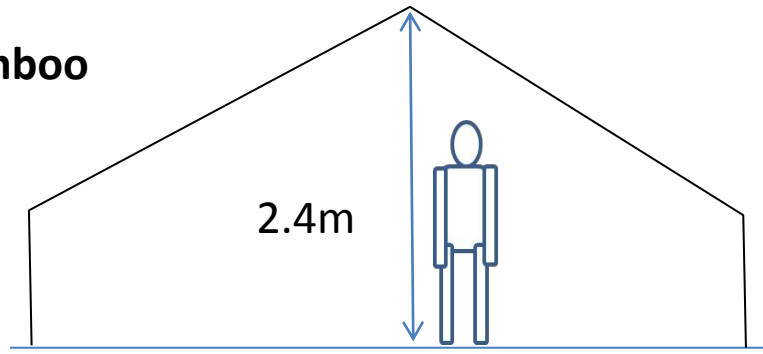
11 to 15 bamboo pole kit



- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ **living space**

the double elevated RSK

15 to 21 bamboo
pole kit



Total kit = £22



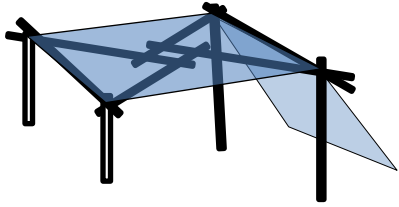
- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ Roof frames can be built on the ground

Myanmar: a vulnerable shelter



weak structure / poorly constructed roof

Myanmar: a stronger shelter



- ✓ Improved strength.
- ✓ Improved tarpaulin support.
- ✓ Cooler shelter.
- ✓ Assemble on ground



the single elevated RSK

from basic shelter to a dignified living space



3 simple steps as more bamboo becomes available:

emergency RSK → double RSK → double elevated RSK

building a strong roof is no longer difficult

the reciprocal
frame provides
the answers

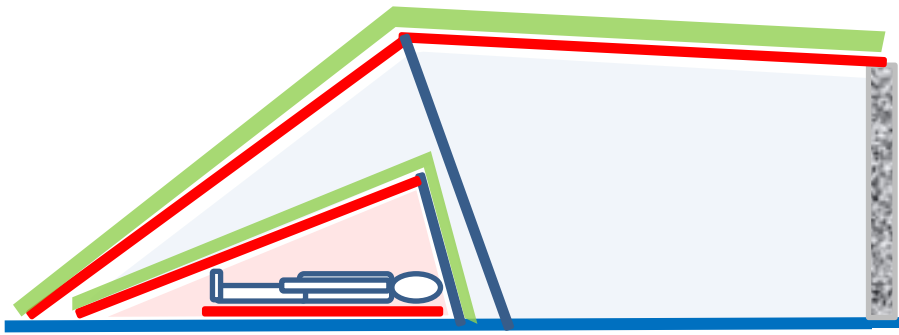
- ✓ Strong
- ✓ Simple
- ✓ Efficient
- ✓ Adaptable
- ✓ Upgradeable
- ✓ Minimal skills
- ✓ Economical
- ✓ Lightweight kit
- ✓ Supports insulation
- ✓ Build on ground



empowering the family to build their shelter

the Reciproboo Shelter Kit (RSK) vision

- ✓ Engage aid agencies to use this building method
- ✓ Set up disaster preparedness programs



steel kit for a cold climate

**for more information visit
reciproboo.org**

Thank you