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# National Shelter Cluster Meeting

Kathmandu  
5 August 11am

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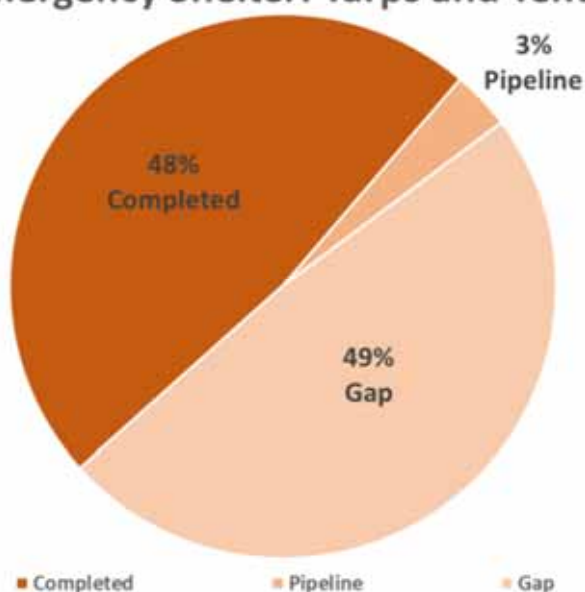
## Agenda

1. Welcome
2. Shelter Cluster Gap Analysis
3. Strategic and Technical Guidance
4. Technical Updates
5. Information Management Update
6. Recovery and Reconstruction Survey
7. AOB

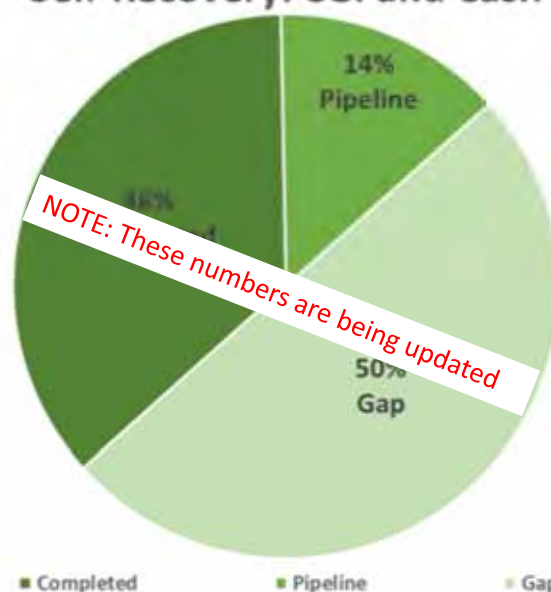
## 2. Shelter Cluster Gap Analysis

## National Update

Emergency Shelter: Tarps and Tents



Self-Recovery: CGI and Cash



# District Gap Analysis

- **Emergency Shelter:**
  - **Most Covered:** Dolakha, Sindhupalchok, Gorka, Rasuwa, Okhaldhunga
  - **Least covered:** Ramechhap, Makwanpur, Kavre, Bhaktapur, KTM
- **Self-Recovery:**
  - **Most Covered:** Rasuwa, Gorkha, Sindhupalchok, Dolakha, Sindhuli
  - **Least Covered:** All others <22%

	Southeast Hub				Northeast Hub		West Hub			Central Hub					
<b>Total Damage (HH) according to GoN</b>	13,138	28,225	39,916	73,647	52,000	66,636	84,405	37,418	72,955	99,526	25,508	79,762	27,954	11,635	<b>712,725</b>
<b>Percentage (%) of total Damaged HHs in 14 Priority Districts</b>	2%	4%	6%	10%	7%	9%	12%	5%	10%	14%	4%	11%	4%	2%	<b>100%</b>
<b>Emergency: Tarpaulin + Tent</b>															
Completed or Ongoing (stock in country) HHS	12,397	9,990	10,118	26,944	44,032	75,464	33,119	7,057	49,756	15,989	14,018	25,462	9,203	7,901	<b>341,447</b>
In pipeline / Planned (HH)	2	0	0	1,267	3,203	2,193	11,986	0	3,874	0	262	1,350	0	835	<b>24,970</b>
<b>Grand Total (HH)</b>	<b>12,399</b>	<b>9,990</b>	<b>10,118</b>	<b>28,211</b>	<b>47,235</b>	<b>77,656</b>	<b>45,104</b>	<b>7,057</b>	<b>53,630</b>	<b>15,989</b>	<b>14,280</b>	<b>26,812</b>	<b>9,203</b>	<b>8,735</b>	<b>366,416</b>
Coverage Percentage vs Total Damage	94%	35%	25%	38%	91%	117%	53%	19%	74%	16%	56%	34%	33%	75%	51%
<b>GAP</b> To Reach All Damaged:	740	18,236	29,799	45,437	4,765	-11,020	39,301	30,361	19,326	83,537	11,228	52,950	18,752	2,900	<b>346,309</b>
% of assistance in pipeline:	0%	0%	0%	4%	7%	3%	27%	0%	7%	0%	2%	5%	0%	10%	7%
<b>Self Recovery: CGI + Cash</b>															
Completed or Ongoing (stock in country) HHS	1,800	6,053	2,069	6,290	46,247	21,189	10,598	3,531	18,341	5,966	3,593	8,987	4,392	6,897	<b>145,951</b>
In pipeline / Planned (HH)	0	5,978	1,825	2,620	9,818	11,926	1,830	0	7,709	279	1,708	8,583	0	2,500	<b>54,775</b>
<b>Grand Total (HH)</b>	<b>1,800</b>	<b>12,031</b>	<b>3,894</b>	<b>8,910</b>	<b>56,064</b>	<b>33,115</b>	<b>12,428</b>	<b>3,531</b>	<b>26,050</b>	<b>6,245</b>	<b>5,301</b>	<b>17,570</b>	<b>4,392</b>	<b>9,397</b>	<b>200,726</b>
Coverage Percentage vs Total Damage	14%	43%	10%	12%	108%	50%	15%	9%	36%	6%	21%	22%	16%	81%	28%
<b>GAP</b> To Reach All Damaged:	11,338	16,195	36,022	64,737	-4,064	33,521	71,977	33,887	46,905	93,281	20,207	62,193	23,562	2,238	<b>511,999</b>
% of assistance in pipeline:	0%	50%	47%	29%	18%	36%	15%	0%	30%	4%	32%	49%	0%	27%	27%

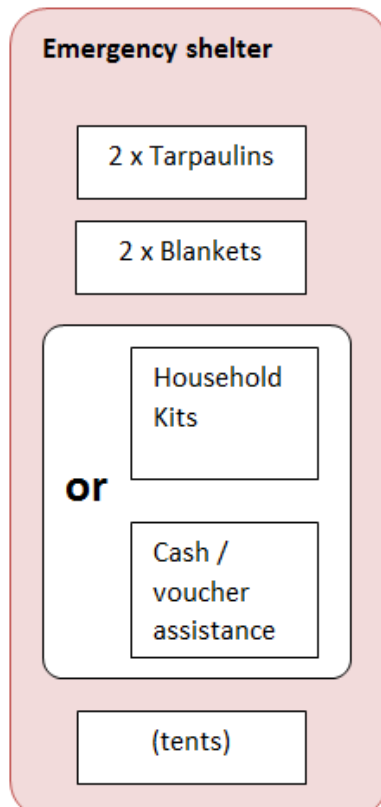
## 3. Strategic and Technical Guidance

# Shelter Cluster Strategy

- About the Shelter Cluster
- Coordination architecture
- Impact of the earthquake
- Strategic Goal & Objectives
- Principles
- Information Management
- Assessments and monitoring
- Advocacy
- Exit and transition strategy



## Emergency

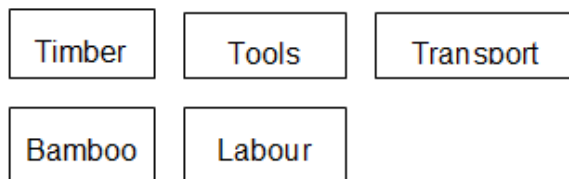


### Strengthening Temporary Shelter and Self-Recovery

Support up to the value of 15,000 NPRs, in the form of cash **OR** in kind distribution of:



Additional support may be provided to vulnerable households up to an additional value of 10,000 NPRs to cover any combination of:



Repair – households may repair damaged houses using materials provided.

Advice and Information



## 4. Technical Updates

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## Tech Update - Agenda

- Success and failure of Nepalese vernacular housing – Dave H IOM
- IEC material development
- Winterisation

# Success and Failure of Nepalese vernacular stone and mud houses



Dave Hodgkin, Shelter Specialist  
IOM Earthquake response

# Some stone and mud houses survived



# Many stone and mud houses collapsed

- Over 70% of all houses that failed were made from stone and mud



# Not because of location, fate or luck...



- Two houses meters apart in the same village in Dolakha

# Not because of they were not steel & concrete



# Failure was primarily due to poor construction

- Lack of corner stone
- Insufficient tie stones
- Too much mud mortar
- Poor stone selection
- Badly tied gables
- Floors not tied to walls
- Lack of Banding or banding failure
- Too thick mud
- Too tall



# Success was primarily due to good construction

1. Good Cornerstones
2. Frequent tie-stone
3. Reinforced gables
4. Strong banding
5. Rectilinear stones
6. Not too much mud
7. Floors tied to walls
8. Stable ground
9. Roof tied down to walls
10. Not too tall



# Gable end failure

- Gable end failure causes the roof to collapse which then pushes the walls apart
- High up gable stones fall the farthest and are therefore the deadliest



IOM • OIM

# Gable end failure



IOM • OIM

- Ridge beams commonly bear load directly on to the gable end wall.

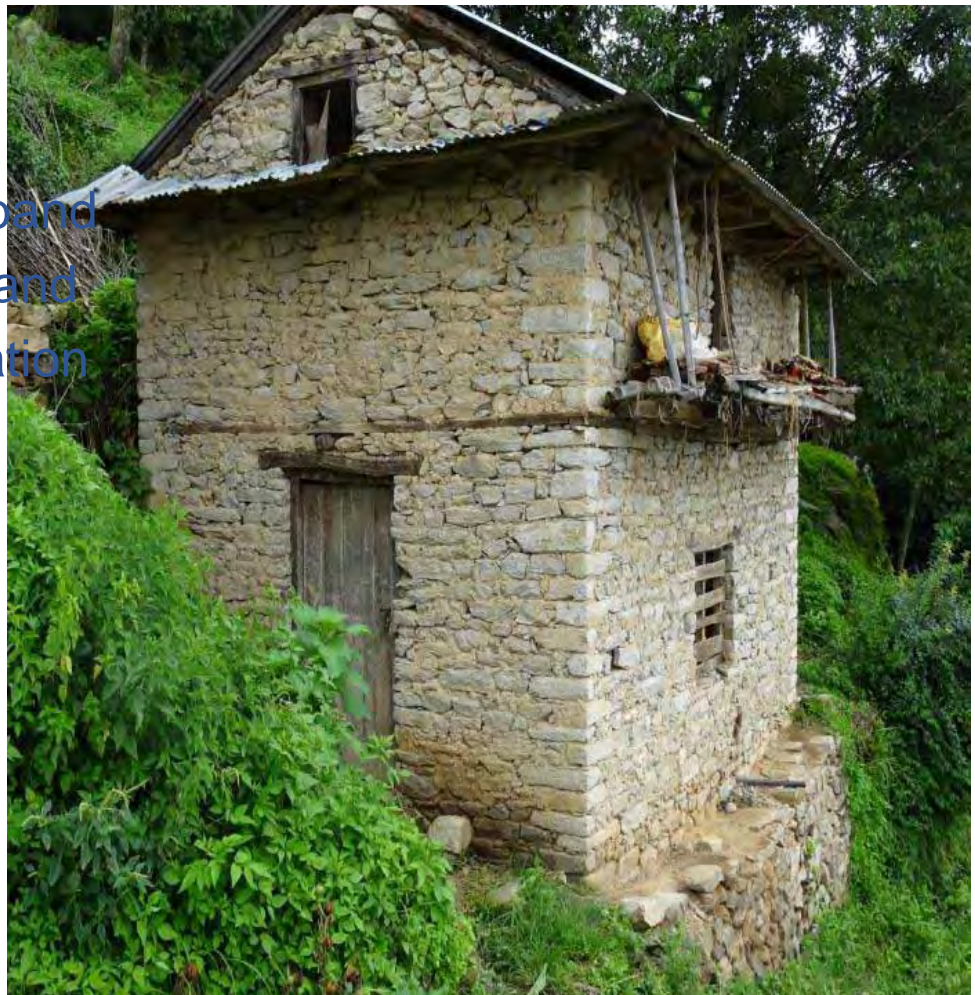
# Roof connection to walls

- Rafters wobbling in the quake have crumbled the walls due to lack of a solid top-plate and connection to it



# Banding

- End eave as band
- Mid floor as band
- Strong foundation as band



# Banding failure



Bands poorly connected in along their length

# Veranda as Banding



# Banding failure

- Bands poorly connected in corners



# Size/height



# Rectilinear interconnected stones



Rectangular stones staggered on top of each other with or without a thin layer of mortar are held together by friction between surfaces

# Corner tie-stones



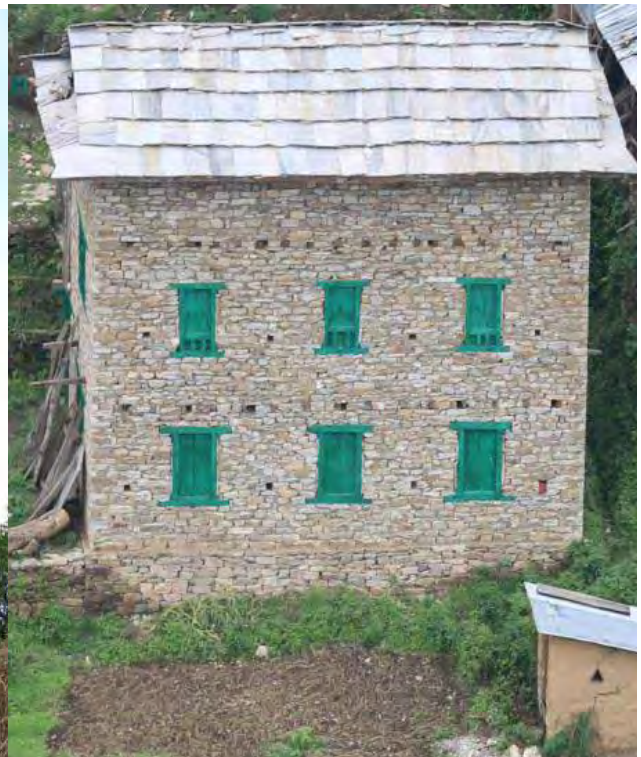
Corner stones tie each wall to its adjoining wall

# Cross wall tie-stones



Regular tie-stones tie the inner skin of the wall to the outer skin

# Mud to stone ratio



Too much mortar between stones crumbles easily allowing the stones to simply tumble apart

# Rubble filled walls



As walls shake rubble fill wobbles down slowly but surely wedging walls apart

# Connection between floor plates and walls

Floor plates that are well connected to walls help stabilise the wall.

This is particularly true of floor joists and bearers are connected to tie bands in the walls



# Length of unsupported walls



Many traditional houses were open plan with very few dividing walls. Houses with smaller separate rooms survived better



# New technology is NOT the answer



Any new technology brings significant risks of being misunderstood, badly implemented or poorly maintained



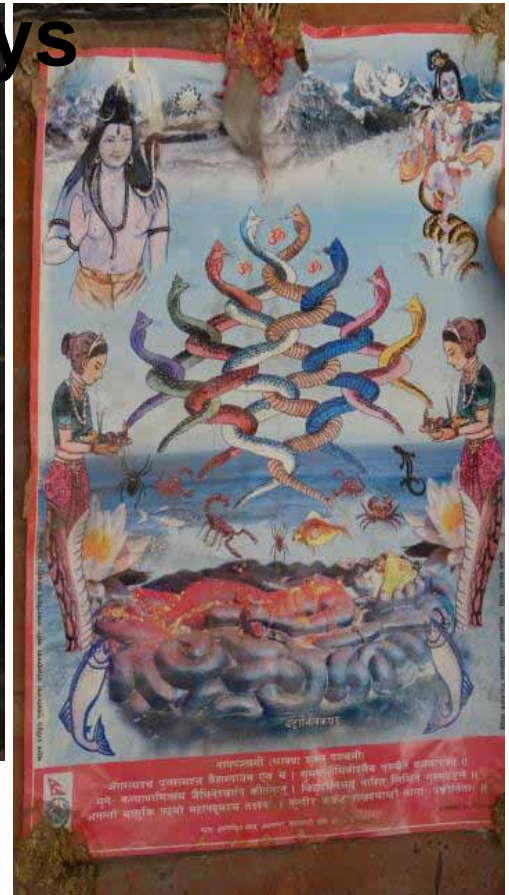
# Poorly made steel reinforced concrete will kill just as surely as poor stone and mud



# Building back properly IS the answer



# Much is simply about remembering old ways



## Key Messages

- Improving Temporary Shelter
- Early Recovery Shelter – Self-recovery
- Early Recovery Shelter – Demolition and Reuse



Well built houses can better withstand earthquakes. Here are 10 tips on how to **BUILD BACK SAFER**

**1 GET TECHNICAL ASSISTANCE BEFORE YOU START**

**2 BAND YOUR WALLS TOGETHER**

**3 TIE YOUR HOUSE TOGETHER WITH TIESTONES**

**4 BUILD YOUR HOUSE WITH GOOD MATERIALS**

**5 TIE YOUR GABLES UP**

**6 TIE YOUR ROOF DOWN**

**7 HAVE A SAFE SITE AND A SAFE EXIT**

**8 BUILD STRONG WALLS**

**9 TIE YOUR FLOORS TO YOUR WALLS**

**10 BUILD ON STRONG FOUNDATIONS**

**10 TIPS TO MAKE STONE HOUSES SAFER**

Shelter Cluster Nepal  
 (shelter@redcross.org.np)  
 Community Work Development Center

LOGO LOCATION LOGO LOCATION LOGO LOCATION

DRAFT: 04/08/2015

**1 MAKE SURE YOUR HOUSE IS ON THE GOVERNMENT LIST.**

**2 GET SOMEONE TECHNICAL TO CHECK IF YOUR HOUSE CAN BE REPAIRED OR NOT**

**3 NEVER WORK ALONE**

Does your house need demolishing? Here are some tips on **SAFE DEMOLITION**

**4 YOU CAN GET TETANUS FROM RUSTY NAILS AND CGI. BE CAREFUL!**

**5 KEEP PEOPLE, CHILDREN, AND ANIMALS AWAY.**

**6 DISCONNECT ELECTRICITY BEFORE DEMOLITION. REMOVE GAS IF SAFE.**

**7 REMOVE LARGE DANGEROUS OBJECTS FIRST**

**8 DEMOLISH CAREFULLY FROM THE TOP DOWN**

**PROTECT YOUR HEAD, EYES, LUNGS, HANDS, AND FEET**

**8 TIPS FOR SAFER DEMOLITION**

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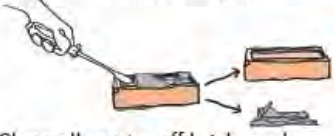
LOGO LOCATION LOGO LOCATION

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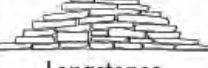

**STONE AND BRICK**



Confirm strength with drop test (drop brick from shoulder height)



Clean all mortar off bricks and stones. Do not reuse cement mortar.

 Stones	 Rubble
 Longstones	 Bricks

Separate stones that are long and flat for use as corner stones and tie stones.

Do not attempt to salvage materials until your building is fully demolished. Here are a few tips on:

**MATERIAL REUSE**




**BE CAREFUL**

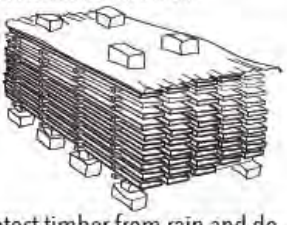


Don't remove doors and windows until clear above.

**TIMBER**






Place timber supports with a 1 meter spacing and stand at midpoint. Ideal timber sections do not show cracking and have minimal knots.



Protect timber from rain and do not store timber on the ground.

**TIPS FOR MATERIAL REUSE**

**DRAFT: 04/08/2015**

## Winterisation TWIG

### OBJECTIVE:

- Provide Technical Guidelines to support agencies to implement winterization strategies
- Define packages of assistance

### TIME FRAME

- 1<sup>st</sup> meeting: Wednesday 5<sup>TH</sup> August @3 pm SC office
- 2 or 3 more meetings to be defined
- Draft Guidance Doc. for SAG approval: 3<sup>rd</sup> week of August
- Final Guidance Doc. : End of August

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# Winterisation TWIG

## PARTICIPANTS:

- NRCS will chair the meetings, since they have experience from previous years.
- Some major agencies already been invited, not exclusive
- Other agencies interested in participating please approach me after the meeting.

## SHARE OF INFORMATION

- Compile existing resources in a sharable drop box

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# Beneficiary Prioritisation Tool

- Approved by Strategic Advisory Group (SAG)
- Tool for systematic thinking on:
  - Family composition/social characteristics
  - Social/Economic factors
  - Capacity to rebuild

## Available on SC website:

<http://www.sheltercluster.org/response/nepal-earthquake-2015>

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# 5. Information Management Update



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## IM Update

- Goodbyes and Hellos
  - Zineb and Jagoda
- Revised Template
  - To capture improved data – training, detailed NFIs
  - To make it more clear
  - Rollout early next week



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## 6. Recovery and Reconstruction Working Group and Survey

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## Recovery and Reconstruction Working Group (RRWG) Survey

- Online survey to map interest and capacity in recovery and reconstruction
- 26 organisations have responded as of this morning
- Survey closes on Friday 7<sup>th</sup> August at 5pm

## 7. Any Other Business

Partners Forum: Wednesday 12 August, 11am  
Theme: CASH

Shelter Cluster Meeting: Wednesday 19 August, 11am

Friendly reminders:

- ✓ Check for updates on the website
- ✓ Send in your reports for SC tracking
- ✓ Register yourself on the mailing list

New Shelter Cluster Email for general correspondence:  
[nepal@sheltercluster.org](mailto:nepal@sheltercluster.org)

<https://www.sheltercluster.org/response/nepal-earthquake-2015>



**Shelter Cluster Nepal**  
ShelterCluster.org  
Coordinating Humanitarian Shelter