

Before

Gorakha Earthquake 2015

Now

Earthquake Reconstruction

Reconstruction Technology Centre



NSET

www.nset.org.np

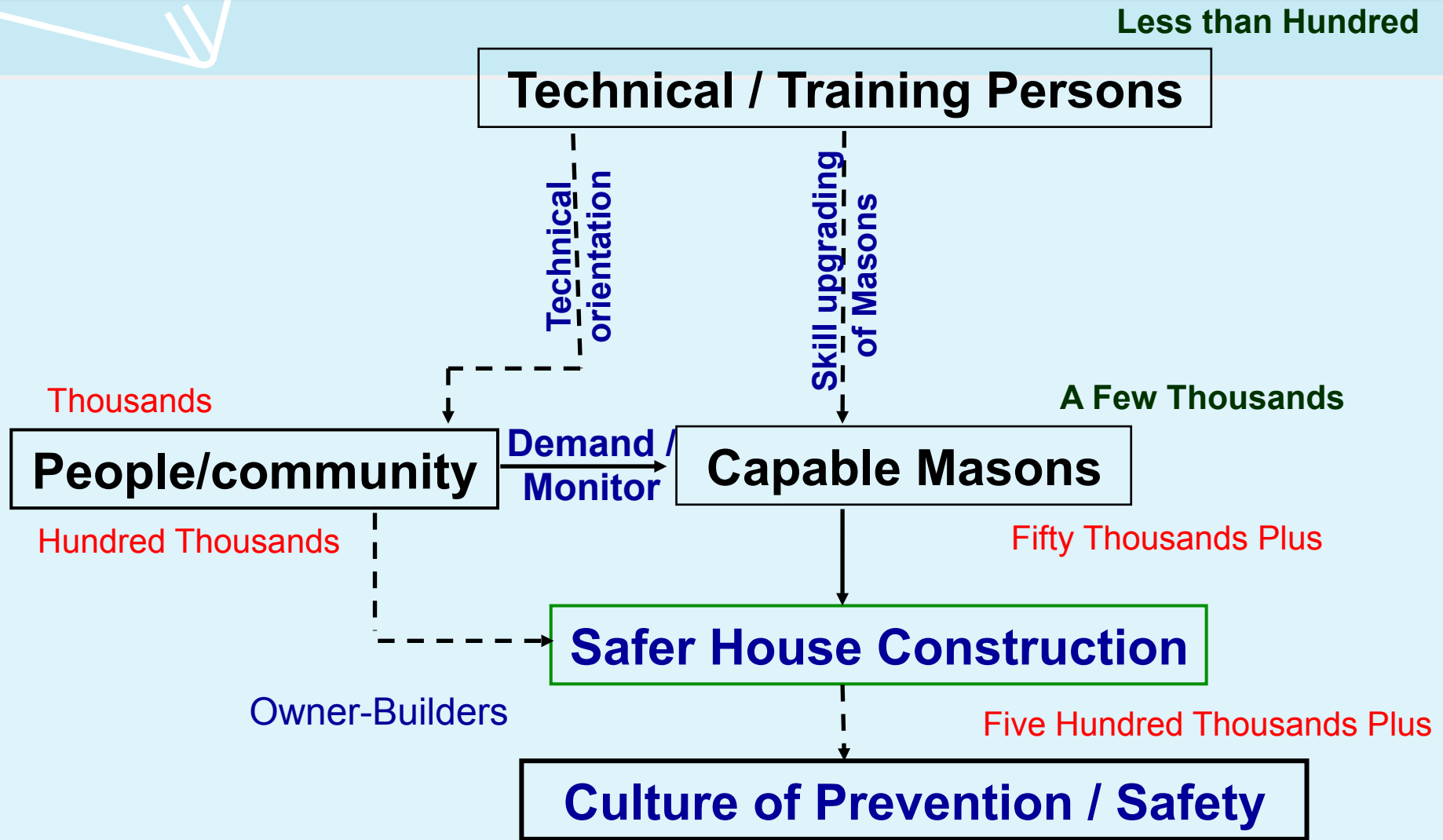


Intervention Required Tentative

- **Repair and Maintenance, 55, 000 units**
- **Retrofitting, 100, 000 units**
- **New Constructions 500,000 units**
- **Masons To be Trained, 50,000 plus**
- **Engineers to be Trained ?? ??**
- **Social Mobilizers to be trained**



Training Requirements





Various Training Packages

Training Awareness Programs	Audience	Duration
Earthquake Preparedness (EP)	General Public	2 hours
Earthquake Prep. and Mitigation	Social Mobilisers	2-3 days
Earthquake Prep. and Mitigation.	Owner Builders	4 hours
Basic Technical Training	Eng. / Arch. / SE	5 days
Eq. Resistant Bld. Const. Technology	Masons	5 days
Vuln. Ass. and Retrofitting Design	Str. Engineers	
Retrofitting Technology	Trained Masons	3 Days
Training For Instructors	Potential Trainers	5 days



Mason Training (Existing curriculum)

- **Earthquake Resistant Construction Of Buildings Curriculum for Mason Training, NSET 2005**
- **Seismic Vulnerability Evaluation Guideline for Private and Public Buildings, DUDBC/ERRP 2011**
- **Guidelines for the Assessment and Repair of Masonry Buildings, UNDP, CDRMP 2011.**
- **Repair and Retrofitting Guideline, NSET**



Mason Training (Existing curriculum)

- **Mason Training on seismic retrofitting, NSET**
- **Engineers Training Manual, NSET**
- **Basic Technical Training (BTT), NSET**
- **Small Scale Mitigation Training For VDC and DDC Technicians, NSET, 2010**
- **निर्माण व्यवसायीहरूका लागि भूकम्प प्रतिरोधी भवन निर्माण व्यवस्थापन तालिम कार्यक्रम, NSET 2014**



- Training Programs.xlsx



Damaged Buildings

as of 2 June 2015 from DRR portal

SN	District	Total Houses	Affected Buildings	
			Collapsed	Damaged
1	Gorkha	66,505	44,610	13,917
2	Dhading	73,851	43,834	18,784
3	Bhaktapur	68,636	18,900	9,090
4	Kathmandu	436,344	37,058	51,030
5	Lalitpur	109,797	17,661	8,262
6	Kavrepalanchok	80,720	49,933	23,714
7	Nuwakot	59,215	57,957	4,215



Damaged Buildings

as of 2 June 2015 from DRR portal

SN	District	Total Houses	Affected Buildings	
			Collapsed	Damaged
8	Rasuwa	9,778	7,040	2,410
9	Sindupalchok	66,688	63,885	2,751
10	Dolakha	45,688	48,908	3,120
11	Ramechhap	43,910	26,797	13,229
12	Okhaldunga	32,502	10,032	3,298
13	Makwanpur	86,125	15,058	17,219
14	Sindhuli	57,581	18,289	10,259
	Total	1,237,340	459,962	181,298



Required Intervention

SN	District	Require Construction		
		New	Retrofitting	Repair
1	Gorkha	47,393	6,959	4,175
2	Dhading	47,591	9,392	5,635
3	Bhaktapur	20,718	4,545	2,727
4	Kathmandu	47,264	25,515	15,309
5	Lalitpur	19,313	4,131	2,479
6	Kavrepalanchok	54,676	11,857	7,114
7	Nuwakot	58,800	2,108	1,265



Required Intervention

SN	District	Require Construction		
		New	Retrofitting	Repair
8	Rasuwa	7,522	1,205	723
9	Sindupalchok	64,435	1,376	825
10	Dolakha	49,532	1,560	936
11	Ramechhap	29,443	6,615	3,969
12	Okhaldunga	10,692	1,649	989
13	Makwanpur	18,502	8,610	5,166
14	Sindhuli	20,341	5,130	3,078
	Total	496,222	90,649	54,389



Masons Required Per Year

SN	District	New	Retrofitting	Repair
1	Gorkha	11,848	870	116
2	Dhading	11,898	1,174	157
3	Bhaktapur	5,180	568	76
4	Kathmandu	11,816	3,189	425
5	Lalitpur	4,828	516	69
6	Kavrepalanchok	13,669	1,482	198
7	Nuwakot	14,700	263	35



Masons Required Per Year

SN	District	New	Retrofitting	Repair
8	Rasuwa	1,881	151	20
9	Sindupalchok	16,109	172	23
10	Dolakha	12,383	195	26
11	Ramechhap	7,361	827	110
12	Okhaldunga	2,673	206	27
13	Makwanpur	4,625	1,076	143
14	Sindhuli	5,085	641	85
	Total	124,055	11,331	1,511



Training Programs Required

SN	District	New	Retrofitting	Repair
1	Gorkha	494	36	4
2	Dhading	496	49	5
3	Bhaktapur	216	24	3
4	Kathmandu	492	133	14
5	Lalitpur	201	22	2
6	Kavrepalanchok	570	62	7
7	Nuwakot	613	11	1



Training Programs Required

SN	District	New	Retrofitting	Repair
8	Rasuwa	78	6	1
9	Sindupalchok	671	7	1
10	Dolakha	516	8	1
11	Ramechhap	307	34	4
12	Okhaldunga	111	9	1
13	Makwanpur	193	45	5
14	Sindhuli	212	27	3
		5,169	472	50

