



NEPAL EARTHQUAKE

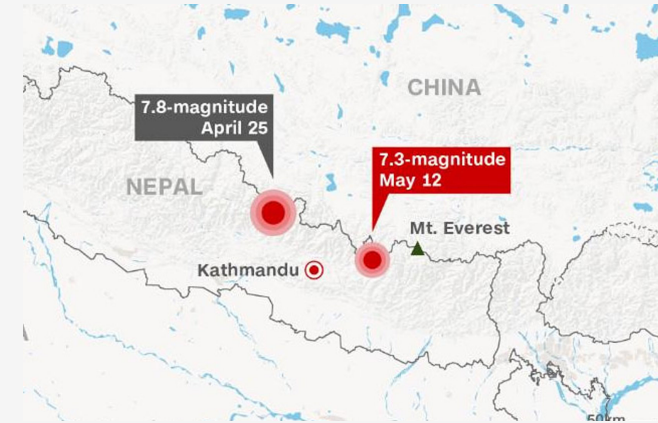
APRIL 2015

PRAGYA RESPONSE TO 2015 NEPAL EARTHQUAKE

PRAGYA ASSESSMENTS OF DAMAGE

ASSESSMENT THE EVENT

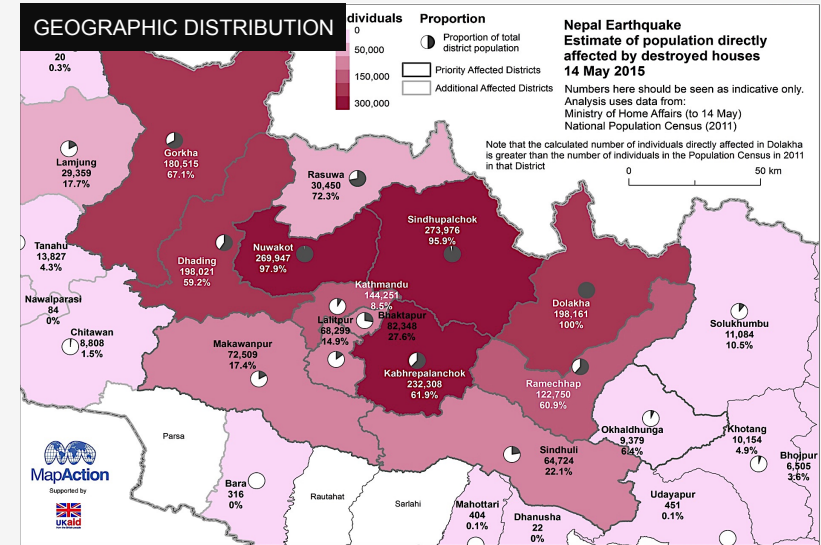
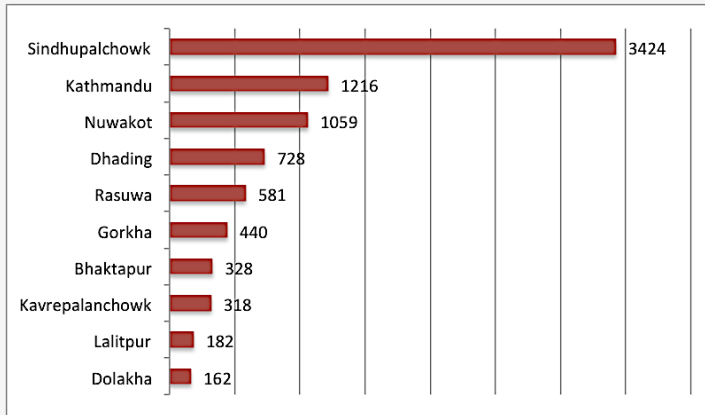
- Two major earthquakes struck Nepal measuring **7.8** and **7.3** on **25th April** and **12th May 2015** respectively, leading to huge damage to life, livelihoods and infrastructure.
- The first earthquake was one of the most lethal earthquakes since 1990.
- Epicenter for the first earthquake was **Barpak, Gorkha District**, and for the second, **Chilankha, Dolakha District** (both were 15 km deep).
- The main shock occurred during working hours while people were awake and outdoors; else, human casualty could have been higher.
- **327 aftershocks of above 4.0 magnitude** followed, mostly to east of the Gorkha mainshock. Aftershocks continue till date.
- Block of **Earth's crust** 120 miles long and 40 miles wide **moved ten feet** in 30 seconds as a result of the earthquake.



ASSESSMENT DAMAGE - OVERVIEW

- ⊙ **32 districts** have been affected, of which **14 districts** have suffered severe damage and declared 'crisis hit': Gorkha, Kavrepalanchok, Dhading, Nuwakot, Rasuwa, Sindupalchowk, Dolakha, Ramechhap, Okhaldunga, Makwanpur, Sindhuli, Kathmandu, Bhaktapur, and Lalitpur

CASUALTIES BY DISTRICT



CONCENTRATION OF CASUALTIES

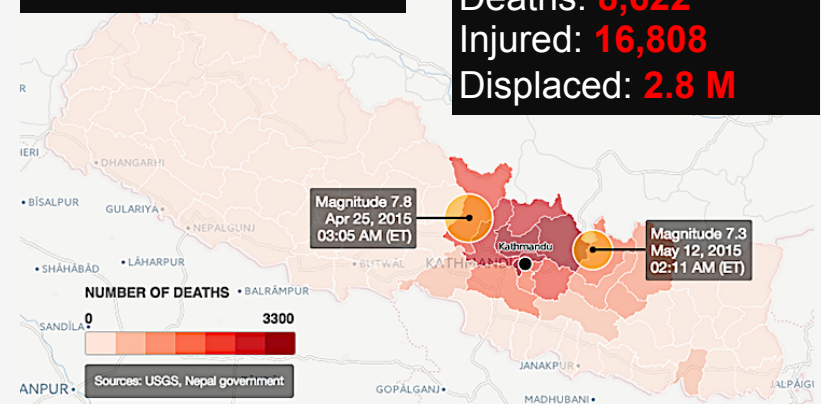


Image Source: – <http://www.ibtimes.com/where-did-earthquake-nepal-hit-death-toll-climbs-after-second-major-tremor-near-mount-1919091>

Date accessed: 19th May 2015

Graph source: PRAGYA, based on available data, 25 May 2015

ASSESSMENT DAMAGE - OVERVIEW

HUMAN

- Approximately **2.8 million** people had been displaced
- **Severe setback to livelihoods;** About 3,000 landslides have been reported that have caused damage to crops and farmlands, estimated as **28,366 million NPR**.
- Over **100,000 livestock** has been lost. 290 irrigation schemes were damaged, resulting in non availability of water for 10,873 ha land.
- **700,000+ people** are expected to **move below poverty line** without immediate livelihood support
- Estimated loss of **tangible heritage** amounted to **16.9 billion NPR**

INFRASTRUCTURE

- Approximately **4,88,530** buildings have been damaged completely and **2,61,988** are partially damaged.
- **27,833 Schools, 414 ECDs, and 6,063 health facilities** have been additionally damaged
- Total value of disaster effects (damage and losses) caused by the earthquakes is estimated to be **NPR 706 billion or US\$ 7 billion**
- Damage to housing and human settlements is estimated to be **408,625 million NPR**
- Loss to infrastructure related to electricity, communication, transport, WASH is estimated to be **66,783 million NPR**

ASSESSMENT

PRAGYA SURVEYS IN AFFECTED DISTRICTS



IDP CAMP AT SHANKARAPUR MUNICIPALITY



BISHAMBARA VILLAGE, KATHMANDU



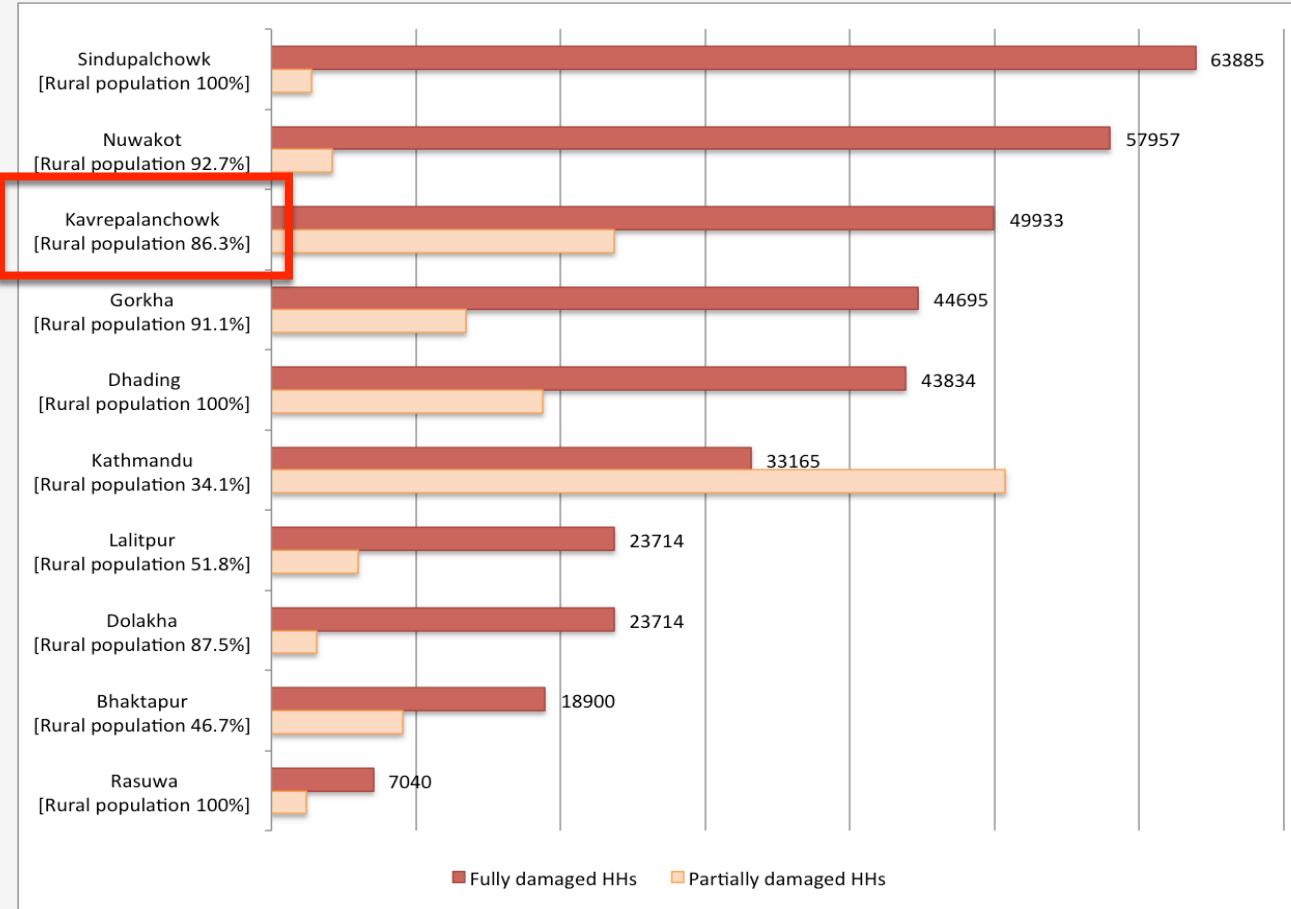
KUTTAL VILLAGE, KAVREPALANCHOWK

A **Thorough and Robust** Assessment Process and Targeting has been followed by PRAGYA:

- Detailed assessment of **village-specific needs: group discussion** with communities to determine needs, **household visits** to ensure comprehensive enumeration of beneficiaries and to verify damage suffered.
- Focus on **districts with extensive damage**, with special targeting of **remote villages, displaced communities**, and **vulnerable groups** (children, women, lower caste groups, PwDs)
- Identifying priority areas in discussion with coordinating authorities in the government (**District Coordinators** and **Chief Development Officers**) to avoid duplication of work; periodic interactions to track changing needs and outreach of state-led compensation and material distribution.
- Participation in coordination meetings at national capital, regular visits to zonal coordination hubs.

ASSESSMENT

PRAGYA SURVEYS IN AFFECTED DISTRICTS



- Initial assessment focused on Kathmandu and neighbouring rural communities due to poor access conditions (week 1; 26th April 2015 onwards)
- Priority districts selected based on **severity of damage suffered and % of rural population** in the district; detailed need assessment carried out in these districts (week 2; 1st May 2015 onwards)

Graph source – PRAGYA, based on Nepal MoHA data on houses damaged, 25 May 2015

DISTRICT ASSESSMENT SINDHUPALCHOWK

DAMAGE & HUMAN LOSS

- ⊙ Sindhupalchowk is one of the **worst-affected** districts with **3,424** dead and **859** injured, while **3,000** people remain unaccounted for. **2,189** people have been **displaced**.
- ⊙ **63,885** houses are **fully** damaged and **2,751** houses are **partially** damaged.
- ⊙ **48 (61%)** out of **79** health facilities have been **completely** damaged. **427 (76.9%)** out of **555** schools have been **damaged**.

PRIORITIES – LONG TERM



Education Infrastructure

Livelihoods



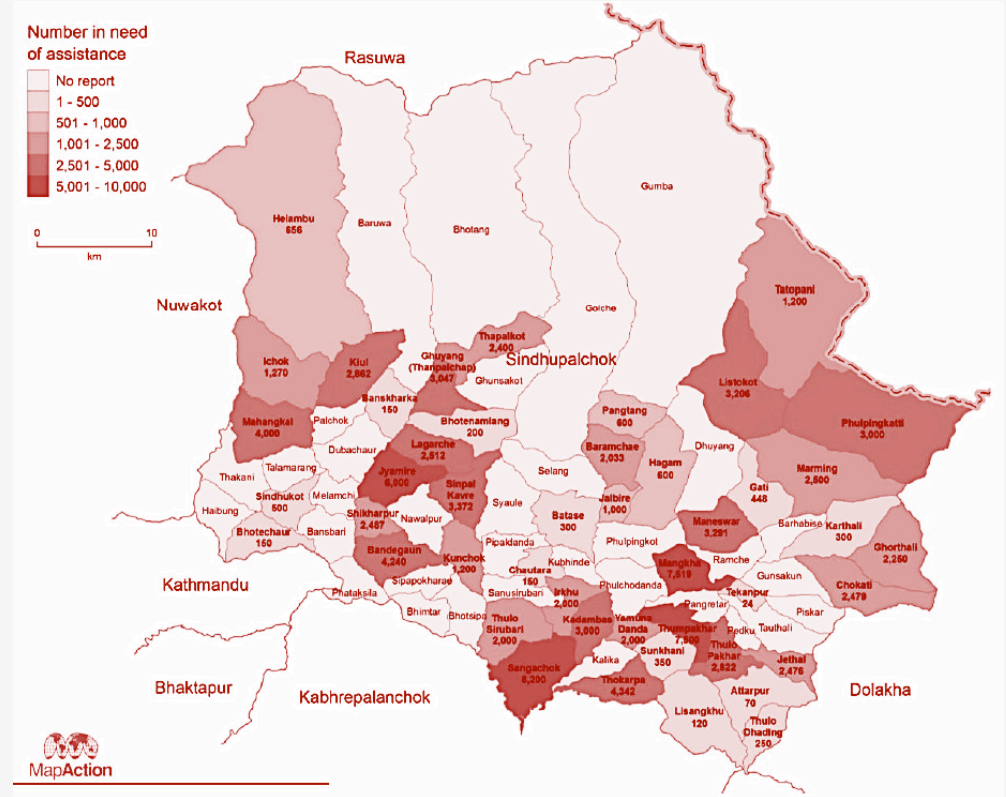
Shelter and WASH



DISTRICT ASSESSMENT SINDHUPALCHOWK

EXACERBATING FACTORS

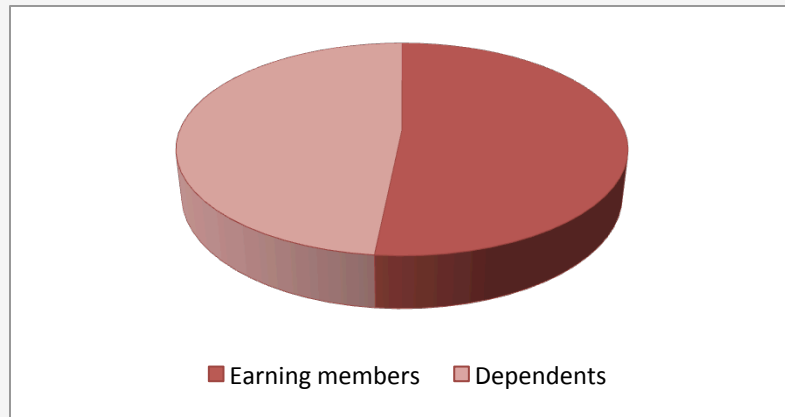
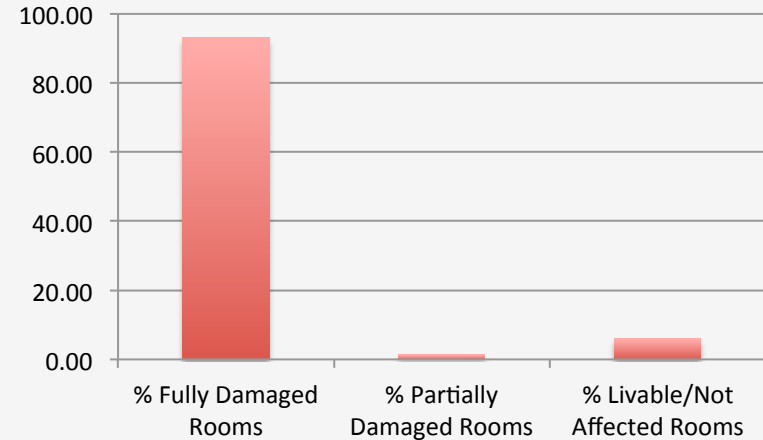
- ◎ **1,23,376** people required immediate **assistance**
- ◎ Sindhupalchowk had faced a **flood event in 2014** which affected several villages along Sankushi River, which the people had not yet recovered from
- ◎ The district comprises **remote mountains** and more **densely populated, accessible hills**; the outreach of aid delivery was not consistent with the needs, and depended on terrain and access conditions
- ◎ The **district capital Chautara** suffered significant damage, causing bottlenecks in coordination process



DISTRICT ASSESSMENT SINDHUPALCHOWK

LOSSES ACROSS SURVEYED HOUSEHOLDS

- 56 HHs surveyed across 6 affected villages
- 46.43% of surveyed HHs were BPL; 41.07% were lower caste and suffered various disadvantages
- 93.03% rooms in the affected households were fully damaged; only 5.99% were still usable
- 96.42% HH had lost electricity connection



CAPACITY OF SURVEYED HOUSEHOLDS

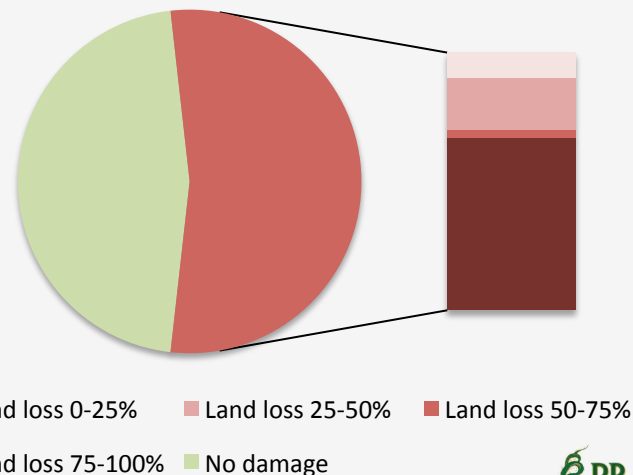
- 48.38% were dependent population
- 29.75% of the 279 members surveyed were illiterate; only 18.27% had completed education till class 10 or above
- Of the earning members 58.33% were male, 41.66% were females; another 14.69% were potential earning members

DISTRICT ASSESSMENT SINDHUPALCHOWK



EFFECT ON LIVELIHOODS

- 87.5% HHs were marginal farmers, with average landholding of 0.33 hectares
- 53.57% HHs had lost agricultural land due to landslides and cracks on the ground from earthquake; of these 37.5% had lost >50% of their land, several having lost all that they owned
- 62.50% HHs suffered livestock loss
- 10.71% HHs owned shops/establishments, 66.71% of them lost their assets



DISTRICT ASSESSMENT NUWAKOT

DAMAGE & HUMAN LOSS

- ◎ **Nuwakot** district has had **1059** people dead and **1311** injured.
- ◎ According to district authorities **57,943** houses are **fully damaged** and **4,200** houses are **partially damaged**.
- ◎ **31 (52.5%)** out of **59** health facilities have been **completely damaged**.
485 (97.9%) out of **495** schools have been **damaged**.

PRIORITIES – LONG TERM



Education Infrastructure



Shelter and WASH



Healthcare



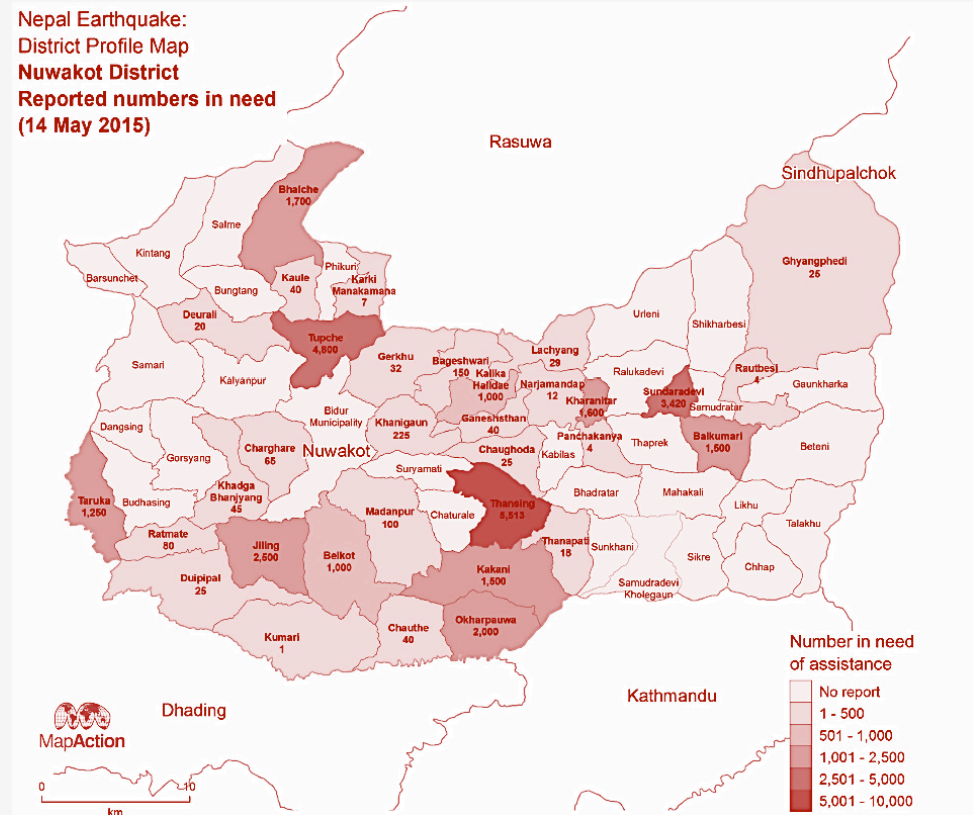
DISTRICT ASSESSMENT NUWAKOT

EXACERBATING FACTORS

- Based on VDC reports, **38,964** people are in the **need of assistance** currently. Several VDC Office buildings had collapsed, causing delays and difficulties in data collection work.
- Road into the **northeastern VDCs** is **damaged**. No **shelter assistance** had reached the northeastern VDCs.
- 270 houses** were **demolished** after being declared as posing high risk to life and neighbouring houses.
- 2 hydropower projects** in Nuwakot that were shut down after the 25th April earthquake. They have now **resumed power generation** after repairs

Nepal Earthquake:
District Profile Map

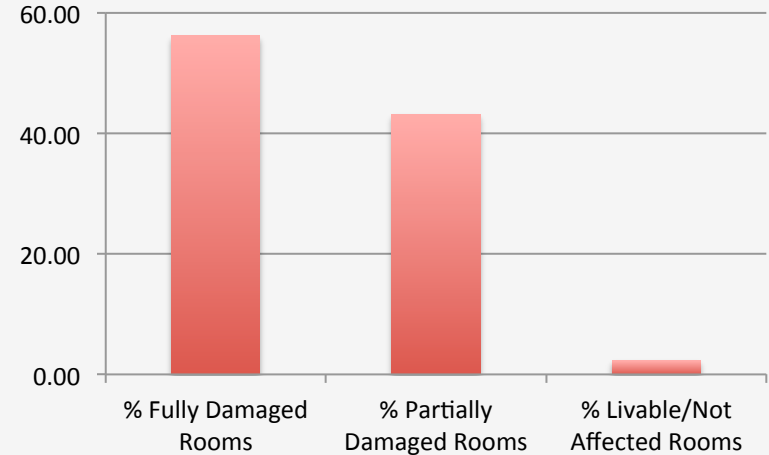
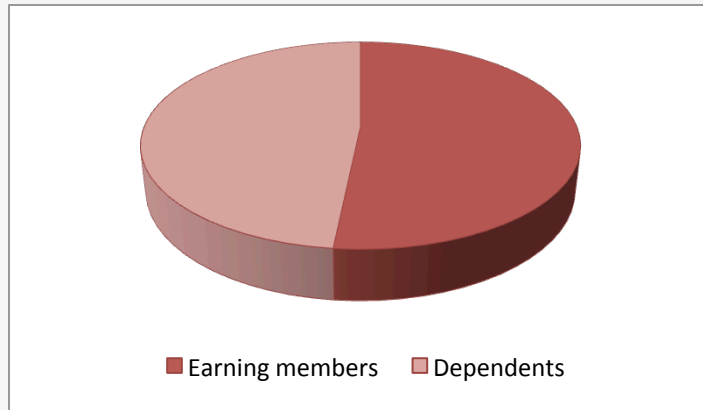
Nuwakot District
Reported numbers in need
(14 May 2015)



DISTRICT ASSESSMENT NUWAKOT

LOSSES ACROSS SURVEYED HOUSEHOLDS

- 43 HHs surveyed across 6 affected villages
- 53.49% of surveyed HHs were BPL; 4.65% were female headed and suffered significant disadvantages
- 56.21% rooms in the affected households were fully damaged; 43.41% were partially damaged; only 2.33% remained usable
- 25.64% HH had lost electricity connection



CAPACITY OF SURVEYED HOUSEHOLDS

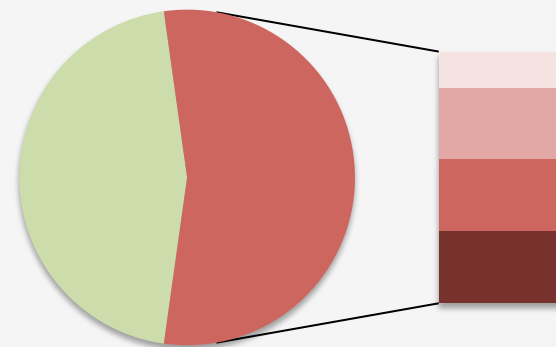
- 48.36% were dependent population
- 20.65% of the 213 members surveyed were illiterate; only 14.55% had completed education till class 10 or above
- Of the earning members 60% were male, 40% were female; another 19.71% population were identified as potential earning members

DISTRICT ASSESSMENT NUWAKOT



EFFECT ON LIVELIHOODS

- 97.6% HHs were marginal farmers, with average landholding of 0.23 hectares
- Damage to land and crops were comparatively lower; 16.28% HHs had lost agricultural land; of these 85.71% had lost >25% of their land, some of them lost the entire plot of land they owned
- 23.26% HHs suffered livestock loss
- 53.48% HHs owned fruit trees, none of which was damaged



■ Land loss 0-25%
 ■ Land loss 25-50%
 ■ Land loss 50-75%
 ■ Land loss 75-100%
 ■ No damage

DISTRICT ASSESSMENT DHADING

DAMAGE & HUMAN LOSS

- ⊙ **Dhading** is one of the **worst-affected** districts with **728** people dead and **702** injured.
- ⊙ According to district authorities **43,741** houses are **fully damaged** and **18,720** houses are **partially damaged**.
- ⊙ **28 (52.8%)** out of **53 health facilities** have been **completely damaged**; **587 (96.5%)** out of **608 schools** have been **damaged**.

PRIORITIES – LONG TERM



Healthcare



Livelihoods



Shelter and WASH



DISTRICT ASSESSMENT DHADING

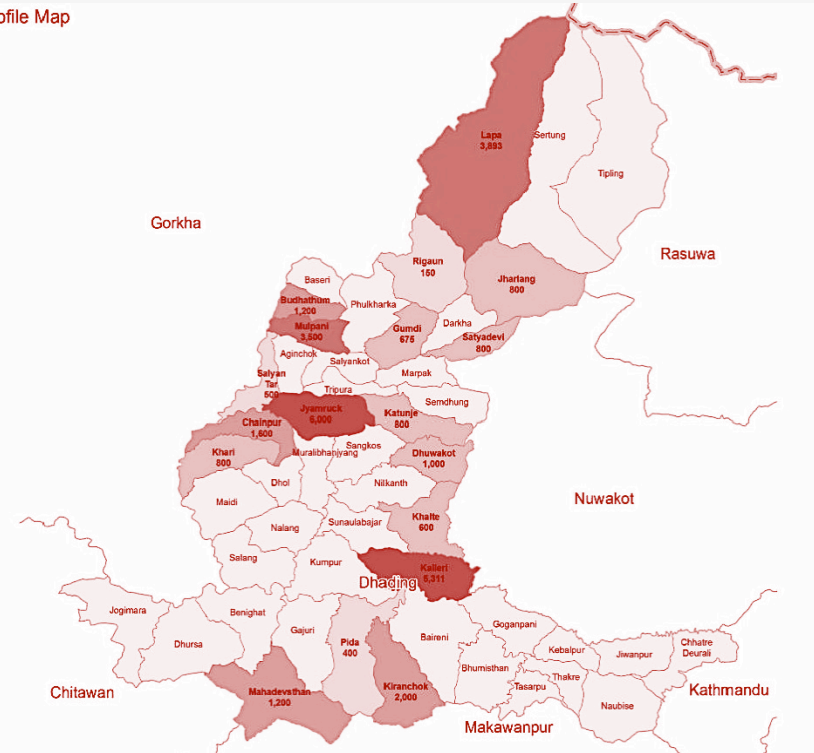
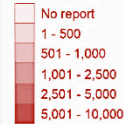
EXACERBATING FACTORS

- ⊙ Based on VDC reports, **32,029** people are in **need of assistance** currently.
- ⊙ There was very **limited road access** to the northern VDCs even before the earthquake. The **existing roads** have been affected by **landslides**.
- ⊙ The district has faced several **landslides**, affecting the access condition; **5 VDCs** (Laapa, Tipling, Setuu, Ruhi and Gaun) remain **inaccessible** by road.
- ⊙ Along with houses, people have also suffered **heavy crop losses**.

Nepal Earthquake: District Profile Map
Dhading District
Reported numbers in need
(5 May 2015)

The map shows the number of people reported to be in need of assistance in each Village Development Committee (VDC), based on information collected from various sources, including Nepali Red Cross assessment results and Kathmandu Living Labs.

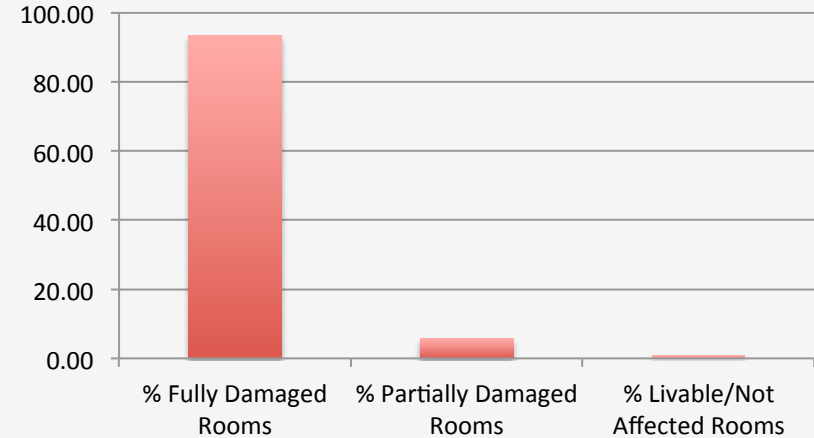
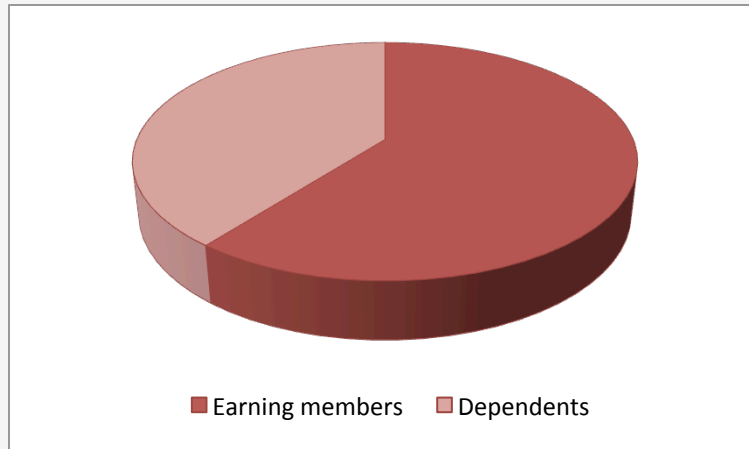
Number in need
of assistance



DISTRICT ASSESSMENT DHADING

LOSSES ACROSS SURVEYED HOUSEHOLDS

- 39 HHs surveyed across 5 affected villages
- 89.74% of surveyed HHs were BPL; 20.51% were lower caste, 7.69% HHs had PwD members and suffered various disadvantages
- 93.43% rooms in the affected households were fully damaged; only 0.78% were unharmed and usable
- 71.79% HHs had lost electricity connection



CAPACITY OF SURVEYED HOUSEHOLDS

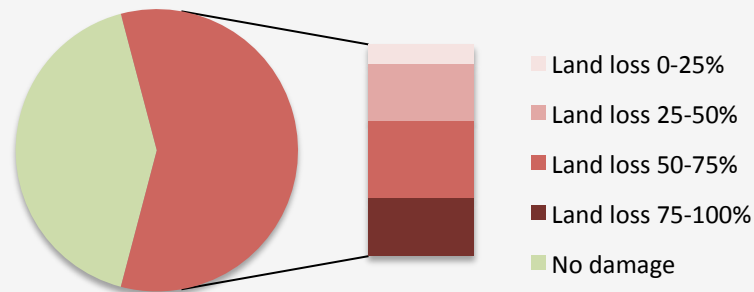
- 39.42% were dependent population
- 20.57% of the 175 members surveyed were illiterate; 23.42% had completed education till class 10 or above
- Of the earning members 52.83% were male, 47.17% were female; another 7.42% were potential earning members

DISTRICT ASSESSMENT DHADING



EFFECT ON LIVELIHOODS

- ⦿ All HHs were marginal farmers, with average landholding of 0.17 hectares (lowest among the districts surveyed)
- ⦿ 28.21% HHs had lost agricultural land; of these 90.91% had lost >25% of their land, some of them lost the entire plot of land they owned
- ⦿ Loss of livestock was significantly high in the district; 61.54% HHs suffered losses
- ⦿ 53.48% HHs owned fruit trees, only 7.69% faced damage; very few HHs owned shops/establishments or vehicles and no damage was reported



DISTRICT ASSESSMENT

KAVREPALANCHOWK

DAMAGE & HUMAN LOSS

- ⊙ In **Kavrepalanchowk** district, the death toll has been comparatively lower, with **318** people dead and **2780** injured.
- ⊙ According to district authorities **49,933** houses are **fully damaged** and **23,714** houses are **partially damaged**.
- ⊙ **13 (13%)** out of **100 health facilities** have been **fully damaged** and **2** were **partially damaged**; **548 (92.2%)** out of **594 schools** have been **damaged**.

PRIORITIES – LONG TERM



Education Infrastructure



Livelihoods



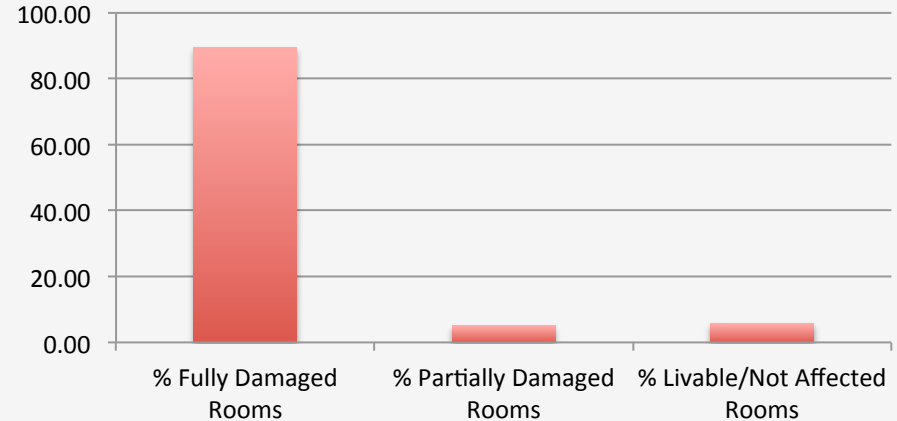
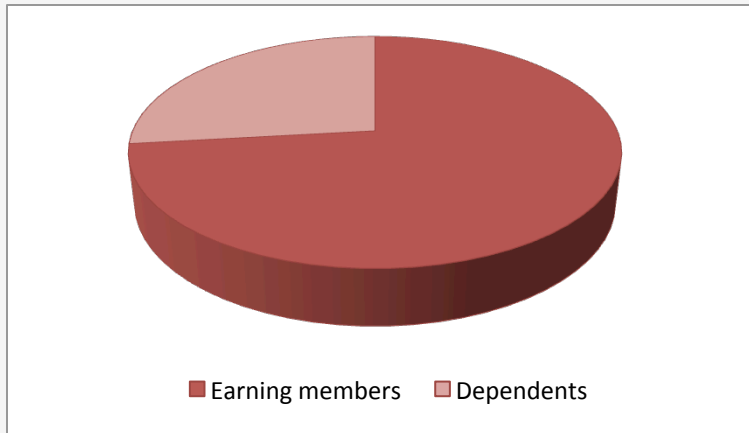
Shelter and WASH



DISTRICT ASSESSMENT KAVREPALANCHOWK

LOSSES ACROSS SURVEYED HOUSEHOLDS

- ⦿ 25 HHs surveyed across 5 affected villages
- ⦿ 84% of surveyed HHs were BPL; 20% were lower caste, 4% were women-headed and suffered various disadvantages
- ⦿ 89.47% rooms in the affected households were fully damaged, 5.26% partially damaged; only 5.88% were unharmed and usable

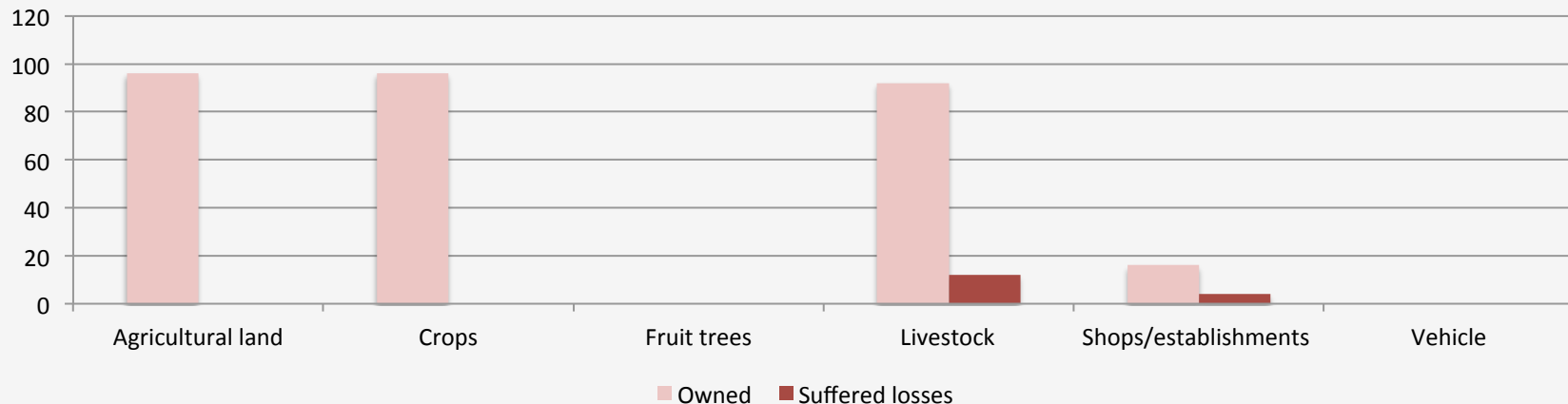


CAPACITIES OF SURVEYED HOUSEHOLDS

- ⦿ The area has an economically active population; only 29.78% were dependent population
- ⦿ 48.21% of the 112 members surveyed were illiterate; only 7.14% had completed education till class 10 or above
- ⦿ Of the earning members 48.78% were male, 51.21% were female

DISTRICT ASSESSMENT

KAVREPALANCHOWK



EFFECT ON LIVELIHOODS

- ⦿ 92% HHs were marginal farmers, with average landholding of 0.41 hectares
- ⦿ There was no damage to land and standing crops in the surveyed villages
- ⦿ Loss of livestock was quite low in the district; 12% HHs suffered losses
- ⦿ Only 16% HHs owned shops/establishments and 4% reported damage



DISTRICT ASSESSMENT

GORKHA

DAMAGE & HUMAN LOSS

- ⊙ **Gorkha** is among one of the **worst-affected** districts. The epicenter of the earthquake was in **Barpok, 15km from Gorkha town** where **440** people lost their lives. **3,074 people** have been **displaced**.
- ⊙ **44,650** houses were **fully** and **13,430** houses **partially** damaged.
- ⊙ **38 (56.7%)** out of **67 health facilities** had been **completely damaged**. **All 495 (100%) schools** had suffered **damage**.

PRIORITIES – LONG TERM



Healthcare



Livelihoods



Shelter and WASH



DISTRICT ASSESSMENT

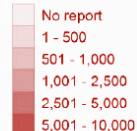
GORKHA

EXACERBATING FACTORS

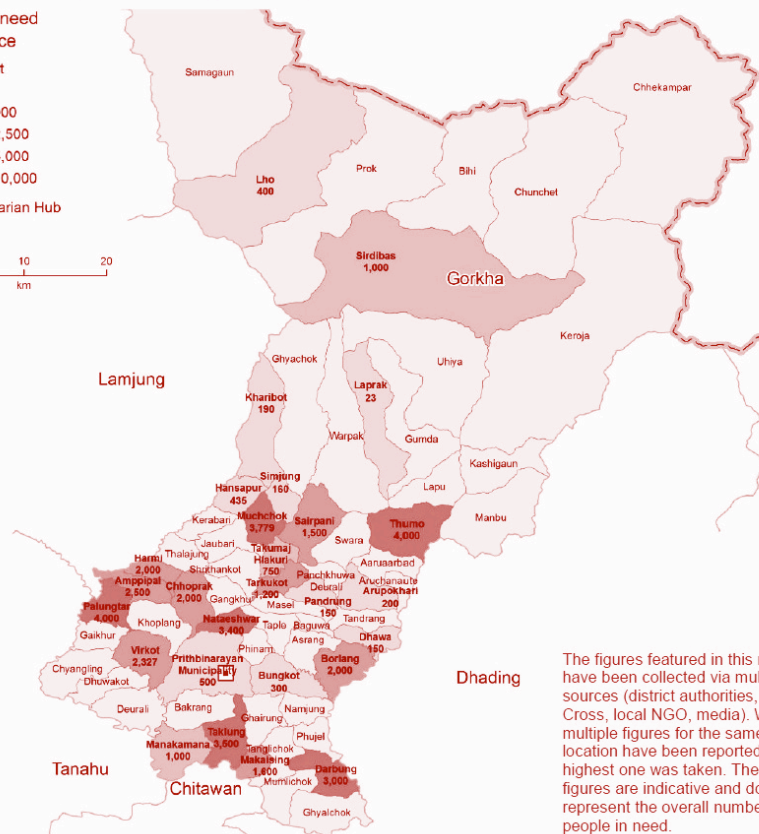
- Based on VDC reports, **38,964** people are in the **need of assistance**.
- No roads** in these northern areas, only **footpaths**. Many trails are also blocked by **landslides**. Remote villages remained inaccessible for a long time.
- Several agencies reached various VDCs with material support; district government received adequate tents and food material but faced challenges in distribution.
- Outbreak of Chicken Pox was recorded in Swara VDC

Reported number of people in need (multiple sources)

Number in need of assistance



Humanitarian Hub



The figures featured in this map have been collected via multiple sources (district authorities, Red Cross, local NGO, media). Where multiple figures for the same location have been reported the highest one was taken. These figures are indicative and do not represent the overall number of people in need.

PRAGYA'S RELIEF EFFORTS

OUR RELIEF EFFORTS OUTREACH

District	People Reached
Kathmandu	1830
Kavrepalanchowk	2751
Gorkha	499
Dhading	778
Sindhupalchowk	493
Nuwakot	940
6 Districts	7291 People Reached



Image source – PRAGYA distribution in Timalisina villages, Kavrepalanchowk district, May 2015

OUR RELIEF EFFORTS

RELIEF SUPPLIES

Thanks to our supporters, we have so far reached 8 remote villages in 5 districts of Nepal

The following material has been provided so far:

2117 packs of baby food and glucose	830 hygiene items
5789 kg food grains and spices	800 packs of ready-to-eat food items
22 blankets, tarpaulins, ground sheets	15984 ft GI sheet for temporary shelter
4 consignments of medicines	Tents and stationery supplies to 10 schools



Image source – PRAGYA distribution in Timalisina villages, Kavrepalanchowk district, May 2015

REHABILITATION AND RESILIENCE NEEDS

NEEDS & PRIORITIES

REHABILITATION OF EARTHQUAKE-AFFECTED



SHELTER AND WASH

- 488,530 houses wholly damaged and 261,988 partially damaged.
- Site suitability assessments needed before reconstruction.
- Capacity building required for masonry, disaster proof structures.
- WASH facilities for communities & schools



EDUCATION & HEALTH

- 32,145 classrooms fully, 15,352 partially damaged
- Education supplies and TLMs required
- Capacity building for psychosocial support
- 446 public health facilities fully destroyed; poor health access in remote villages
- Shortage of food and low nutrition status



GENDER EMPOWERMENT

- 2 million women and adolescent girls vulnerable to GBV and sex trafficking post-earthquake
- Peer-support network required for women and adolescent girls
- Capacity building of women's SHGs and livelihoods facilitation needed for economic empowerment



LIVELIHOODS

- Communities need support for seeds (food grains and vegetables), farm tools, repair of irrigation structures
- Support in terms of livestock, feed, cattlesheds are required
- Capacity building and facilitation of alternate livelihoods are required

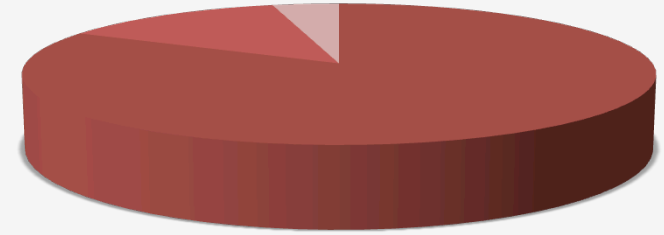
NEEDS & PRIORITIES

SHELTER & WASH

OVERVIEW OF CONCERNS

- ⊙ Across Nepal 488,530 houses were fully damaged; 261,988 houses were partially damaged
- ⊙ 84.37% surveyed rooms were fully damaged, 12.16% were partially damaged, only 4.29% were unharmed and usable
- ⊙ The BPL, lower caste, women headed households with **fully and partially damaged rooms**, are particularly affected and vulnerable

REHABILITATION PRIORITIES



- % Fully Damaged Rooms
- % Partially Damaged Rooms
- % Livable/Not Affected Rooms

Shelter & Household Items Provision

- **Temporary shelters** (GI sheets and tents) to protect earthquake survivors from the monsoons
- 68.65% surveyed households lost electricity connection; **solar lanterns / home lighting kits** to address immediate needs
- Durable construction material support (cement, iron rods, GI sheets) for reconstruction of damaged houses
- Training on masonry for earthquake resistant structures and building codes
- Helpline services to enable people access available financial support, provide technical guidance

WASH Provisions

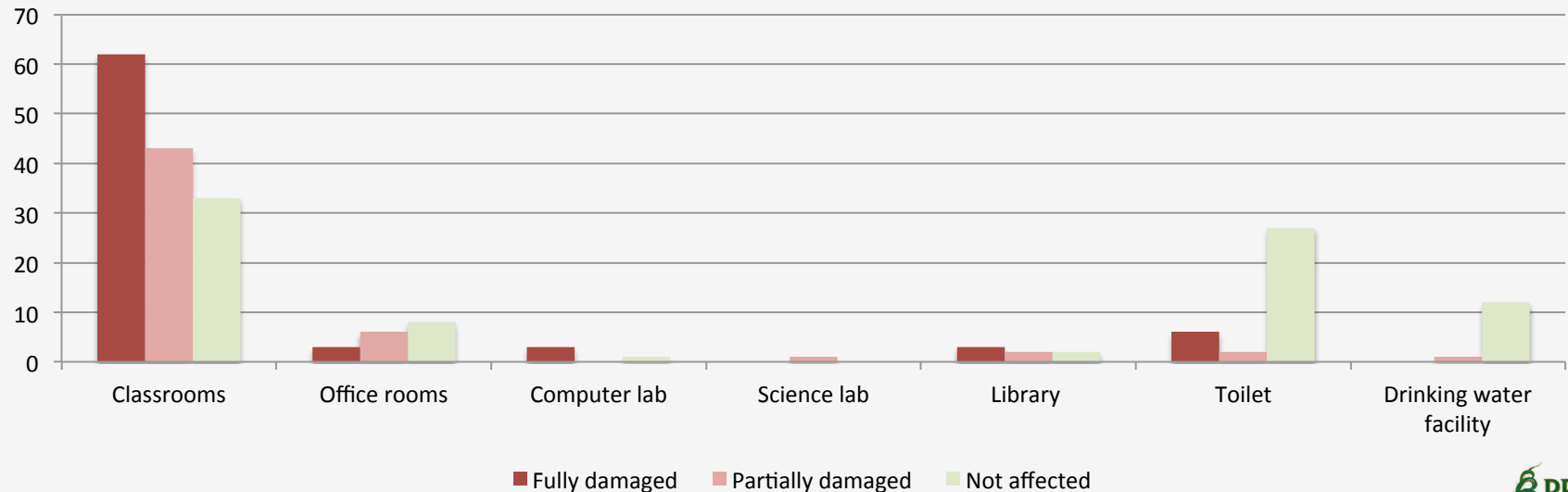
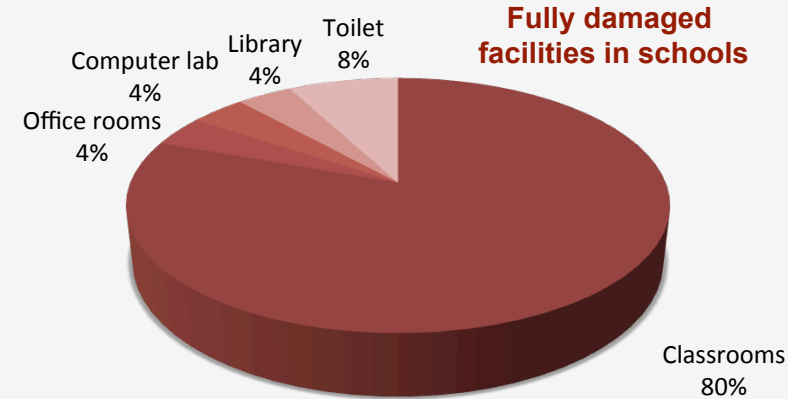
- 1.1 million people are in need of safe water, 1 million people require sanitation services; **Community toilets** as shared facilities would prevent open defecation and spread of water borne diseases
- **Filtration units** in villages where water sources were damaged due to landslides

NEEDS & PRIORITIES

EDUCATION & HEALTH

OVERVIEW OF DAMAGE

- 13 schools surveyed across 4 districts; 44.93% classrooms were fully damaged, 31.16% partially damaged – **schools with fully & partially damaged classrooms** would be prioritised for interventions
- 446 public health facilities (5 hospitals, 12 Primary Health Centres, 417 Health Posts, 12 others) fully destroyed; 765 structures partially damaged
- 30.76% schools had their **toilets damaged**; they need to be prioritised for WASH support



NEEDS & PRIORITIES

EDUCATION & HEALTH

REHABILITATION PRIORITIES

Re-initiation of schools

- Tents / temporary shelters, ground sheets for initiating schools
- Teaching Learning Materials (TLMs), Solar Lanterns for each school
- Events for student engagement and psycho-social support
- Re-building WASH structures



Bridging and health & nutrition gaps

- Health camps in remote villages and psycho-social counseling
- Distribution of nutrition supplements based on malnourishment (SAM and MAM) tracking
- Nutrition surveillance and home nutrigardens for improved diet



NEEDS & PRIORITIES

GENDER EMPOWERMENT

OVERVIEW OF CONCERNS

- ⊙ Nepal ranks 112 out of 142 in Gender Gap Index; scores only 45.2 out of 100 in Women Resilience Index (Japan scores 80.6); 1751 km open border with India accentuates the woes of Nepal's women
- ⊙ 2 million women and adolescent girls are vulnerable to gender-based violence and sex trafficking post-earthquake
- ⊙ 28,000 girls are sole survivors in their families and face risks of exploitation
- ⊙ Hygienic menstruation practices are at risk; 126,000 pregnant women require care



REHABILITATION PRIORITIES

Peer-support network for women and adolescent girls for improving healthcare & WASH access and near-at-hand socio-legal support

Women's SHGs and livelihoods facilitation for economic empowerment; trainings & seed inputs; financial and market linkages

Cadre of Women Counsellors facilitating access to rights; lifeskills courses, adult literacy, confidence building inputs via Rural Resource Centres

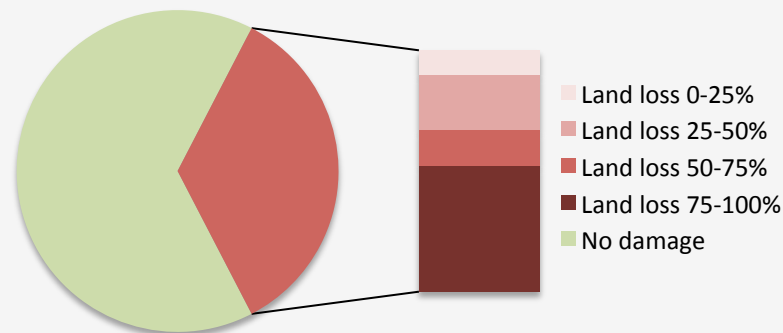
NEEDS & PRIORITIES

LIVELIHOOD DEVELOPMENT

OVERVIEW OF CONCERNS



- ⊙ The earthquakes are expected to push 2.5 -3.5% Nepalis into poverty in 2015-16 (700,000 additional poor)
- ⊙ Of the 163 HHs surveyed across 17 affected villages, 64.42% were BPL; 22.09% were lower caste; these **disadvantaged sub-groups** needs to be prioritised for support
- ⊙ 29.45% people lost their land; of these those who **lost >25% of cultivable land**, need to be prioritised for support
- ⊙ 44.17% HHs that **suffered livestock loss** also need to be prioritised for support



NEEDS & PRIORITIES

LIVELIHOOD DEVELOPMENT

REHABILITATION PRIORITIES

- ③ Facilitating quick incomes
- ③ Customised solutions for those who lack mobility, eg., women
- ③ Long-term solutions to reduce excessive dependence on a single sector

Immediate measures



- Support for seeds (food grains and vegetables), farm tools, nurseries
- Community-anchored repair of irrigation structures
- Support for livestock replacement, animal feed, fodder farms
- Vegetable farming in greenhouses

Sustainable livelihood measures – farm based



- High-value cash-cropping (medicinal plants, mushrooms), organic vegetable farming
- Seed banks, crop storage
- Buyer-seller meets
- Enterprise clusters for processing of agri-produce, spice drying

Sustainable livelihood measures – non-farm



- Enterprise clusters for crafts with weaving centres
- Handicraft centres, toolkits
- Bee-keeping
- Vocational skill building for alternate livelihoods
- Micro-enterprise facilitation and market linkages for non-farm livelihoods

NEEDS & PRIORITIES RESILIENCE BUILDING

OVERVIEW OF CONCERNS

- ⦿ Authorities faced several bottlenecks in terms of delivering aid, due to lack of preparedness and pre-positioning of resource, fast-track systems for warehousing and delivering relief materials; poor and delayed outreach to the most remote and marginalised communities
- ⦿ Violation/poor implementation of DRR strategies, building norms, etc; poor planning, lack of local capacity to build resistant structures led to high destruction

PRIORITIES FOR RESILIENCE

**Hazard & vulnerability
mapping and mitigation**

**Decentralised Disaster
Response System**

**Institutionalising culture of
collaboration & co-decision**

Community anchored preparedness & mitigation

Participatory mapping of vulnerable and safe spaces, evacuation routes

Citizen science program for real-time early warning

Capacity building for risk reduction and mitigation (hazard-proof construction, protective structures, slope stabilisation etc)

Youth based Disaster Response Teams equipped with tools for recording, communicating disaster-relevant data

Decentralised multi-agency disaster response system

Comprehensive DMS manual and District Disaster Management Support Units (DDMSU)

Local Responder Network and Points of Presence for need identification and rapid first response

Multi-Agency Coordination

NEEDS & PRIORITIES RESILIENCE BUILDING



EARLY WARNING

- Community engagement to monitor and assess weather, geological and other disaster-relevant data
- Location-specific early warning system based on identified indicators
- Monitoring for combination disasters



INFORMATION SYSTEM

- Multi-agency information system for disaster response
- Communication channels with last-mile POPs to enable rapid identification of and response to DM needs



MITIGATION & PREPAREDNESS

- Community mobilisation for effective needs assessments and rapid response
- Capacity building for risk mitigation
- Decentralised extension structures comprising village-level, youth-teams and POPs (Points of Presence) equipped with communication instruments



NETWORKING

- Local Responder Network
- Disaster Management Teams anchored with local government
- Directory of local DRR resources
- Co-management of hazards and disasters in the remote regions by multiple responders

THANK YOU

