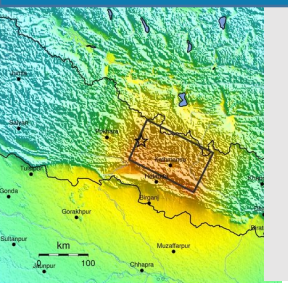
NEPAL

Earthquake | Magnitude 7.8 (April 2015)

VERSION 2

Date released: 29 April 2015

WFP Initial estimates
All information may change and need to be verified



Geographic impact

A magnitude 7.8 earthquake occurred at 77km NW of Kathmandu at a depth of 15 km below ground.

Powerful aftershocks greater than magnitude 6 have been felt in the zones of Bagmati, Lamjung and Gandaki.

Geographical profile

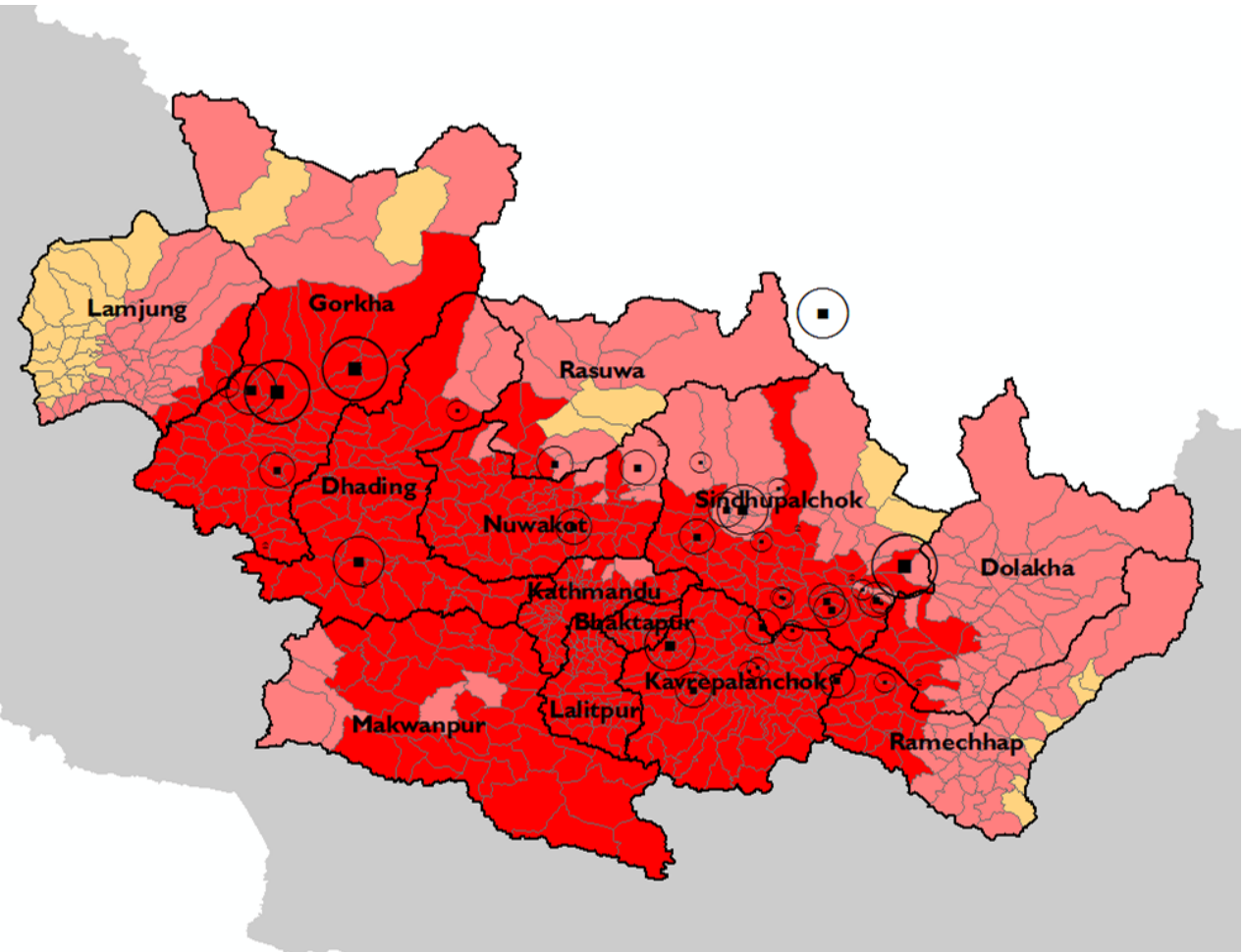
- **epicentre** in Lamjung district. Major aftershocks in Dolakha and Kathmandu
- **15 districts** heavily affected
- **hilly and mountainous terrain**

Profile of the affected population

- **1.2 million** households affected
- **6.4 million** affected
- **1.4 million** people needing priority assistance

Livelihood profile

- **subsistence agriculture** is a key livelihood
- **livestock rearing** is important in hills and mountains
- **casual labour** is important in urban areas
- **migration** is critical in hill areas



Priority 1 (750,000 people)

Households in Priority 1 areas are near the epicentre of the earthquake in mountainous and hilly areas, and live in poor quality housing. Impact on livelihoods (predominantly farming-based) and food security is expected to be extremely high.

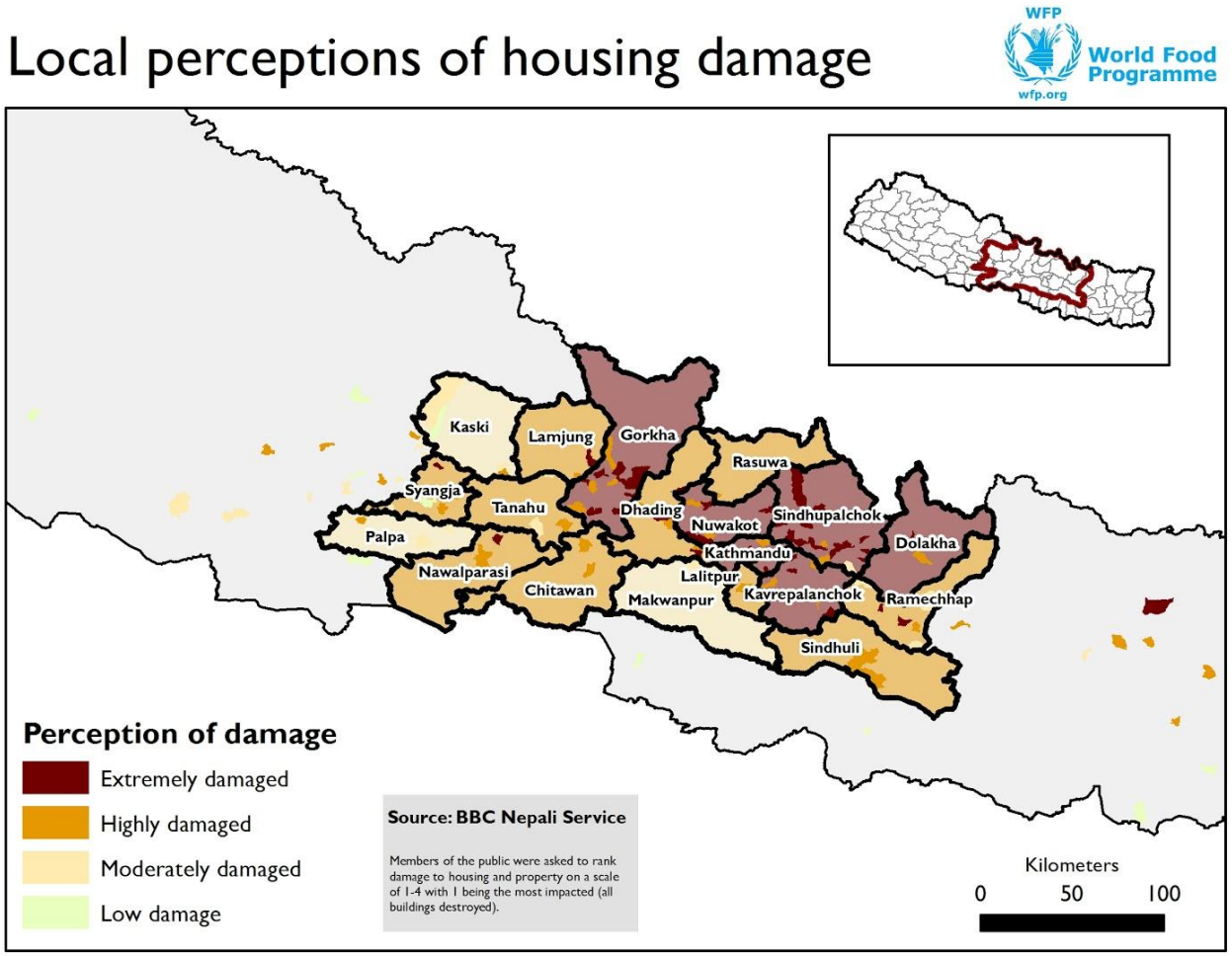
Priority 2 (450,000 people)

Households in Priority 2 areas include those affected by aftershocks who live in poor quality housing. Impact is likely to have been high. Households in this priority include rural hill and mountain areas, as well as urban areas in the Kathmandu Valley.

Priority 3 (200,000 people)

Households in Priority 3 areas are further away from the epicentre but have have also experienced major shakes and who live in the poorest quality of housing.

VALIDATION OF RESULTS (SOCIAL MEDIA)



Results from a voluntary survey conducted via the BBC Nepali Service Facebook page has provided additional information about perceptions of local damage which have helped validate the results of the initial assessments conducted. The results are particularly as they help provide an understanding of the potential damage in the more remote, mountainous villages where access for assessment teams has been very limited.

The map highlights perceptions of housing damage at VDC level. The most common perceived level of damage is also shown, with Gorkha, Nuwakot, Sindhupalcok, Dolakha, Kavrepalanchok, Kathmandu, Bhaktapur, and Lalitput reporting the most severe damage.

These initial results and other assessments are being used to validate and define the priority rankings for each district.

OVERVIEW

Resilience profile

Resilience: Households in the rural areas - especially in hills and mountains - are among the least resilient, due to high poverty rates, and limited access to roads and markets. Urban areas are more resilient given higher connectivity and market access. Rehabilitation of critical infrastructure will be a priority in order to restore normalcy.

Food accounts for over 65% of household expenditures, for over half of rural households. This makes them particularly vulnerable to price increases.

Social protection (most relevant): The government's *Poverty Alleviation Fund* safety net targets the poorest households, through rural community infrastructure and income generation projects. The *Agriculture Disaster Relief Programme,* also government led, provides assistance through seeds and fertilizer support for disaster affected farmers. Some livestock insurance schemes are also active. Other programmes include school meals, pensions, and widow and disability allowances.

Food security and nutrition

Food sources: In rural areas, about half of the food (in terms of caloric intake) comes from own production. Aside from staples, half of which are home produced, households also produce milk, vegetables and pulses themselves. In urban areas, households buy almost all of their food. In both urban and rural areas, meat and oil is mainly purchased.

Nutrition: In the Central and Western regions approximately 38% of children 6 – 59 months are stunted and 11% are wasted, both considered serious according to WHO classification. Furthermore, disparities exist based on wealth quintile with the prevalence of wasting at 12.5% in the lowest quintile compared to 7.4% in the highest. Complementary feeding practices are sub-optimal with only 24% of children 6 -23 months fed appropriately based on recommended infant and young child feeding practices and micronutrient deficiencies are high with 46% of children 6 – 59 months anemic. Finally, maternal nutrition is poor with 18.5% of women underweight, over 10% overweight or obese and 35% anemic.

Livelihood profile

Livelihoods: The dominant livelihood activity in affected rural areas is subsistence farming (cropping and livestock rearing), followed by remittances and casual labour. Seasonal migration, primarily to India, is also an important livelihood strategy, especially in the Hill areas, where about half of the households have at least one member migrating. In urban areas, livelihoods are more diversified, and include government and factory employment, tourism, as well as casual labor. Casual labourers will likely be employed in the short term to remove debris, and so will likely restore their livelihoods shortly.

Agriculture: The main winter crops (wheat and barely) have recently been harvested, but damage to stocks are highly likely. Planting for maize was ongoing when the earthquake struck, and planting for rice and millet was due to start next month. It is therefore likely that maize, rice and millet production this year will be affected.

Markets and Cash & Vouchers

Markets: Markets in both urban and rural areas are thought to have been severely disrupted. Many of the affected rural districts have very limited market access, even in normal times. The main regional markets supplying the affected areas are Bharatpur (likely to have been severely affected) and Bhairahawa (possibly less affected), which both serve as key trade hubs with India. Bharatpur is particularly important, as it supplies the urban consumer market hub in Pokhara - which itself services rural markets in surrounding affected districts.

Prices: Price hikes in both urban and rural areas are expected. Even in normal conditions, markets in rural areas are poorly integrated, with food prices largely determined by transportation costs. Prices in rural mountain districts, in particular, can be up to three times more expensive than in source markets. In addition, past experience has shown that prices can quickly double following road closures.

Cash & Vouchers: Given the above, it is recommended to focus the immediate response on **in-kind assistance**. The appropriateness of transitioning to cash in some areas is currently being assessed.

Logistics and communications

Coordination: The Government of Nepal has activated the Logistics Cluster, which WFP is co-leading. Immediate priorities will be supporting search and rescue teams; transporting lifesaving medical equipment, items and personnel; and transporting emergency food, shelter and other non-food items.

Air transport: There are 47 airstrips countrywide, but only the one at Kathmandu airport can accommodate wide-bodied fixed-wing aircrafts. In view of the anticipated heavy congestion at the Kathmandu airport, WFP is working with the Government and the Humanitarian Coordination Team on a prioritisation mechanism for incoming flights/delivery of relief items. Assessments are also ongoing to identify other potential airstrips within the country. Jet A1 fuel (aircraft) is imported from India, so ensuring fuel pipeline is essential.

In the initial days, humanitarian operations will draw on the foreign military presence. The deployment of UNHAS will also be required, particularly helicopters to access remote mountainous areas,

Land and sea transport: Truck availability and capacity is normally good in Nepal. Access within the Kathmandu Valley appears to be fine, although accessing mountainous areas within the valley is reported to be impossible due to extensive damage. To ease the traffic flow into Kathmandu airport, WFP is exploring the use of road transport from India (e.g. Calcutta and Birganj). However, possible delays due to customs clearance at the border, as well as onwards transport within Nepal, might prove very challenging.

Warehouses: The recently completed WFP-government humanitarian staging area near Kathmandu airport is operational. In country, WFP has 32 mobile storage units in-country ready to deploy and establish as hubs in the affected areas.

IT and communications: VHF radio communication is working well. Although Nepal Telecom and Ncell mobile networks are working in most areas of Kathmandu, networks are congested and making calls is difficult. There is no power in the city area, meaning cellphone and computer batteries may soon run out. Internet through local service providers is working. There is very little information on mobile networks and power in rural areas.

ADDITIONAL INFORMATION

? ASSUMPTIONS

Geographic impact: based on the USGS shakemaps and Mercalli intensity scale.

Affected population (6.4 million): based on 2011 census data projected to 2015. It includes the total population in 15 districts most directly impacted, including the Kathmandu valley. Population living adjacent districts may also have been affected but they were not included in the total number of population affected.

Priority areas: based on the USGS shakemaps, type of household outer wall, and population density. The results of a social media survey on local perceptions of housing damage carried out in collaboration with the BBC Nepali Service have been used to triangulate the priority rankings.

People in need of assistance (1.4 million): determined by overlaying geographic impact with quality of housing indicator based on wall type: houses made of mud bonded bricks or unbaked bricks were assumed less resistant than cement and wood/bamboo housing. For severely affected districts, it was assumed that ⅔ of weaker houses were severely damaged or destroyed, in highly impacted areas ⅓ and in moderately affected areas ¼. This determined an initial planning number of population in immediate need of assistance in three priority areas.

REFERENCES & LINKS

- Excel spreadsheet on estimated affected population and households by VDC's and priority areas.
- OPWeb http://opweb.wfp.org/
- OCHA COD/FOD registry http://www.humanitarianresponse.info/applications/data
- WFP Geonode http://geonode.wfp.org
- Copernicus http://www.copernicus.eu
- NeKSAP - Food Security Information System in Nepal http://www.neksap.org.np/

TRAVELLERS' INFORMATION

The average altitude of the affected areas ranges from 1,400 m to 2,500m.

The weather is cold, with temperatures forecast to be around 12 degrees Centigrade at night and a maximum of 27 degrees during daytime. During daytime it can be expected to be sunny. **Heavy rains are expected over the coming days,** which will complicate the operation.

Not available:

- Accomodation
- Food and drinking water
- Shops /restaurants
- Clothing and footwear
- Heating
- Electricity
- Mobile phone network
- Health care

CONTACTS

For more information, contact:

NEPAL:
Kurt Burja, VAM Officer, *Nepal*
Man Kshetri, GIS Officer, *Nepal*

BANGKOK:
Siemon Hollema, Senior Regional Programme Officer (VAM), *Regional Bureau for Asia*
Ruangdech Poungprom, Programme Officer, *Regional Bureau for Asia*
Amy Chong, GIS Officer, *Regional Bureau for Asia*
Ellen Kiosterud, Statistical Analyst, *Regional Bureau for Asia*
Darryl Miller, Food Security Analyst, *Regional Bureau for Asia*
Anna Law, Food Security Analyst, *Regional Bureau for Asia*
Krishna Krishnamurthy, Regional Climate Risk Analyst, *Regional Bureau for Asia*

ROME:
Filippo Pongelli, GIS Officer (Emergencies), *Rome Office*
Francesco Stompanato, GIS Officer (Emergencies), *Rome Office*
Rashid Kashif,

STATISTICAL PROFILE

REGION	DISTRICT	Priority	Total population 2015	Households (2011)	Food poverty prevalence	Poverty rates	Underweight	Wasting	Stunting	Diarrheoa	Share of weak houses	Share of houses without toilet	Share households with improved water source
Central	Dolakha	1	198,358	45,658	35%	26%	32%	7%	51%	11%	92%	30%	78%
Central	Sindhupalchok	1	169,559	34,615	37%	25%	31%	9%	48%	12%	72%	36%	78%
Central	Nuwakot	1	295,532	59,194	25%	20%	26%	10%	39%	10%	92%	41%	87%
Central	Dhading	1	358,242	73,842	26%	19%	23%	9%	42%	11%	85%	30%	85%
Western	Gorkha	1	288,208	66,458	22%	20%	25%	8%	42%	12%	87%	27%	63%
Central	Kabhre	2	402,104	80,651	22%	14%	25%	10%	38%	11%	84%	27%	79%
Central	Lalitpur	2	490,393	109,505	14%	8%	19%	8%	31%	13%	30%	4%	70%
Central	Bhaktapur	2	320,105	68,557	12%	13%	20%	8%	31%	13%	39%	3%	82%
Central	Kathmandu	2	1,821,040	435,544	20%	8%	15%	6%	28%	15%	16%	1%	70%
Western	Lamjung	2	178,055	42,048	19%	17%	21%	7%	39%	12%	76%	20%	88%
Central	Rasuwa	3	45,151	9,741	41%	32%	32%	9%	47%	10%	87%	43%	88%
Central	Makwanpur	3	445,377	86,045	26%	28%	25%	12%	39%	13%	45%	40%	78%