



2015 NEPAL EARTHQUAKE RESPONSE

Shelter Recovery Assessment

PRELIMINARY FINDINGS

JUNE 2015

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INTRODUCTION

INTRODUCTION

- On 25 April 2015, a 7.8 magnitude earthquake struck Nepal, approximately 81km northwest of the country capital, Kathmandu.
- Intense tremors, and subsequent aftershocks, landslides, and avalanches caused widespread damage to personal shelters, infrastructure, and livelihoods, affecting millions across an estimated total of 39 out of 75 districts.
- On 27 April 2015, REACH was deployed to Nepal in the framework of its partnership with the Global Shelter Cluster to facilitate the implementation of a detailed inter-agency shelter & settlements vulnerability assessment. During the assessment, REACH was supported by Shelter Cluster members who seconded staff and vehicles.

ASSESSMENT OBJECTIVES

Objective: To inform operational and strategic planning for life saving and recovery activities regarding shelter, and to provide a shelter baseline study of those affected by the earthquake

Specific Objectives:

1. To verify emergency shelter & NFI coverage assumptions and gap analysis
2. To enable the shelter cluster to define a comprehensive shelter & settlements recovery strategy
3. To inform the earthquake revised flash appeal
4. Establish a baseline and method for potential longitudinal study of recovery

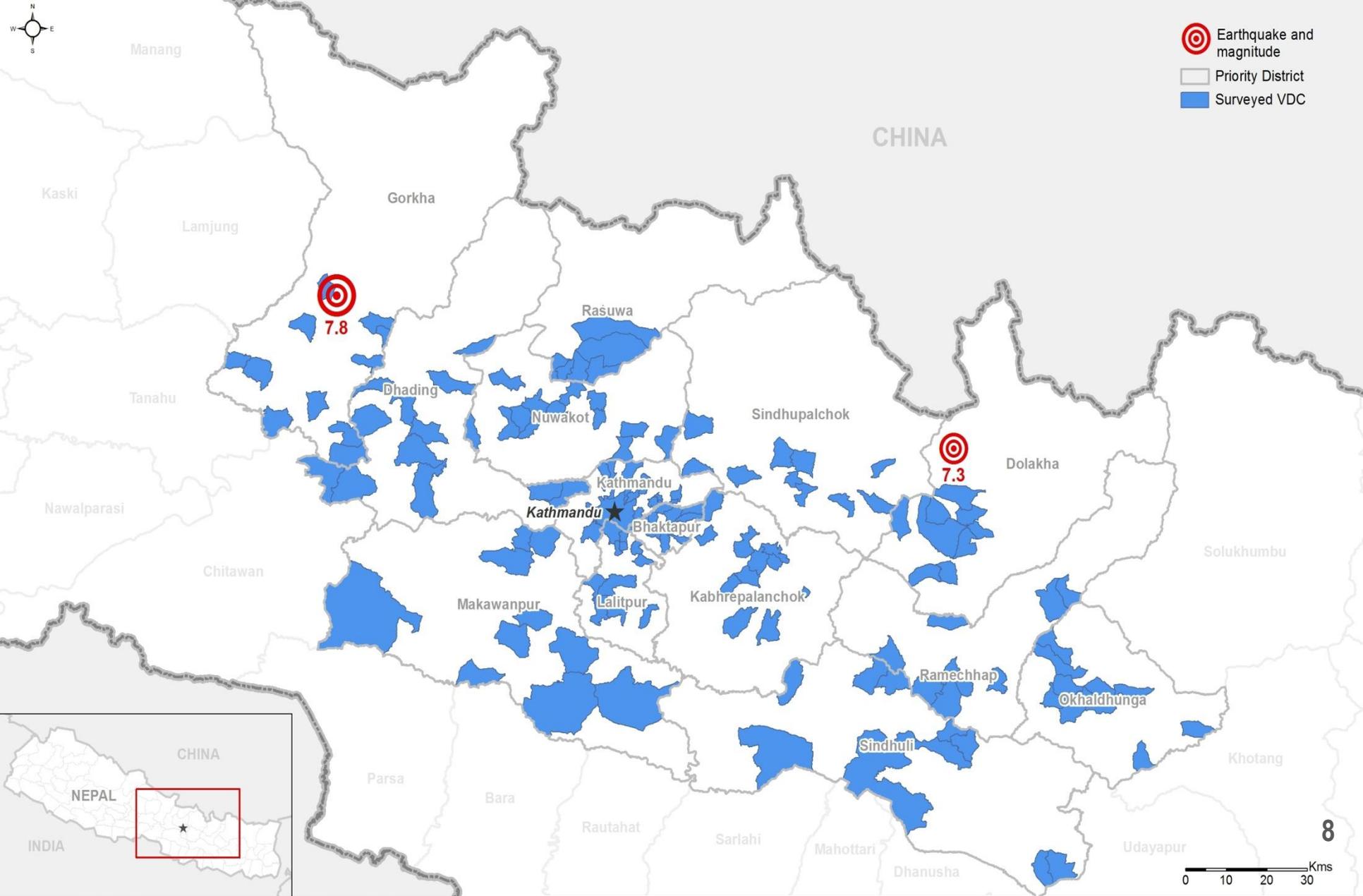
METHODOLOGY

ACCESSIBLE AREAS: SAMPLING

- This preliminary analysis is based on data collection from 16 May to 4 June.
- This assessment targeted all **areas accessible by 4x4 vehicle** of the 14 priority districts.
- Over 1680 household interviews, 120 per district, were conducted.
- At the district level, findings are representative of households living in accessible areas in each district to a **95% confidence level and 10% margin of error**.

ACCESSIBLE AREAS: SAMPLING

- Based on data of the 2011 National Population and Housing Census of Nepal, VDCs within each district were weighted and randomly sampled with a minimum of 10 households per district.
- Up to 12 VDCs were sampled per District, in each of which a random Ward was sampled.
- Inside the Ward, enumerators randomly selected the first house (pen toss), after which every 3rd household was assessed.
- All enumerators were final-year civil engineering students at the Institute of Engineering, Tribhuvan University of Nepal. Additional staff from International Medical Corps, People in Need, and Plan International were seconded and trained to support in the field.



DIFFICULT ACCESS AREAS: KEY INFORMANT INTERVIEWS

- To provide complementary data on inaccessible areas, key informant interviews were conducted in five difficult to access valleys in four of the Northern priority districts:
 - Rasuwa
 - Gorkha
 - Sindupalchok
 - Dolakha
- **The findings on difficult to access areas will be incorporated directly into the Final Report.**



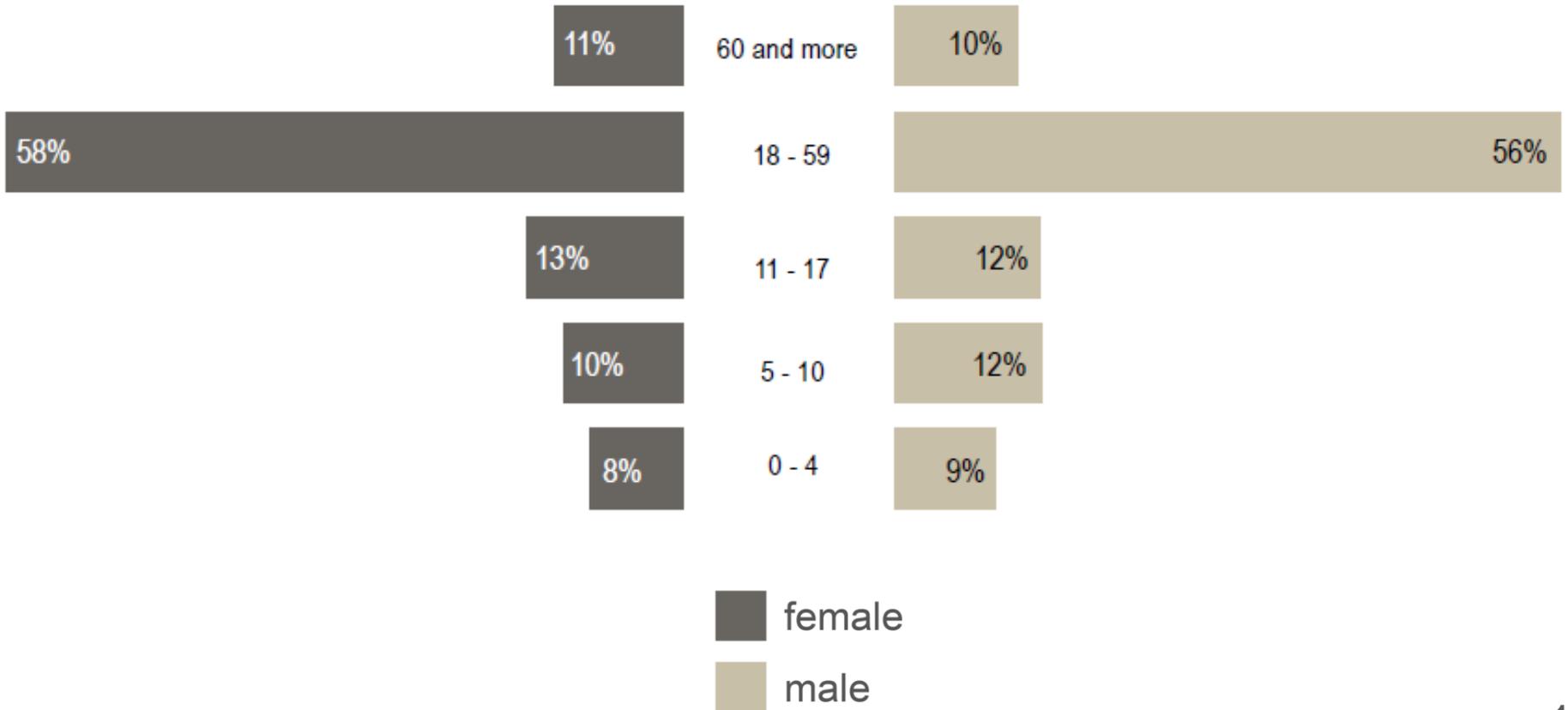


LIMITATIONS

- The data that is presented is only representative of areas that are accessible by 4x4 vehicles during the pre-monsoon season
- Only 14 districts that were classified as priority districts by the Government of Nepal were assessed. Other potential damaged areas outside of these districts have not been included.
- Several findings are data sub-sets, and as such will be less representative, depending on the number of entries per sub-set
- **This presentation is a preliminary analysis. These findings should not be used for final programming and targeting models, as, once all data has been collected, some results will be subject to modification.**

DEMOGRAPHICS

POPULATION AGE BREAKDOWN



DEMOGRAPHICS

- On average, **19%** households across all priority districts are female-headed.
At **27%**, Dhading reported the highest percentage
- On average, **9%** households across all priority districts have at least one disabled member
At **19%**, Okhaldhunga reported the highest percentage
- On average, **3%** of the households across all priority districts were hosting separated, orphaned or unaccompanied children
At **7%**, Sindhupalchok reported the highest percentage

LAND TENURE

On average, **90%** of the households across all priority districts reported being homeowners

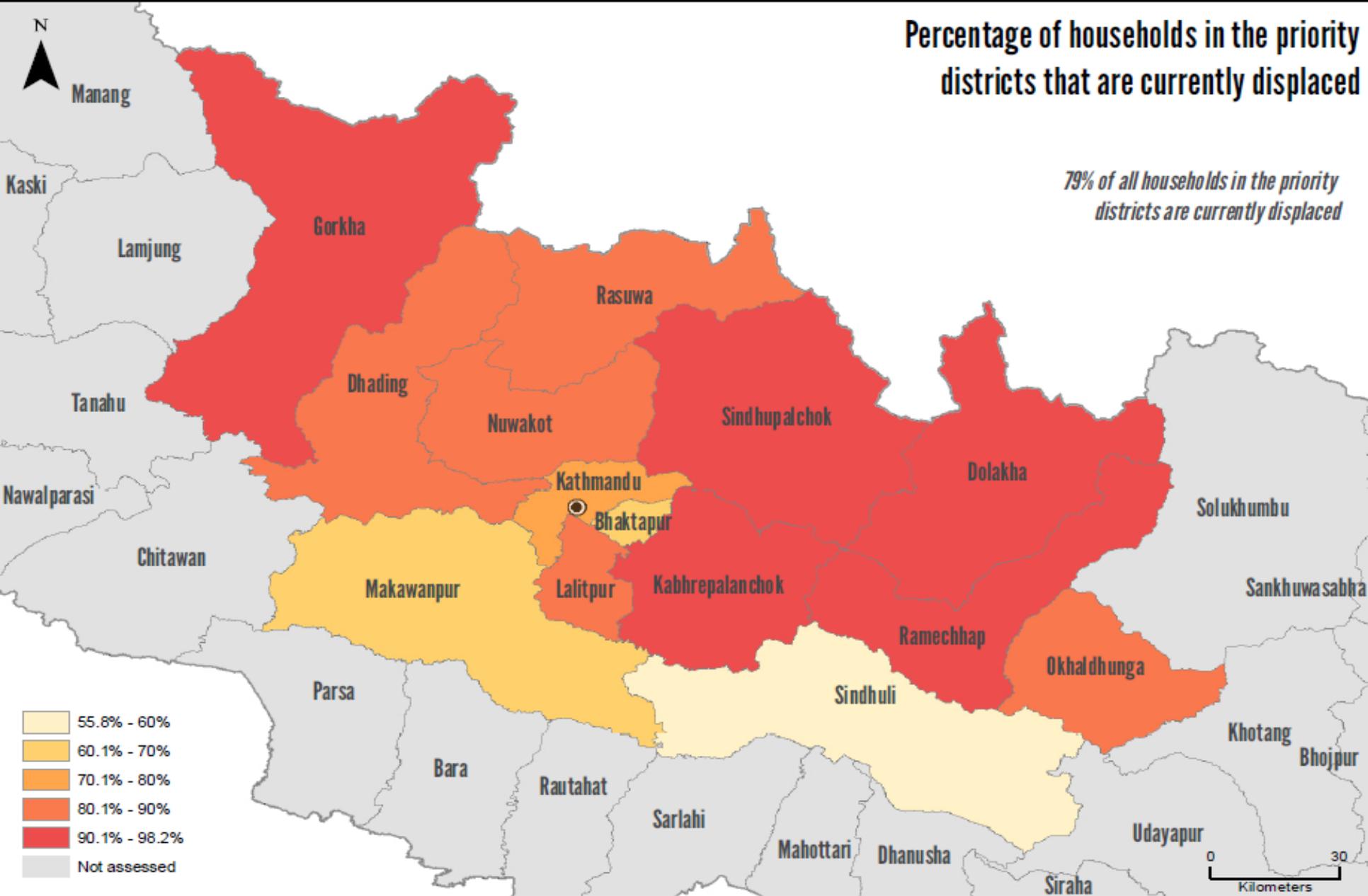
Of non-owners:

- **8%** of households reported they are **paying renters**
- **1%** of households reported **staying for free with consent** of the owner
- **<1%** of households reported staying for free **without consent** of the owner
- **<1%** of households reported staying in an **institutional facility**

DISPLACEMENT

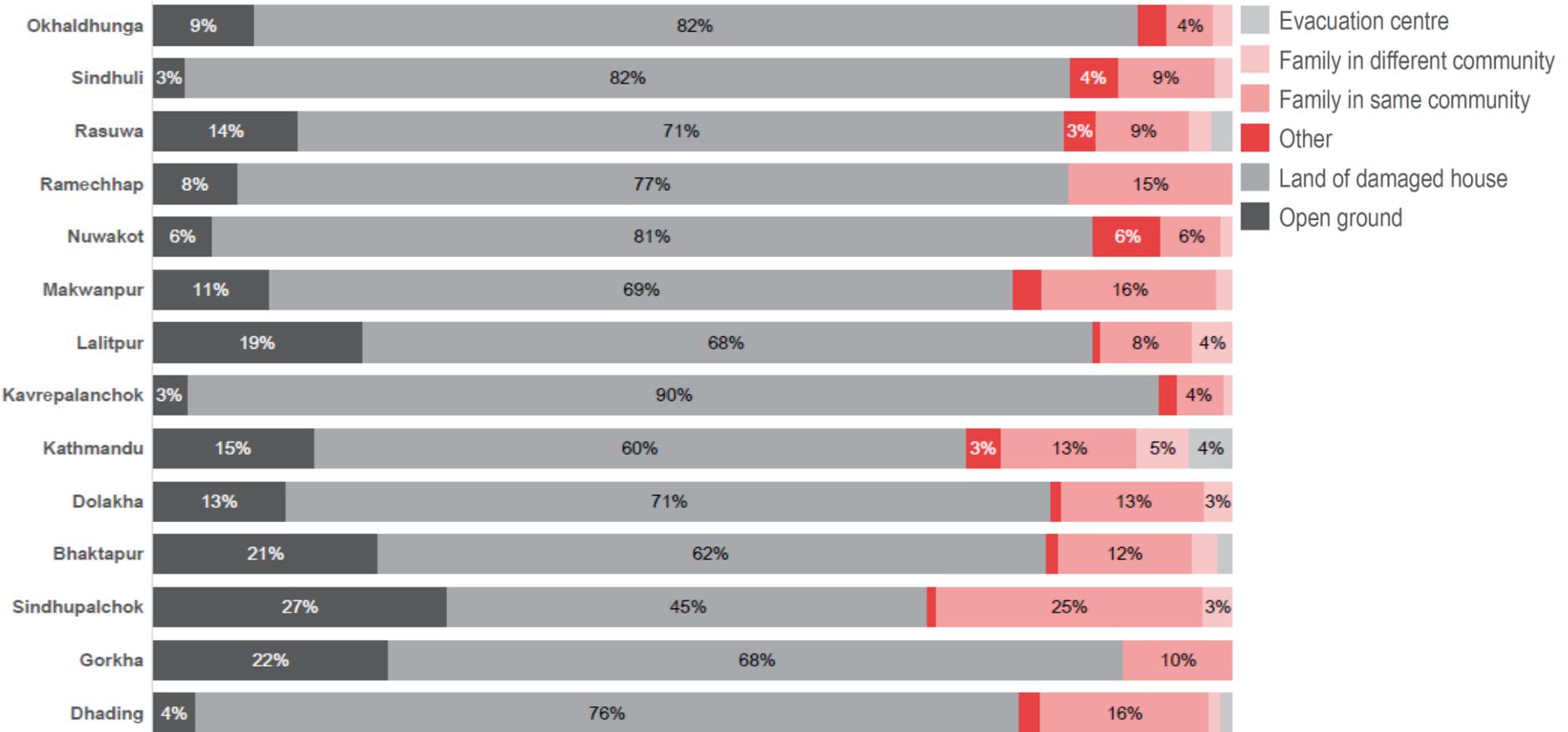
Percentage of households in the priority districts that are currently displaced

79% of all households in the priority districts are currently displaced



LOCATION OF DISPLACEMENT

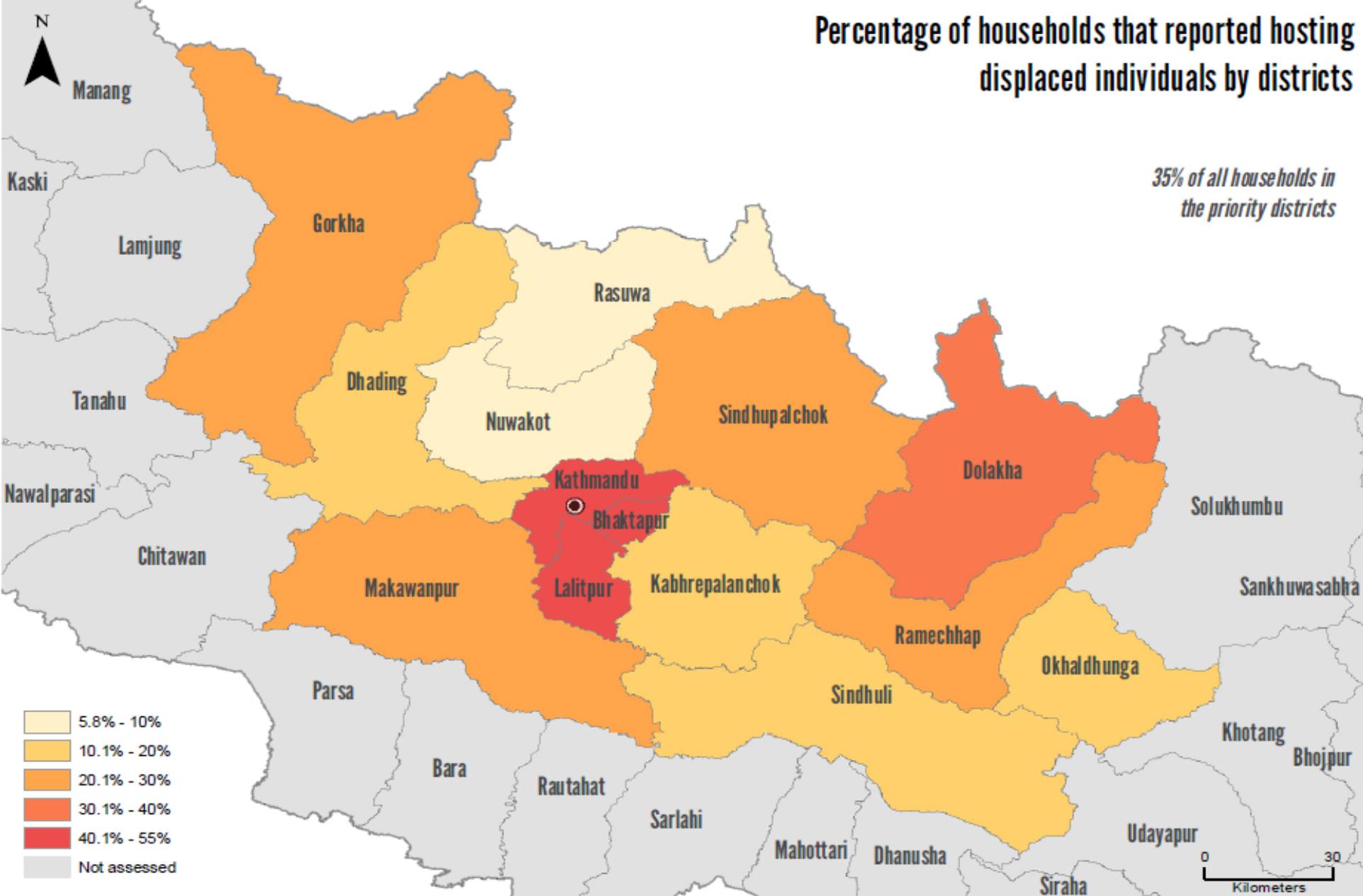
68% of all displaced households report they live adjacent to their damaged homes*



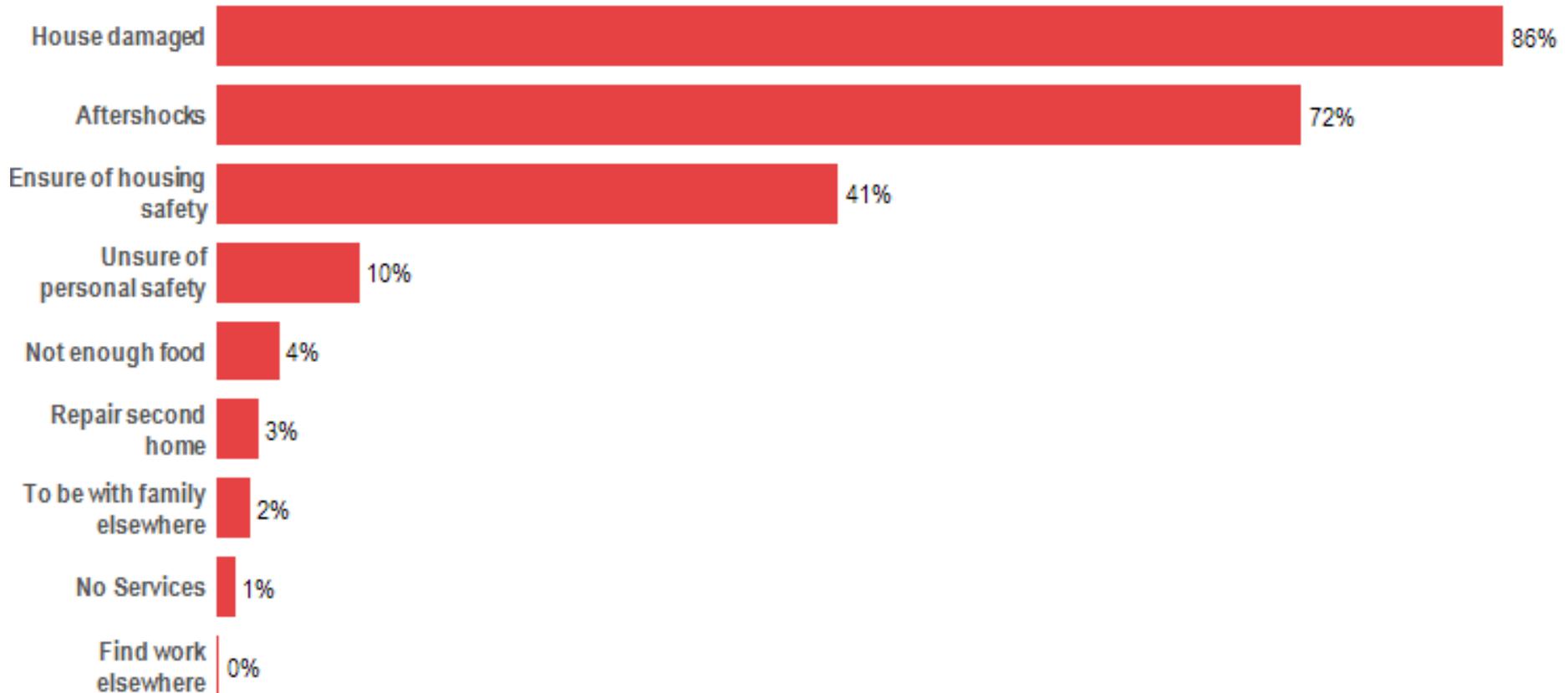
* It should be taken into account that all sub-set data has a reduced level of representativeness, depending on the number of entries per sub-set.

Percentage of households that reported hosting displaced individuals by districts

35% of all households in the priority districts



REASONS FOR DISPLACEMENT*



** It should be taken into account that all sub-set data has a reduced level of representativeness, depending on the number of entries per sub-set.*

INTENTIONS

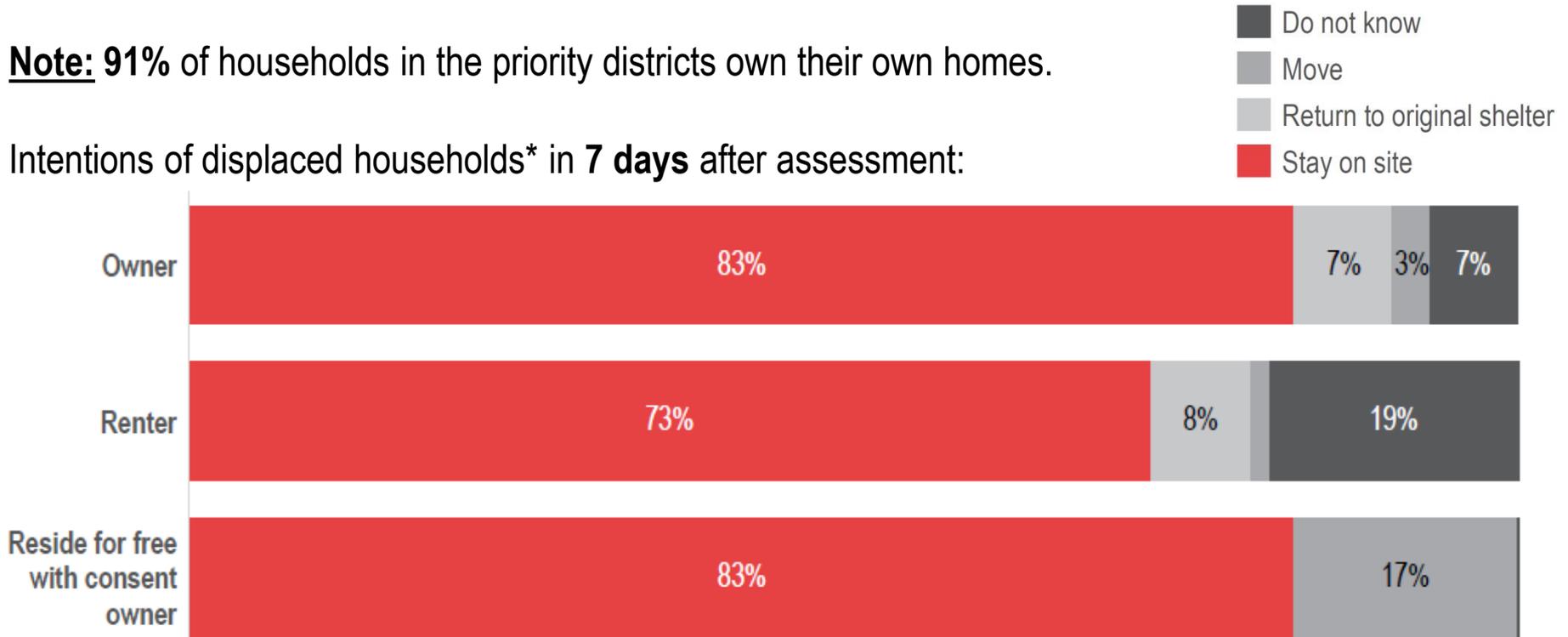
- **83%** of displaced* households intended to stay on site within **7 days** of the assessment
- **7%** of displaced households intended to return to original house within **7 days** of the assessment
- **55%** of displaced households intended to stay on site within **30 days** of the assessment
- **18%** of displaced households intended to return to original house within **30 days** of the assessment

** It should be taken into account that all sub-set data has a reduced level of representativeness, depending on the number of entries per sub-set.*

INTENTIONS — 7 DAYS BY LAND TENURE

Note: 91% of households in the priority districts own their own homes.

Intentions of displaced households* in **7 days** after assessment:

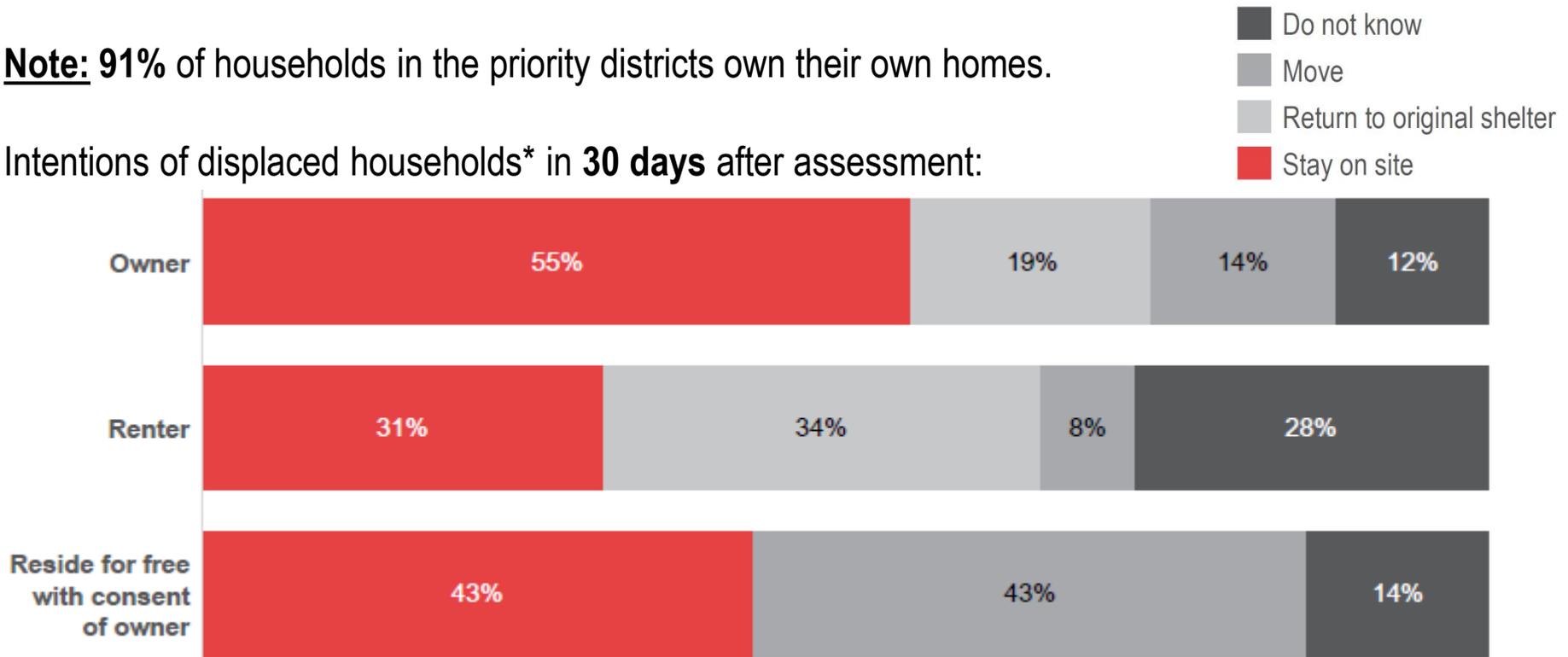


** It should be taken into account that all sub-set data has a reduced level of representativeness, depending on the number of entries per sub-set.*

INTENTIONS — 30 DAYS BY LAND TENURE

Note: 91% of households in the priority districts own their own homes.

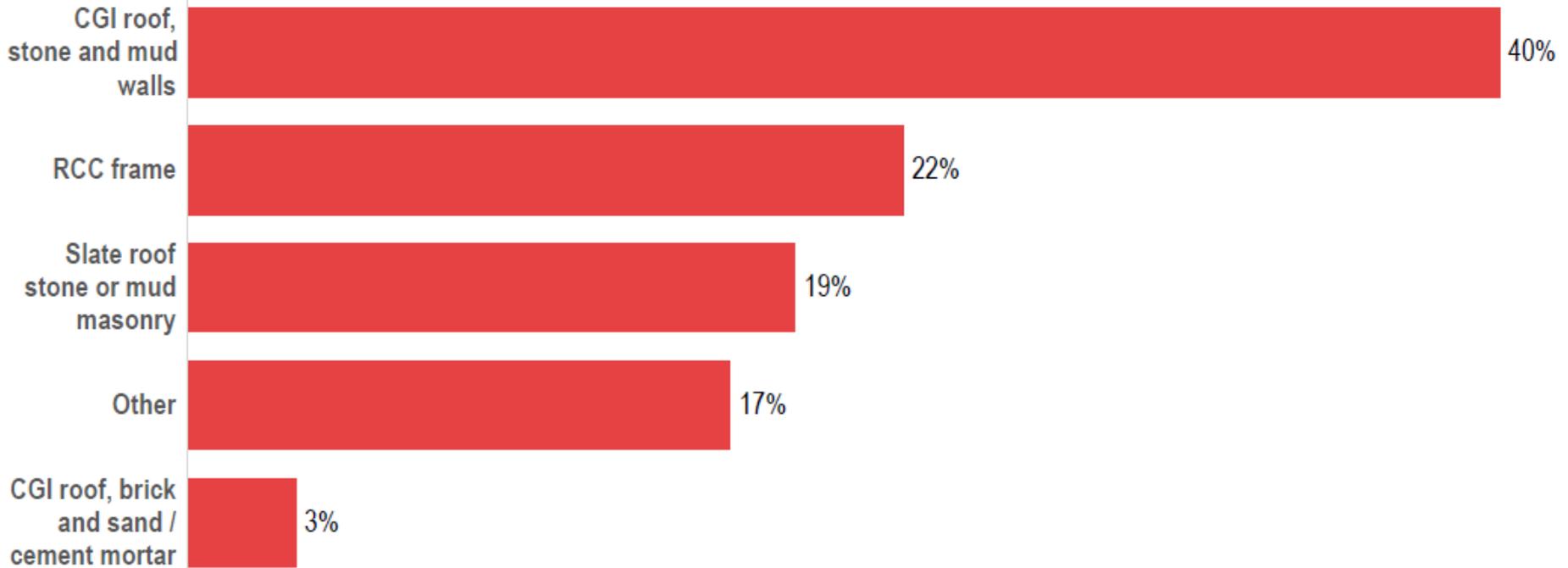
Intentions of displaced households* in **30 days** after assessment:



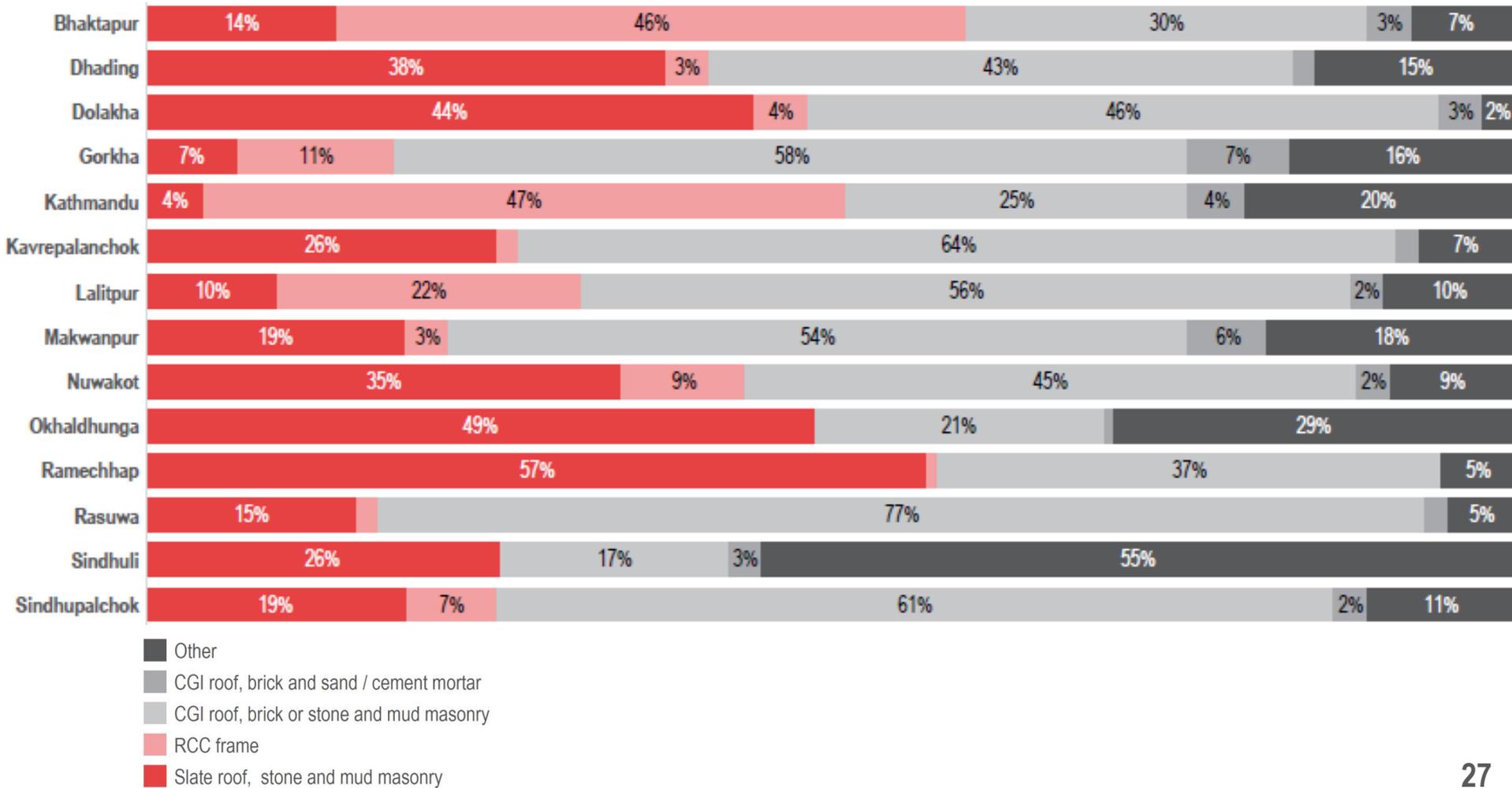
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PRE-CRISIS HOUSING

HOUSING TYPOLOGY — PRIORITY DISTRICTS



HOUSING TYPOLOGY BY DISTRICT



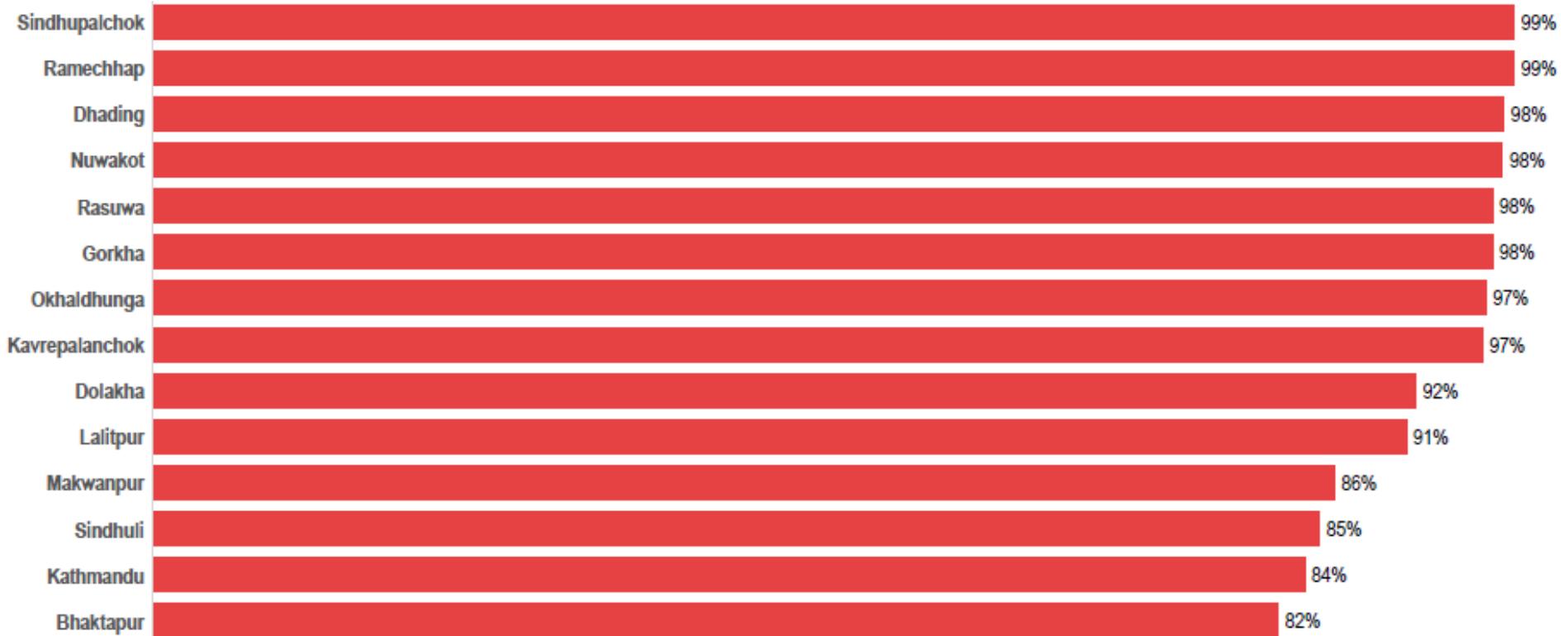
PREDOMINANT PRE-CRISIS MATERIALS PER HOUSE COMPONENT

- **50%** of pre-crisis roofing was comprised of CGI
- **65%** of pre-crisis wall materials was made of mud-bonded brick or stone
- **38%** of pre-crisis floor materials consisted of dirt, and **27%** of mud-bonded brick or stone
- **68%** of pre-crisis foundation materials was made of mud-bonded brick or stone

DAMAGE

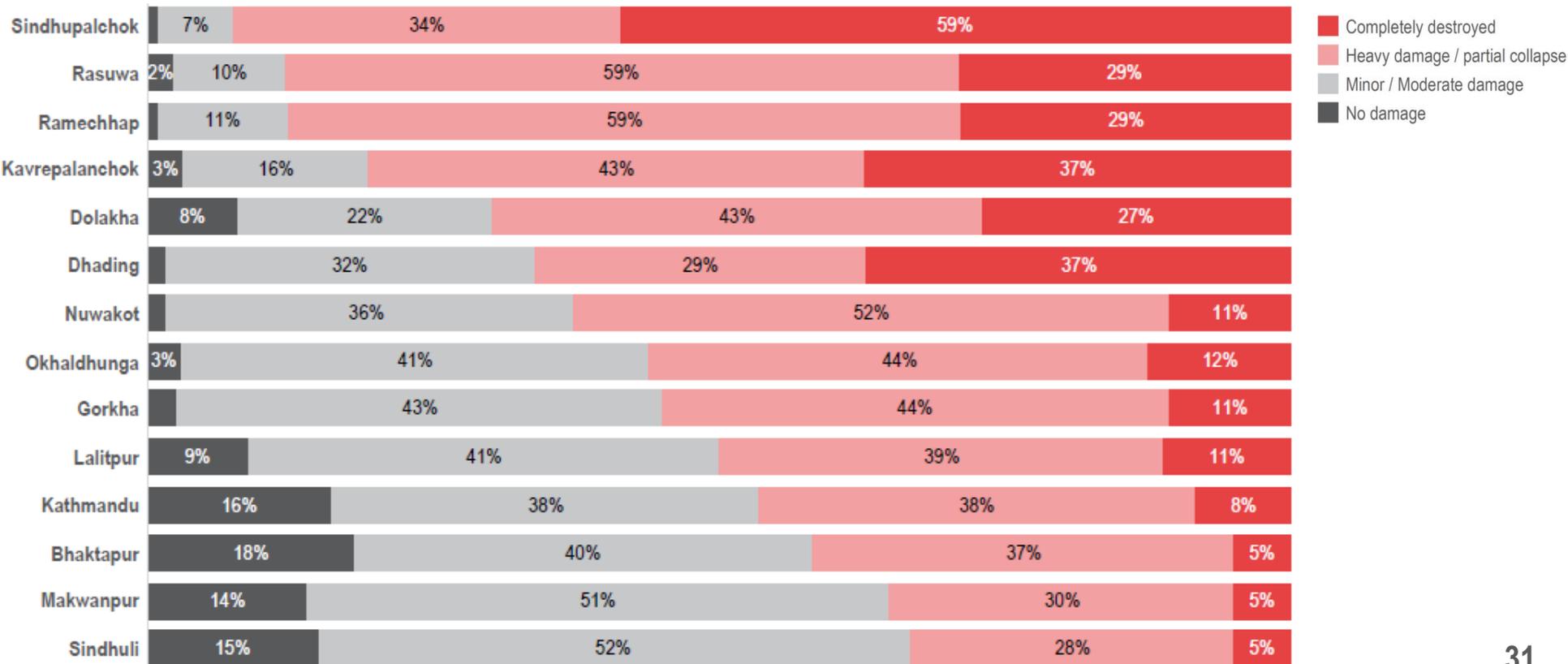
HOUSING DAMAGE BY DISTRICT

90% of households reported that their homes were damaged because of either the 25 April or 12 May earthquake, or both. **This overview includes minor damages, e.g. small cracks.**



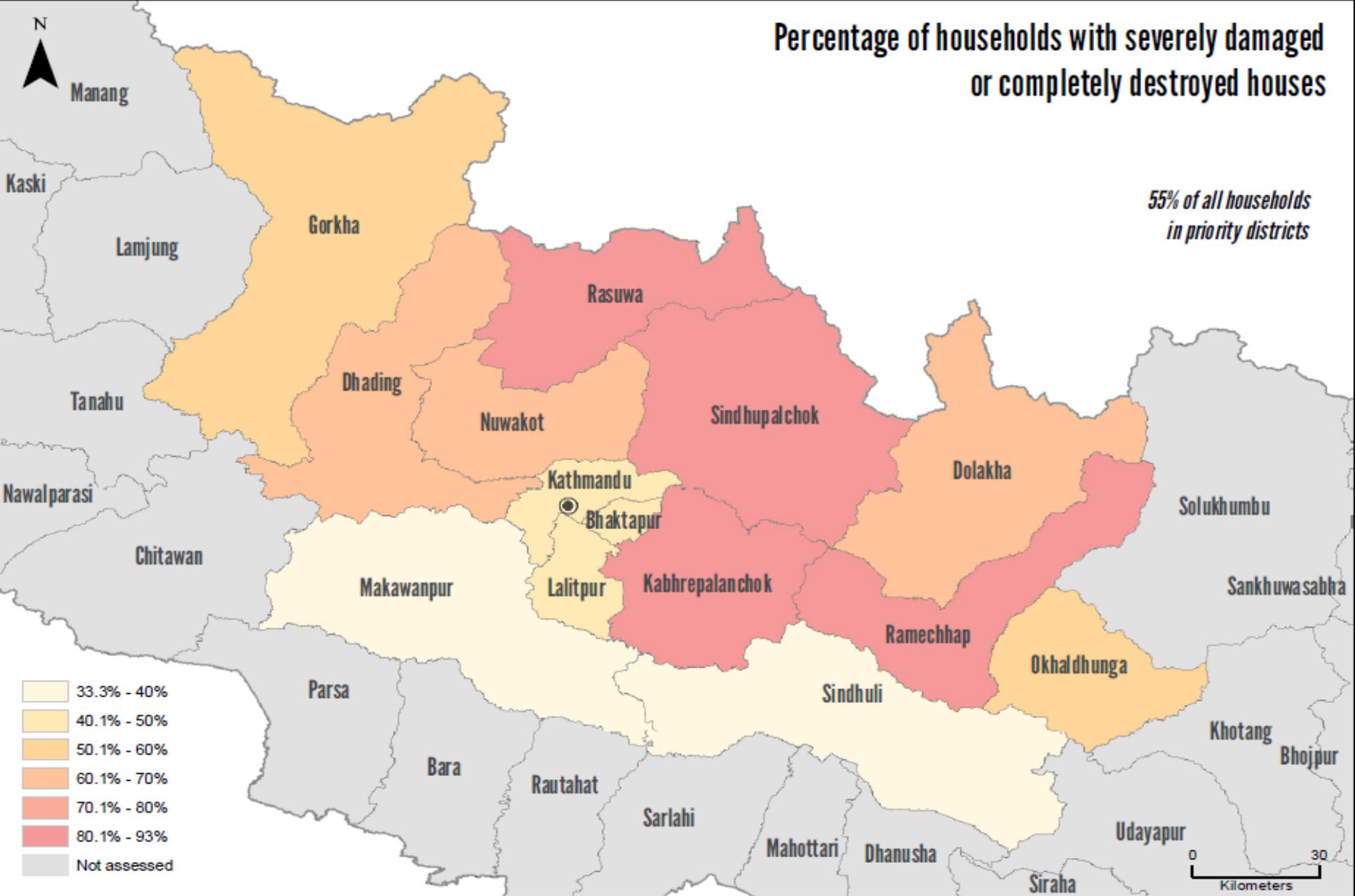
DEGREE OF DAMAGE

55% of all households reported that their homes were either completely destroyed, or heavily damaged / partially collapsed



Percentage of households with severely damaged or completely destroyed houses

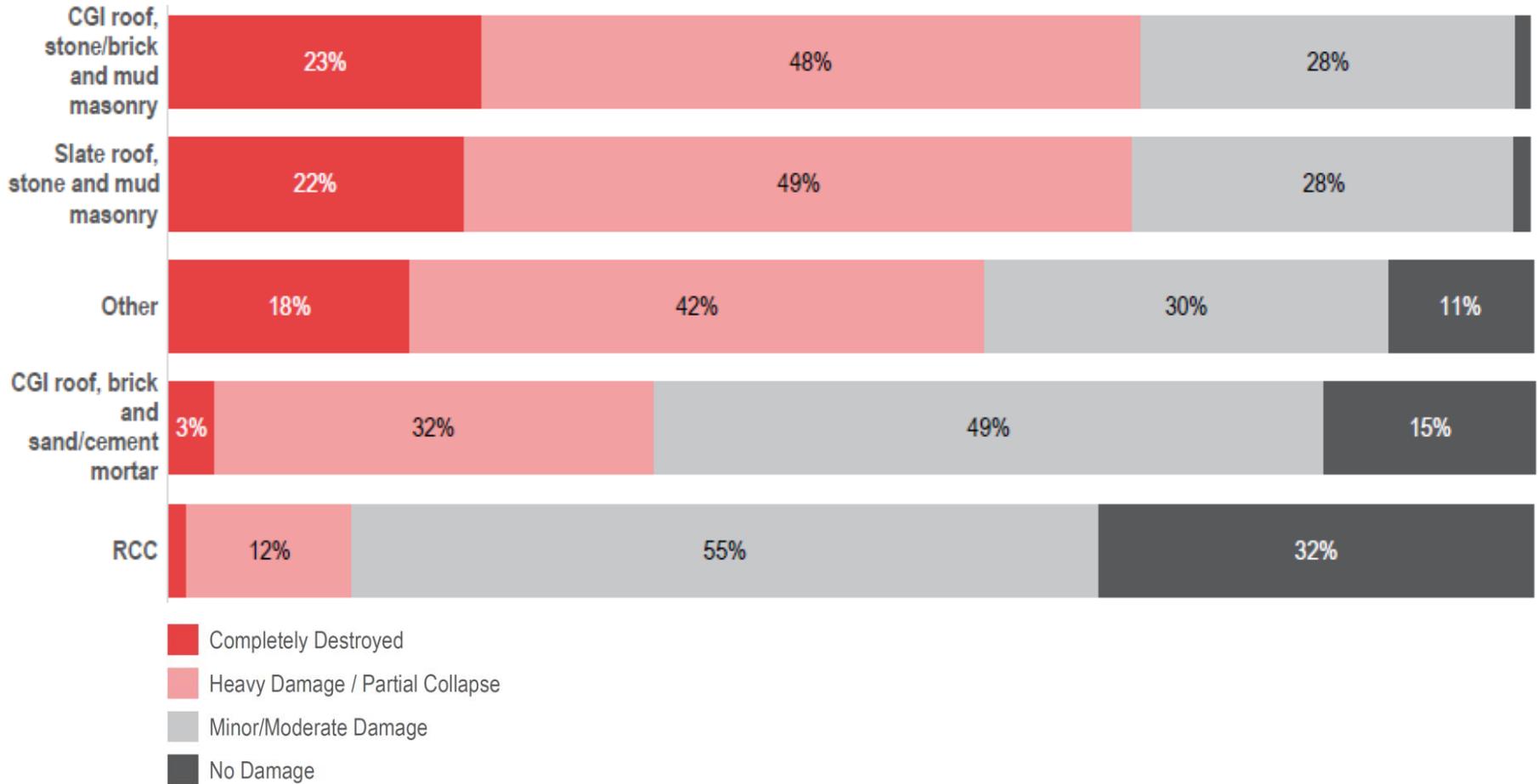
55% of all households in priority districts



- 33.3% - 40%
- 40.1% - 50%
- 50.1% - 60%
- 60.1% - 70%
- 70.1% - 80%
- 80.1% - 93%
- Not assessed

0 30 Kilometers

DAMAGE BY TYPOLOGY*



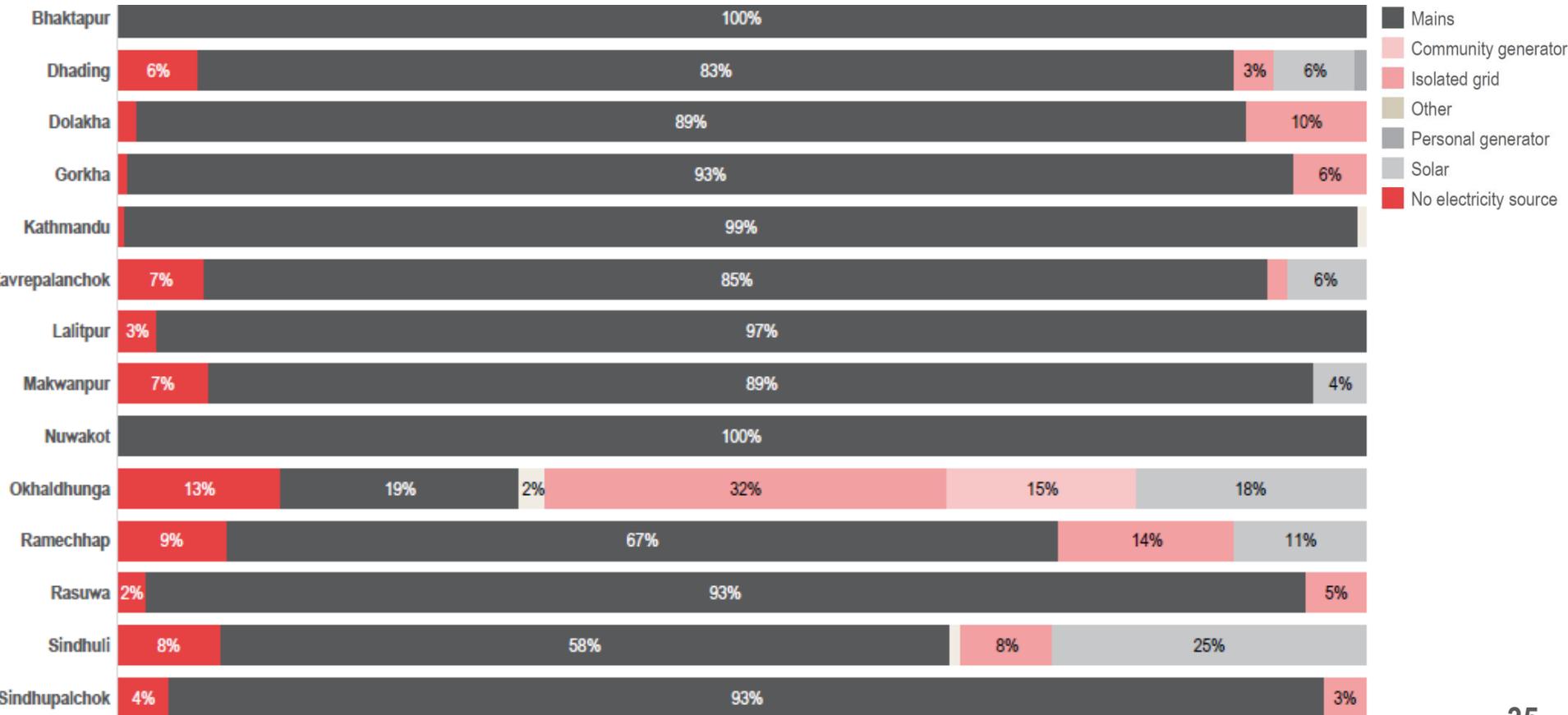
* It should be taken into account that all sub-set data has a reduced level of representativeness, depending on the number of entries per sub-set.

DAMAGE PER SHELTER SECTION

- **68%** of all households reported that their **walls** were either completely destroyed, or heavily damaged
- **43%** of all households reported that their **roofs** were either completely destroyed, or heavily damaged
- **36%** of all households reported that their **floors** were either completely destroyed, or heavily damaged

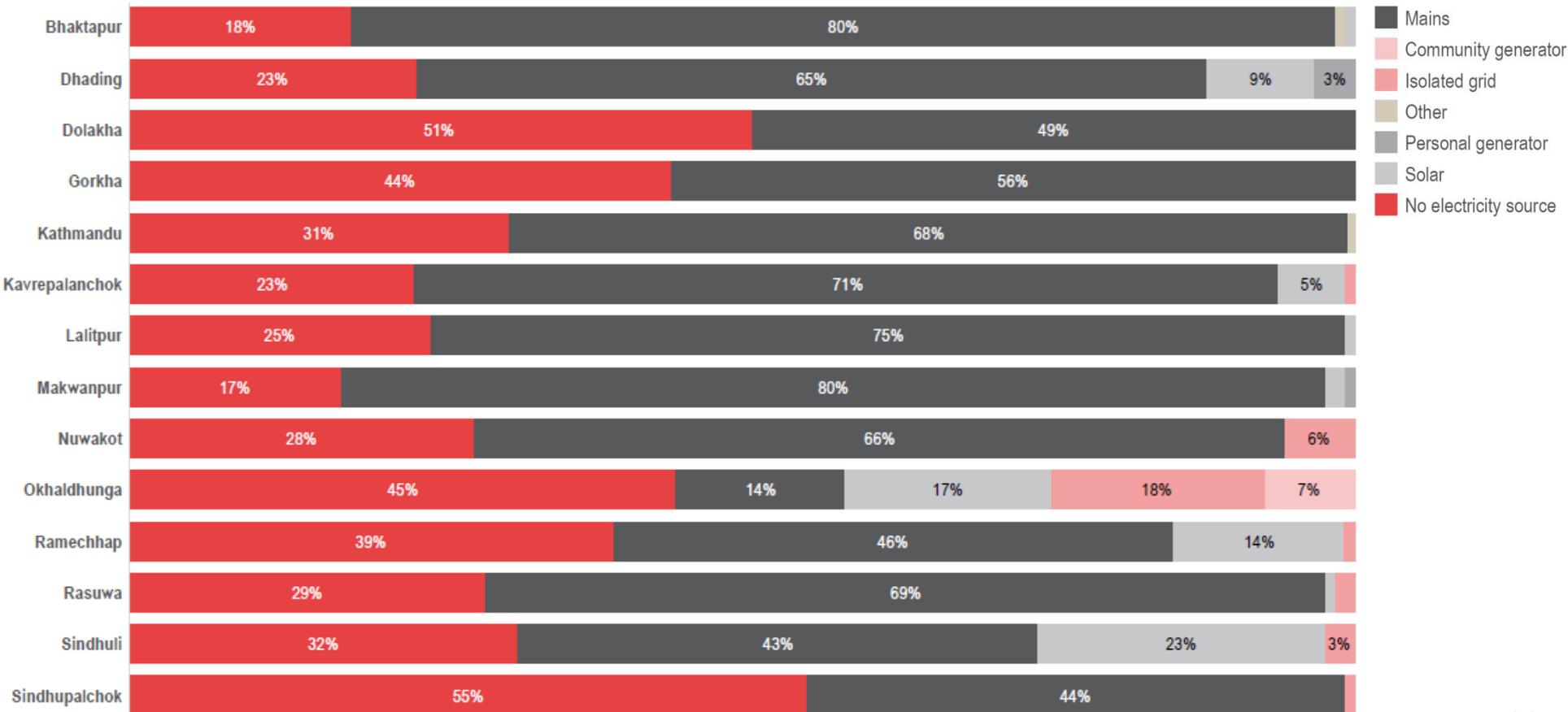
ELECTRICITY

Only **4%** of households had no source of electricity before the crisis



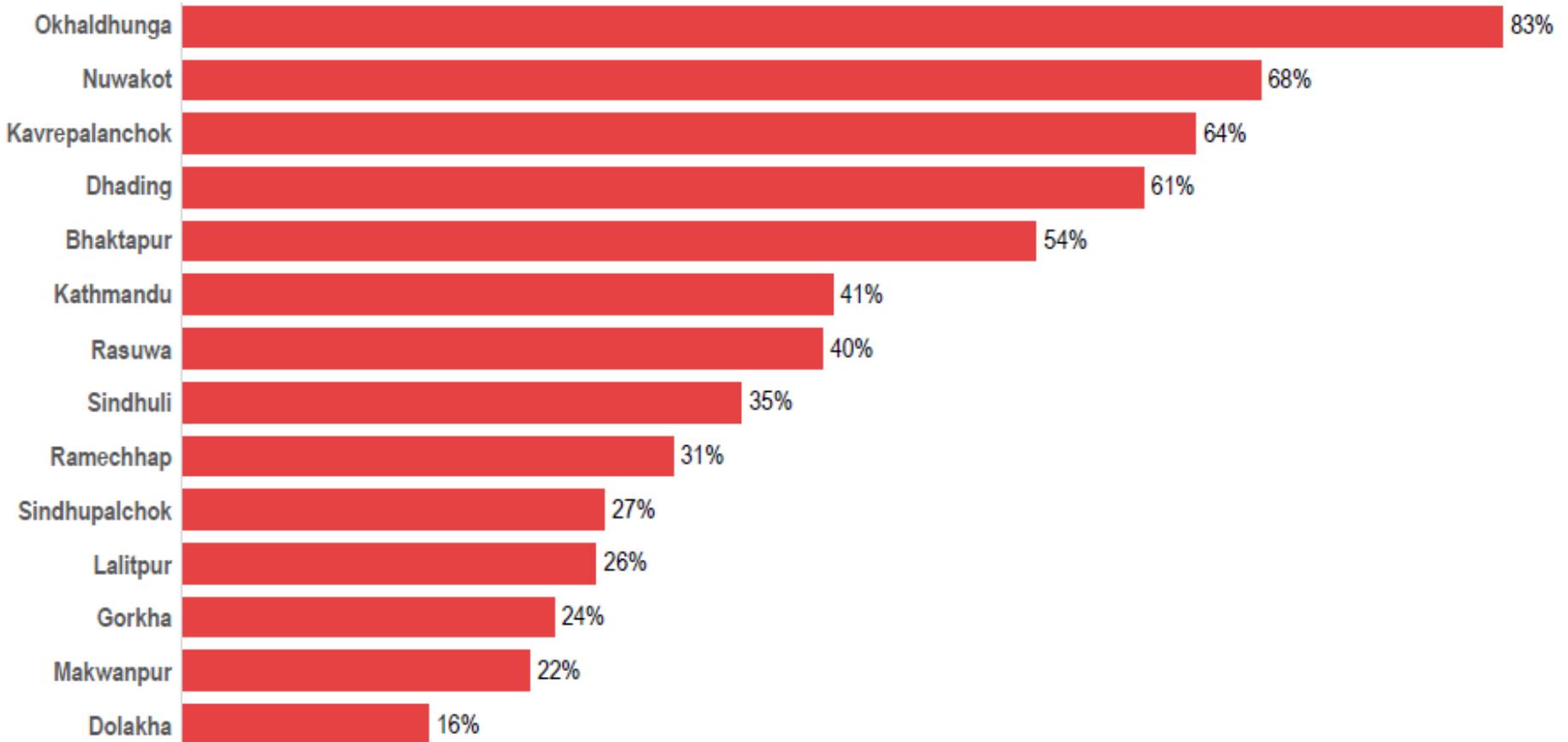
ELECTRICITY

Post-crisis, **31 %** of households reported to have no source of electricity



STRUCTURAL ASSESSMENT

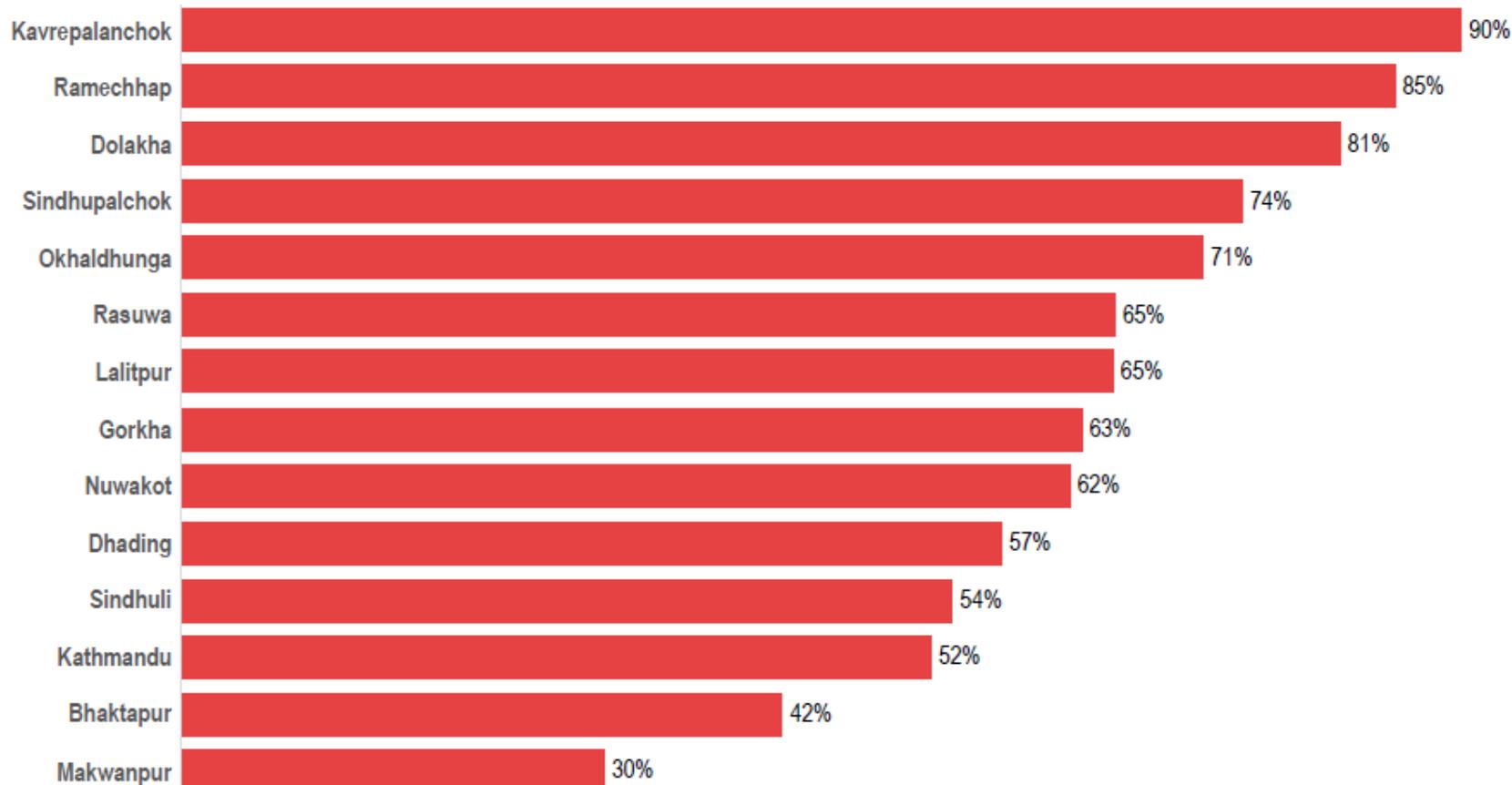
42% of all households reported that they had received a structural assessment by a qualified engineer at the time of assessment



TEMPORARY SHELTER

TEMPORARY SHELTER CONSTRUCTION

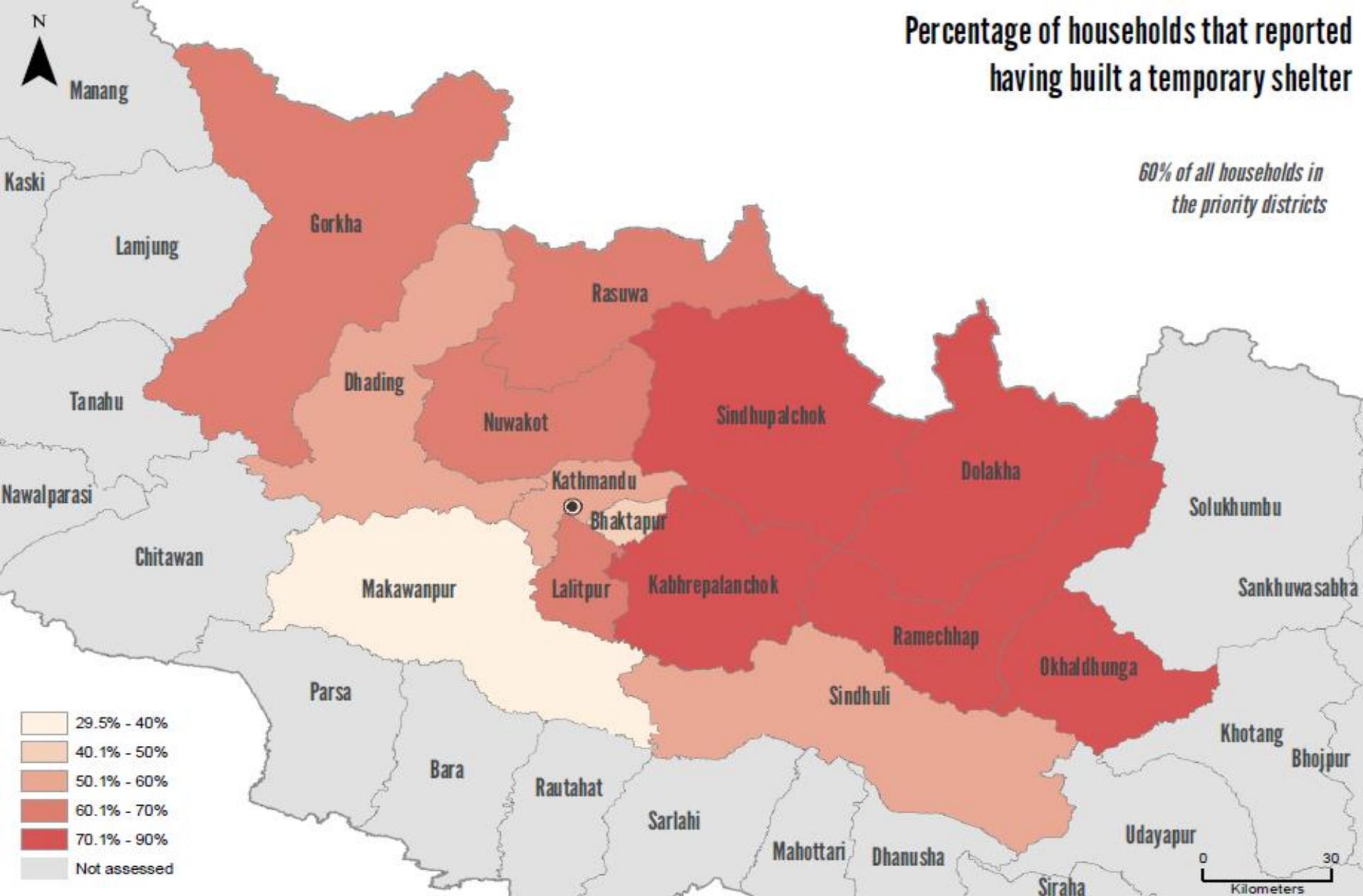
60% of households with damaged housing* reported that they have started constructing a temporary shelter



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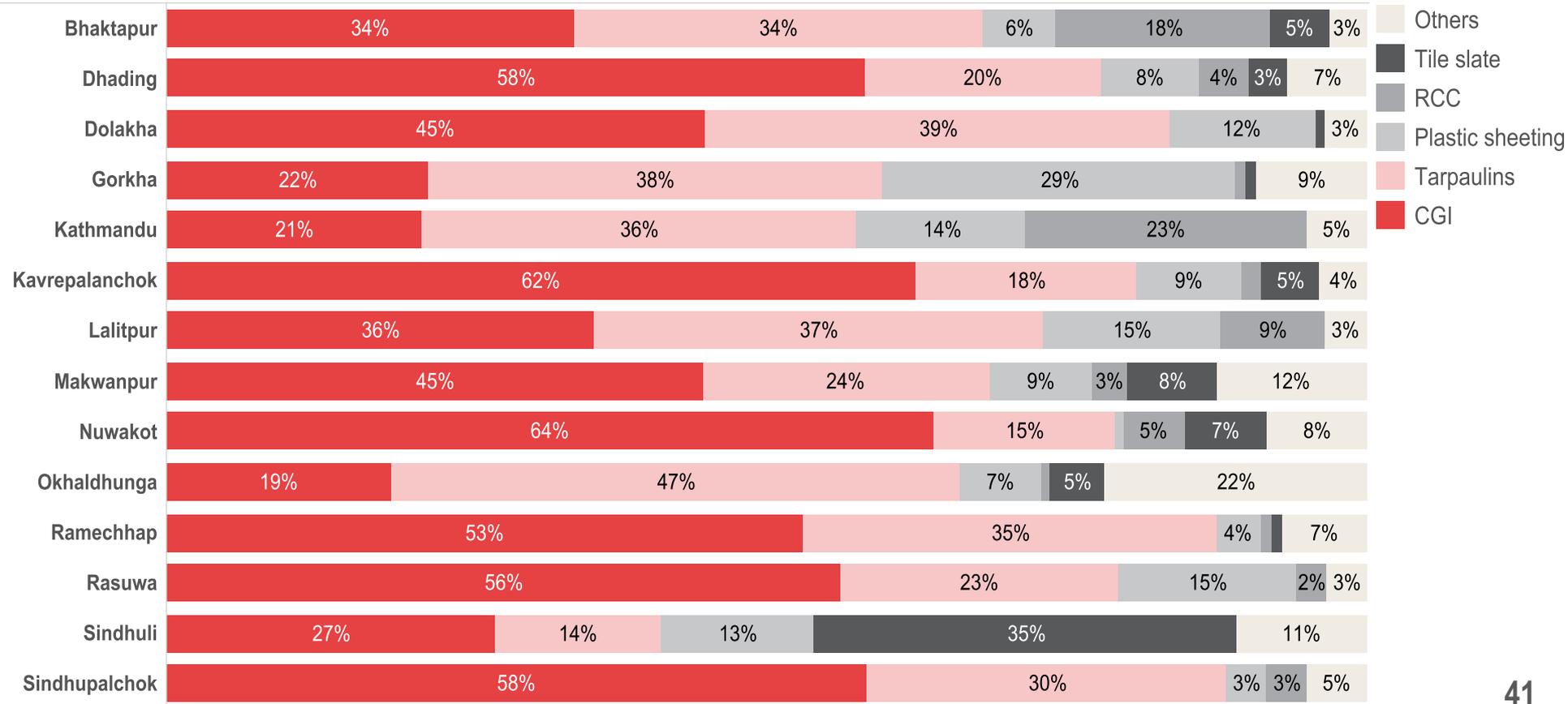
Percentage of households that reported having built a temporary shelter

60% of all households in the priority districts



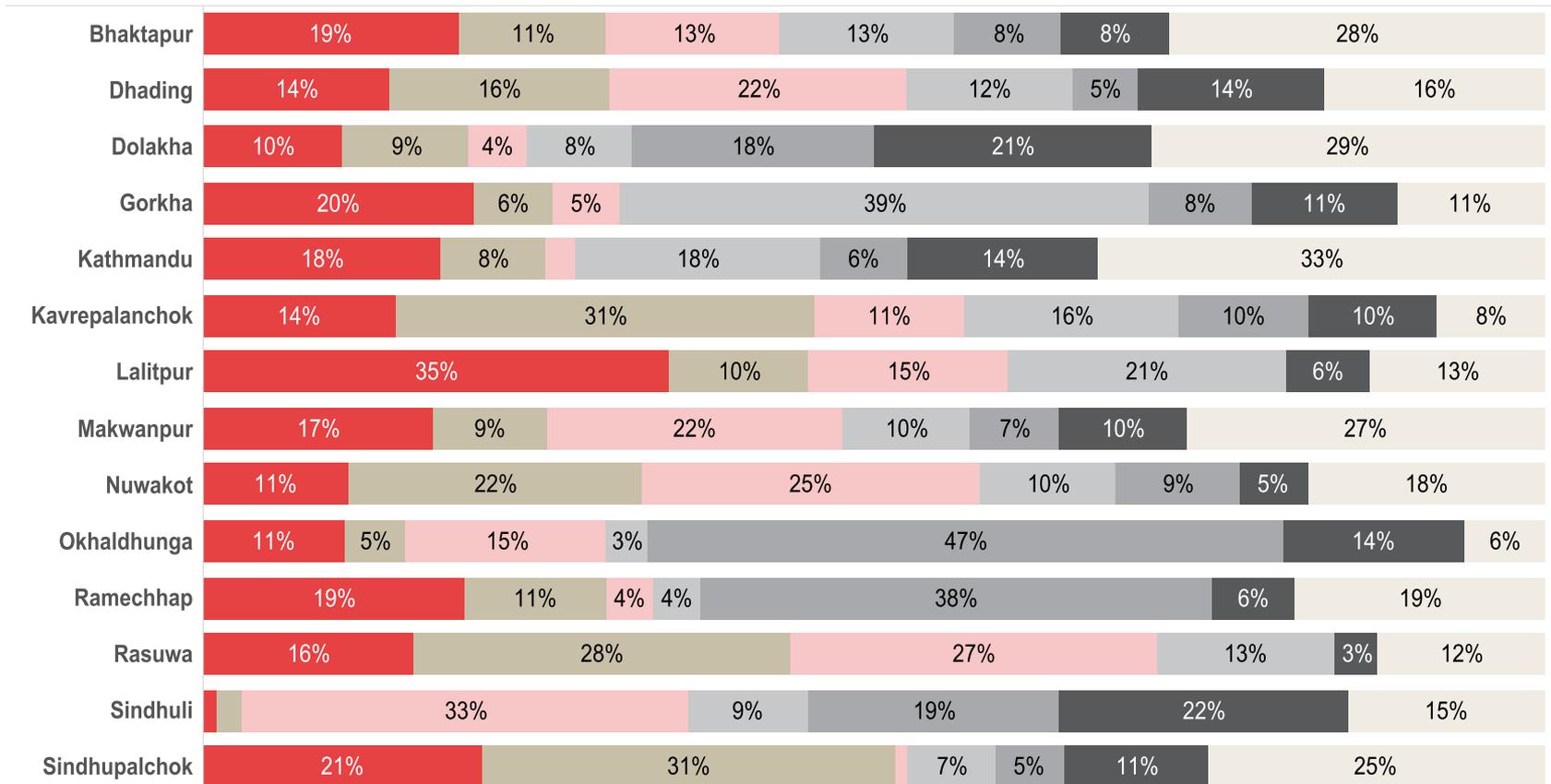
SHELTER ROOF MATERIAL

38% of all temporary shelter roofs are made of CGI, while **30%** are constructed from tarpaulins. *[Only 5 most predominant types are displayed]*



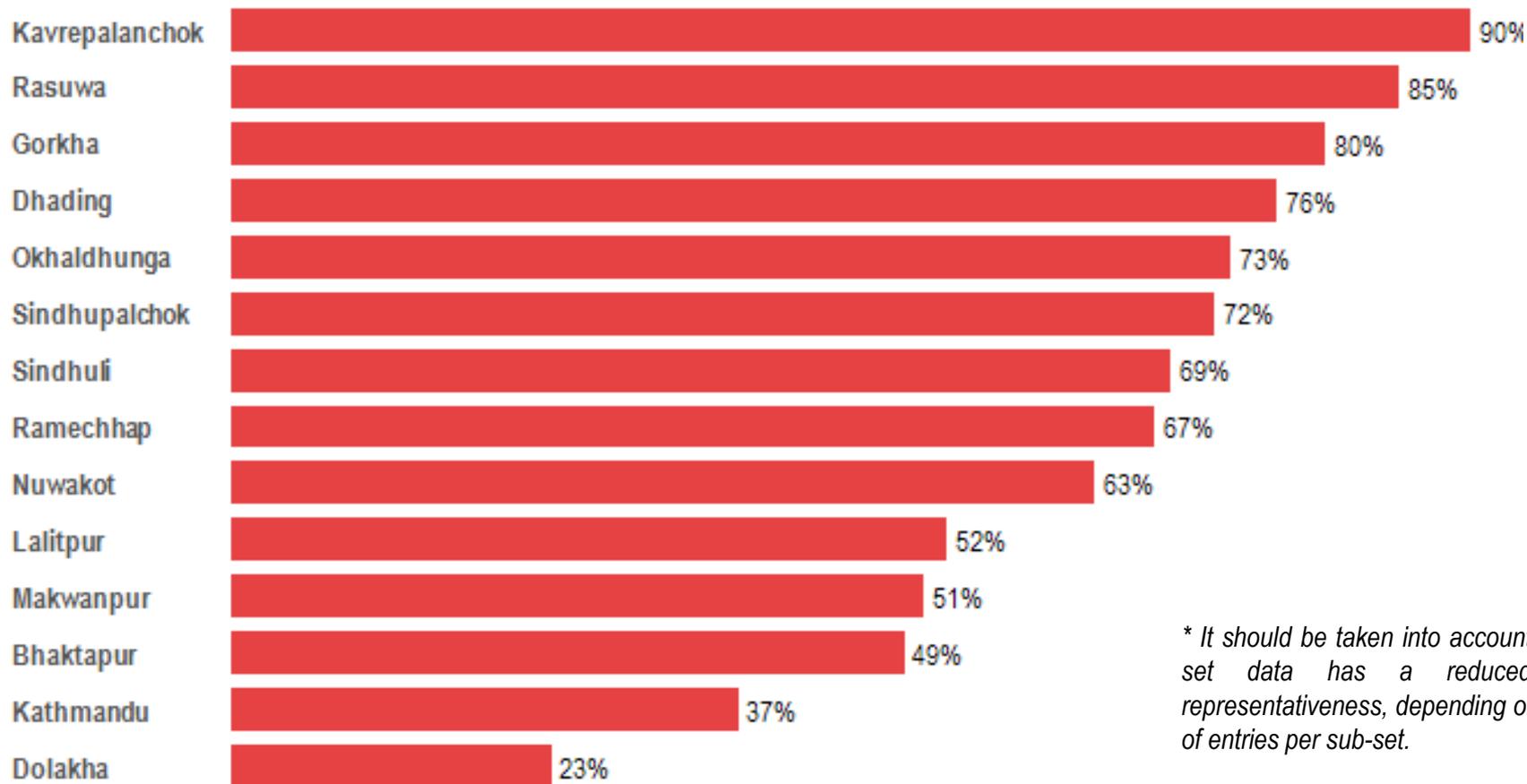
SHELTER WALL MATERIAL

17% of temporary shelter walls consist of tarpaulins, while 15% is plastic sheeting. *[Only 5 most predominant types are displayed]*



TEMPORARY SHELTER ASSISTANCE

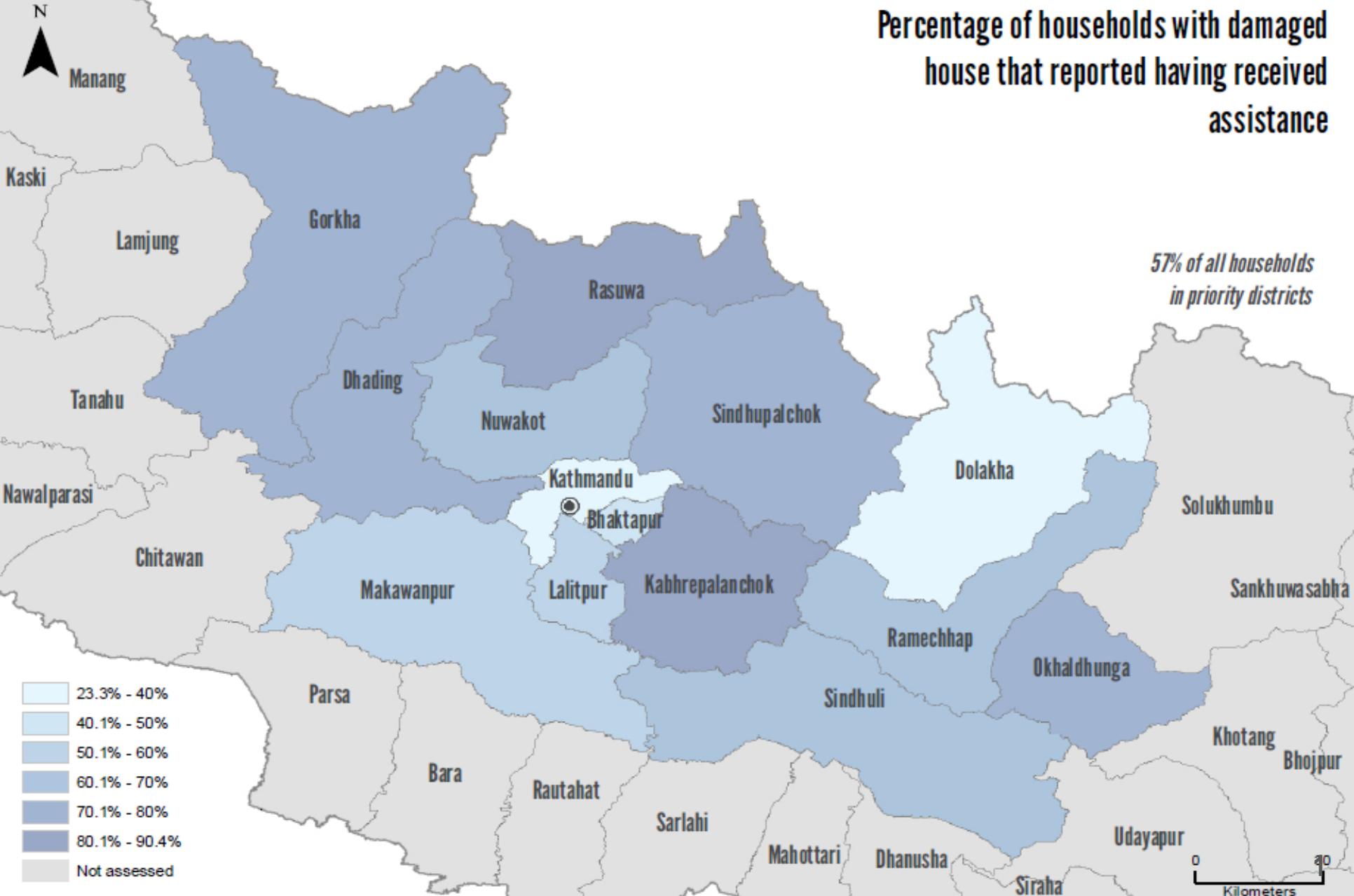
57% of all households with housing damage report to having received shelter assistance*



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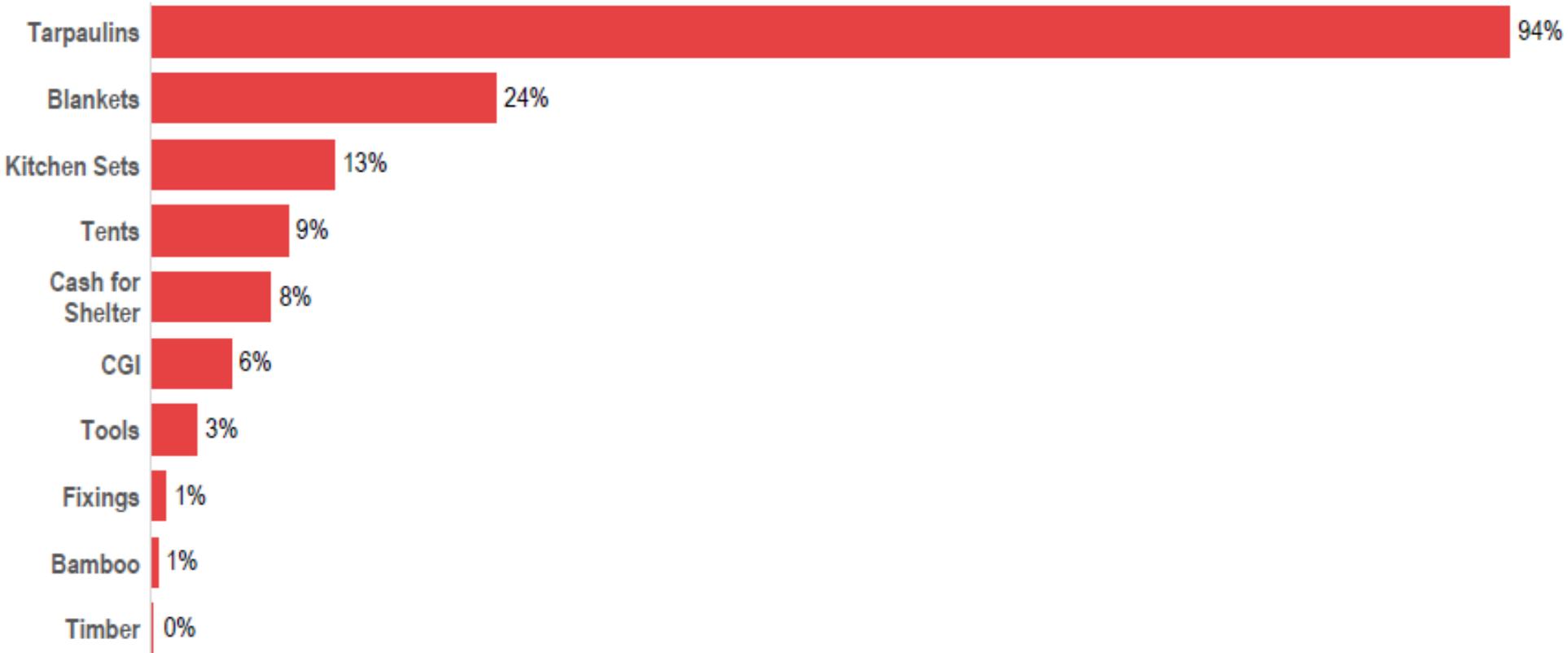
43

Percentage of households with damaged house that reported having received assistance



SHELTER ASSISTANCE RECEIVED

Tarpaulins are the predominant form of emergency shelter assistance that has been received



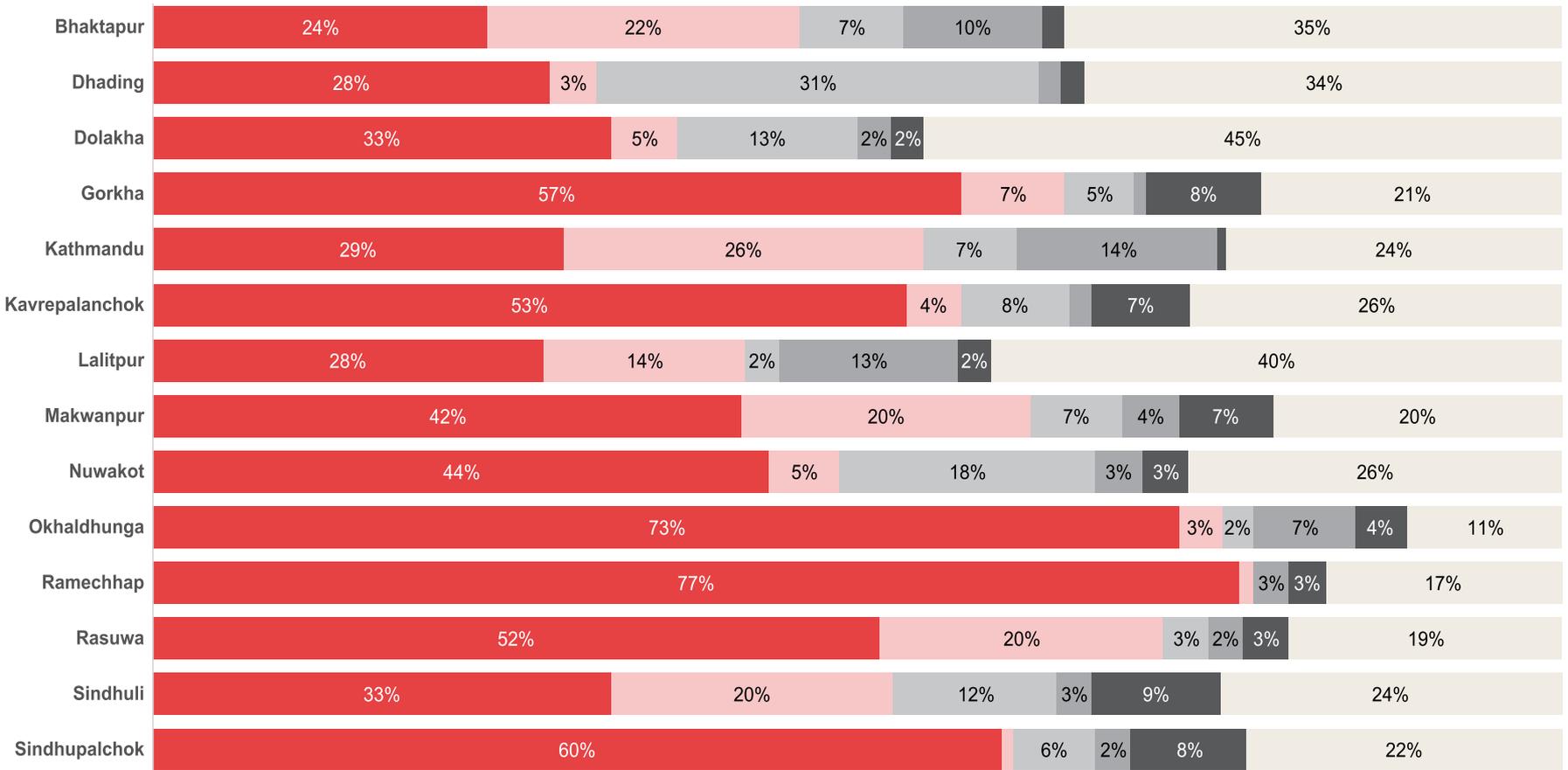
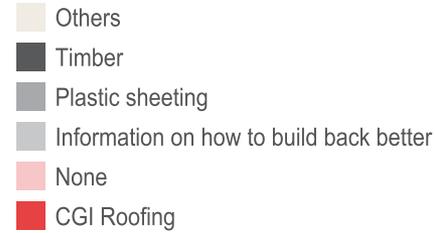
CASH ASSISTANCE RECEIVED

Cash assistance was reported to have been received in 6 districts, predominantly in Rasuwa, Nuwakot, Dolakha.



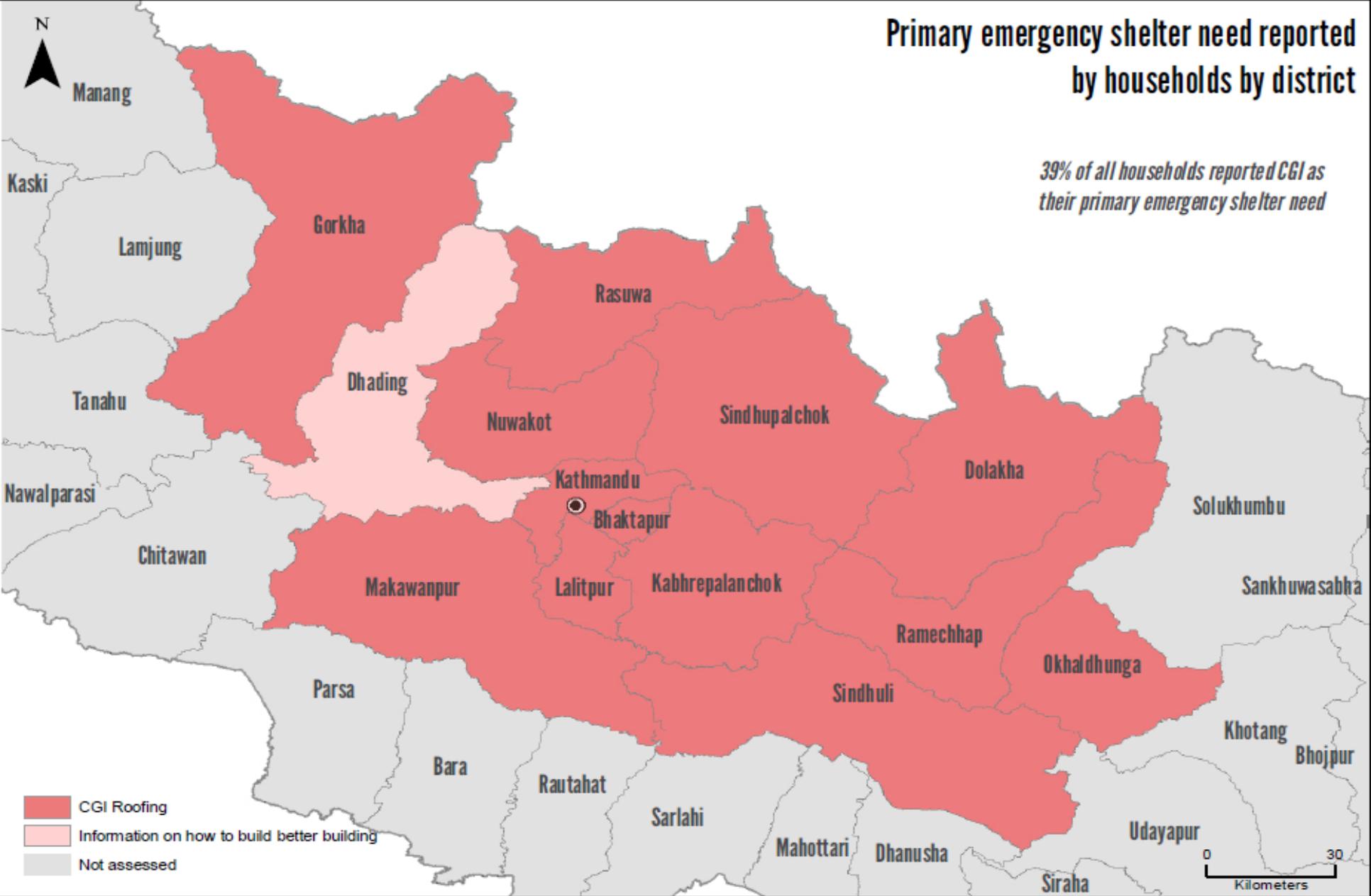
PRIMARY SHELTER NEEDS

39% of all households reported CGI as their primary emergency shelter need; it is also the predominant reported secondary need.



Primary emergency shelter need reported by households by district

39% of all households reported CGI as their primary emergency shelter need



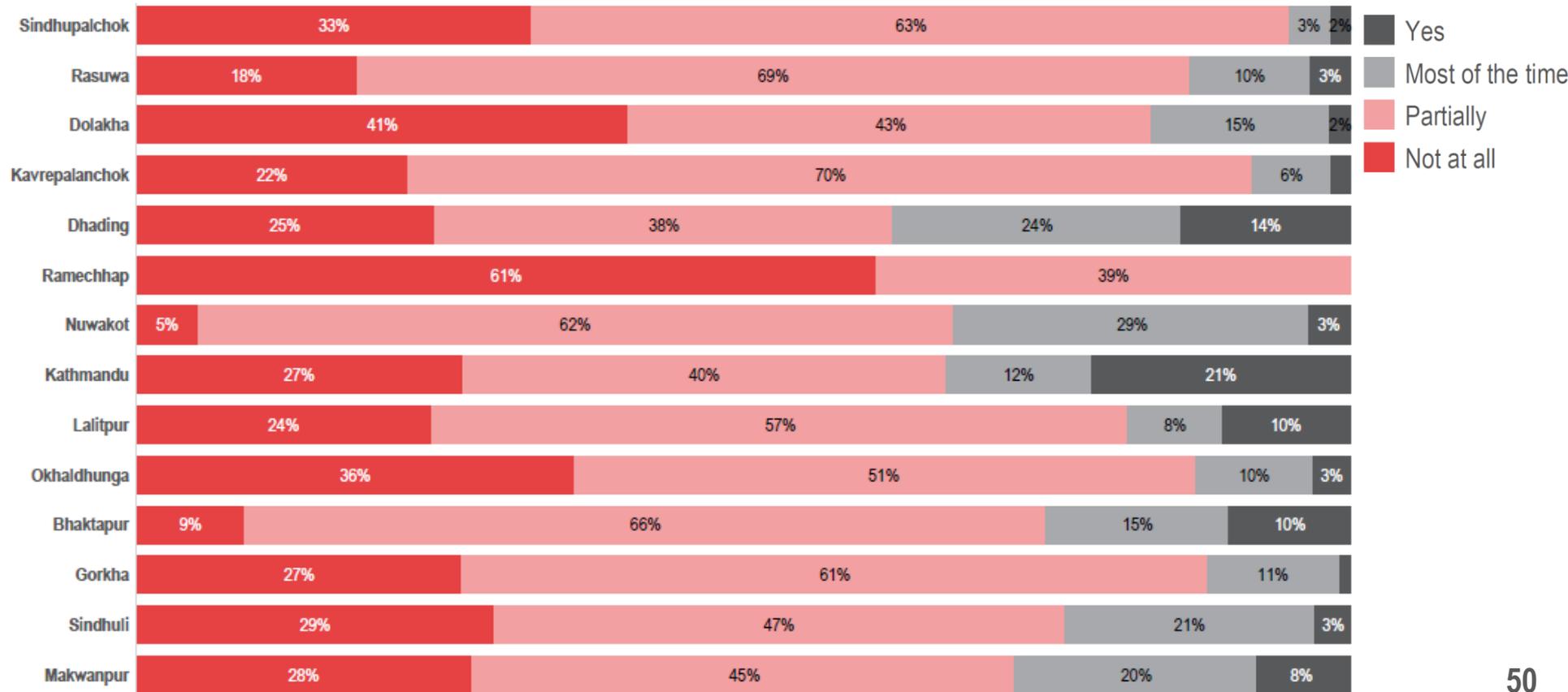
- CGI Roofing
- Information on how to build better building
- Not assessed



CURRENT SAFETY PERCEPTIONS

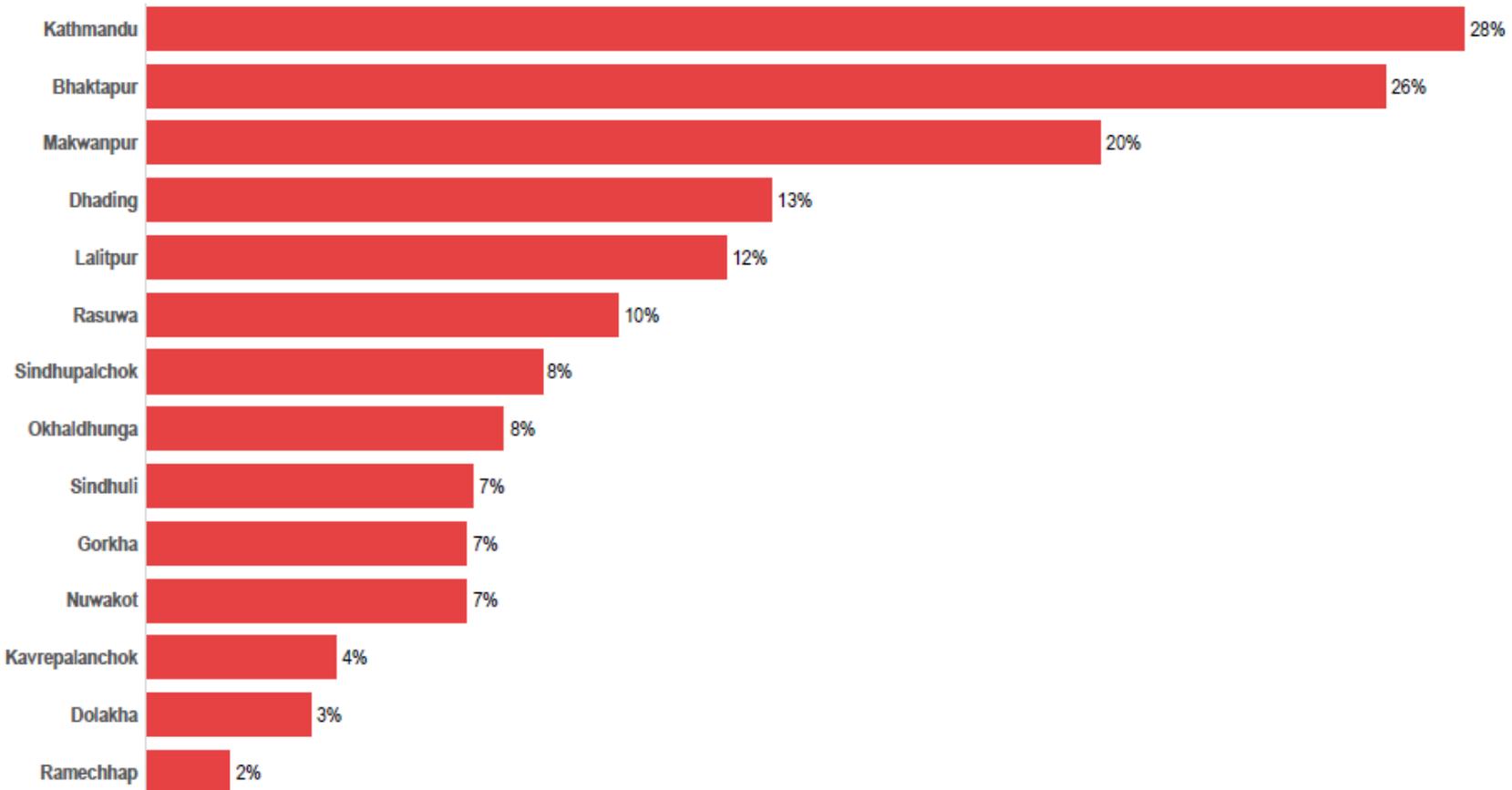
CURRENT WEATHER PROTECTION

25% of all households in the priority districts reported that they do not feel protected at all from current weather conditions



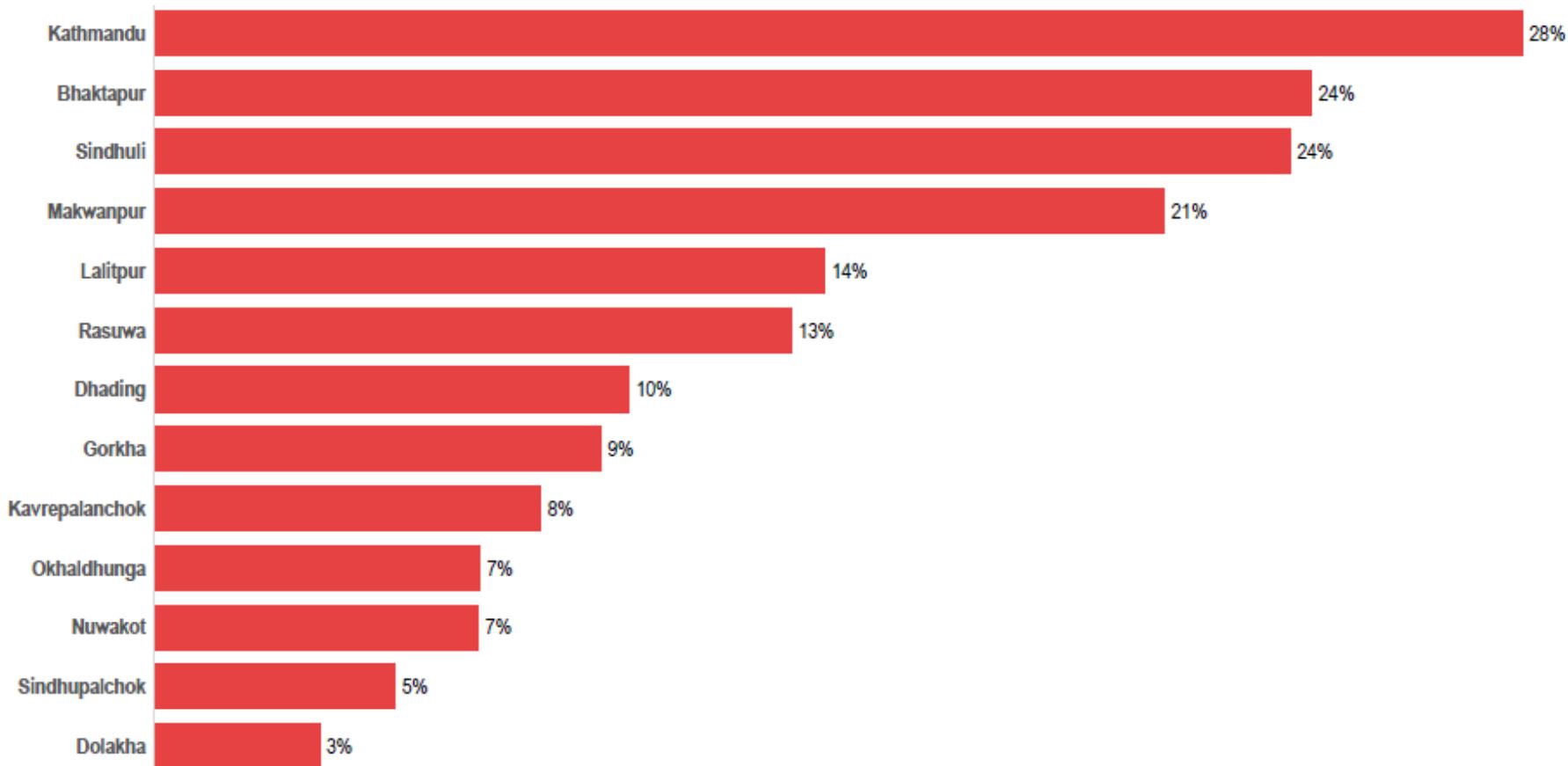
MONSOON SEASON PROTECTION

Only **21%** of all households in the priority districts reported that they feel protected against the upcoming monsoon season



WINTER SEASON PROTECTION

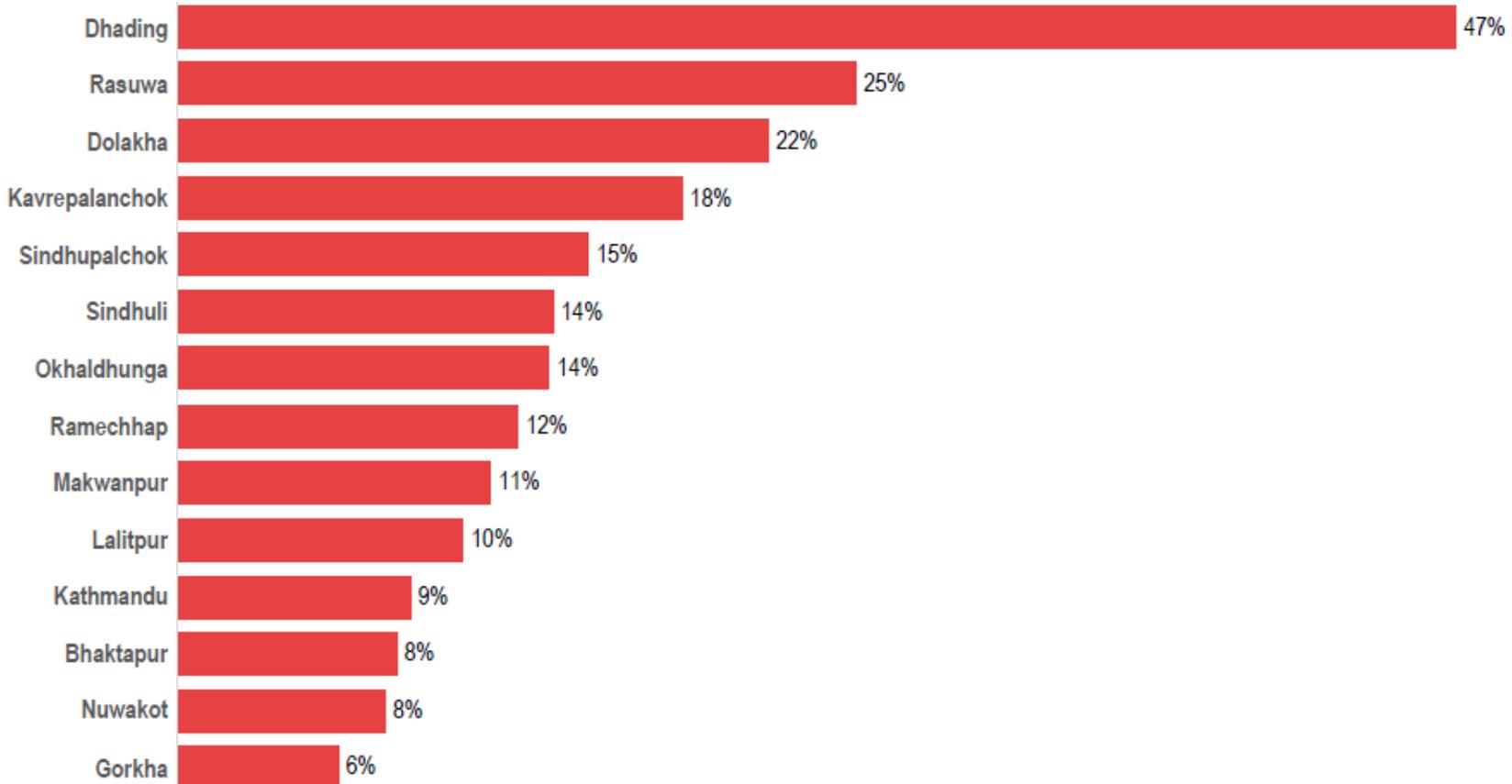
Only **22%** of all households in the priority districts reported that they feel protected against the upcoming winter season



HOUSING RECOVERY

HOUSING RECOVERY

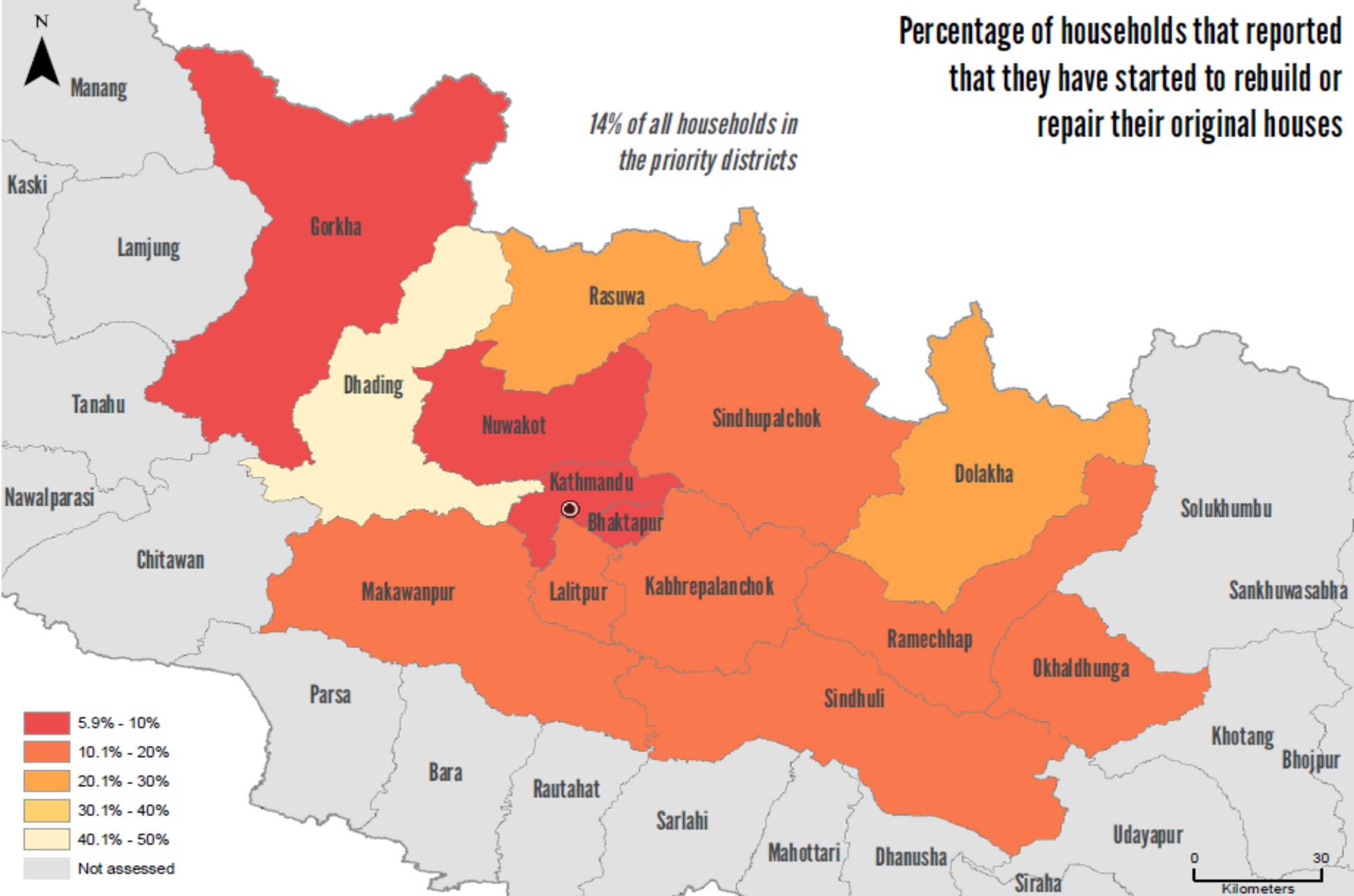
14% of all households with damaged housing* reported that they have started to rebuild or repair their original houses



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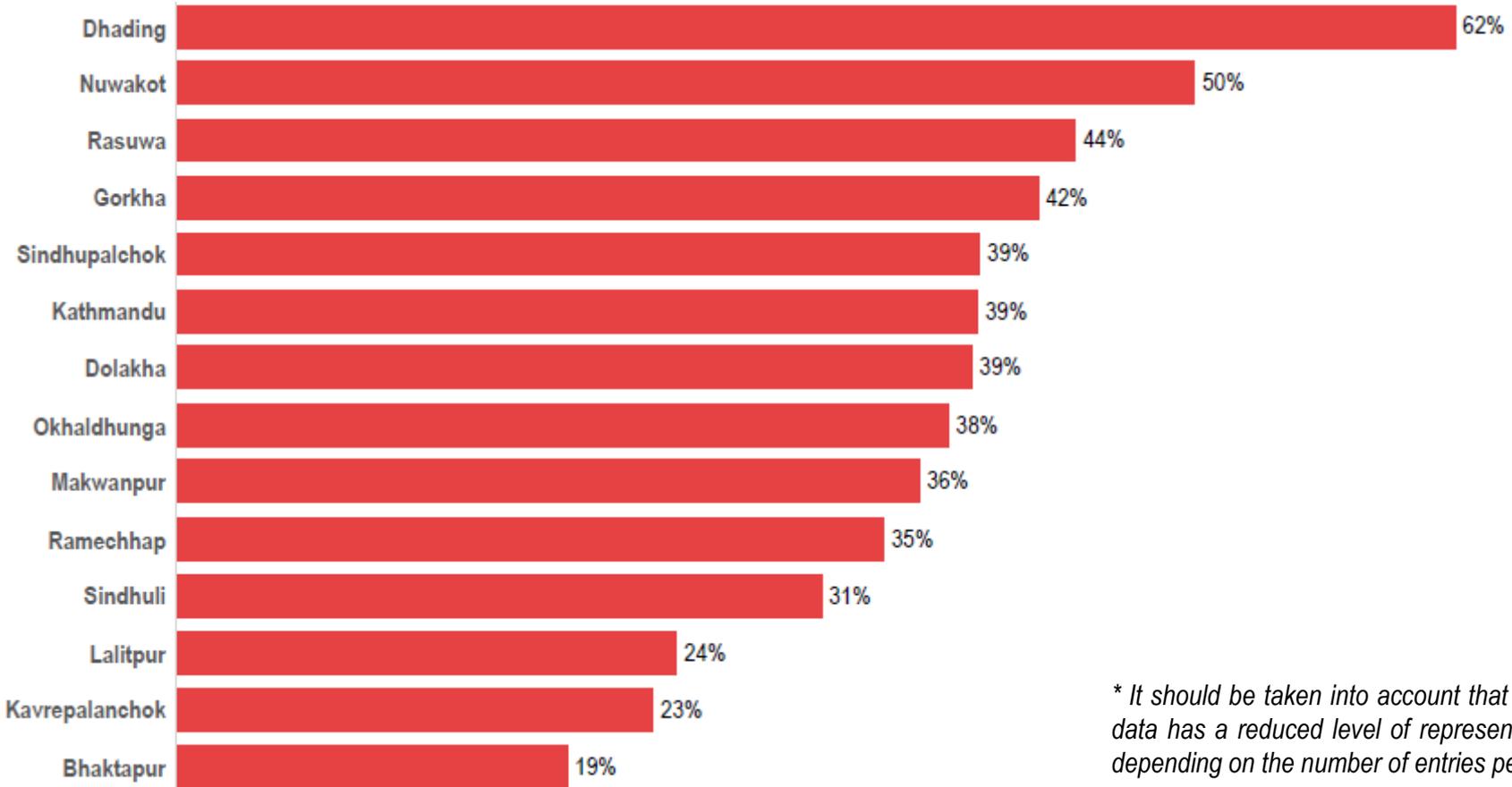
Percentage of households that reported that they have started to rebuild or repair their original houses

14% of all households in the priority districts



CAN USE DEBRIS FOR RECOVERY

37% of all households with damaged housing* reported that they can use debris for housing recovery

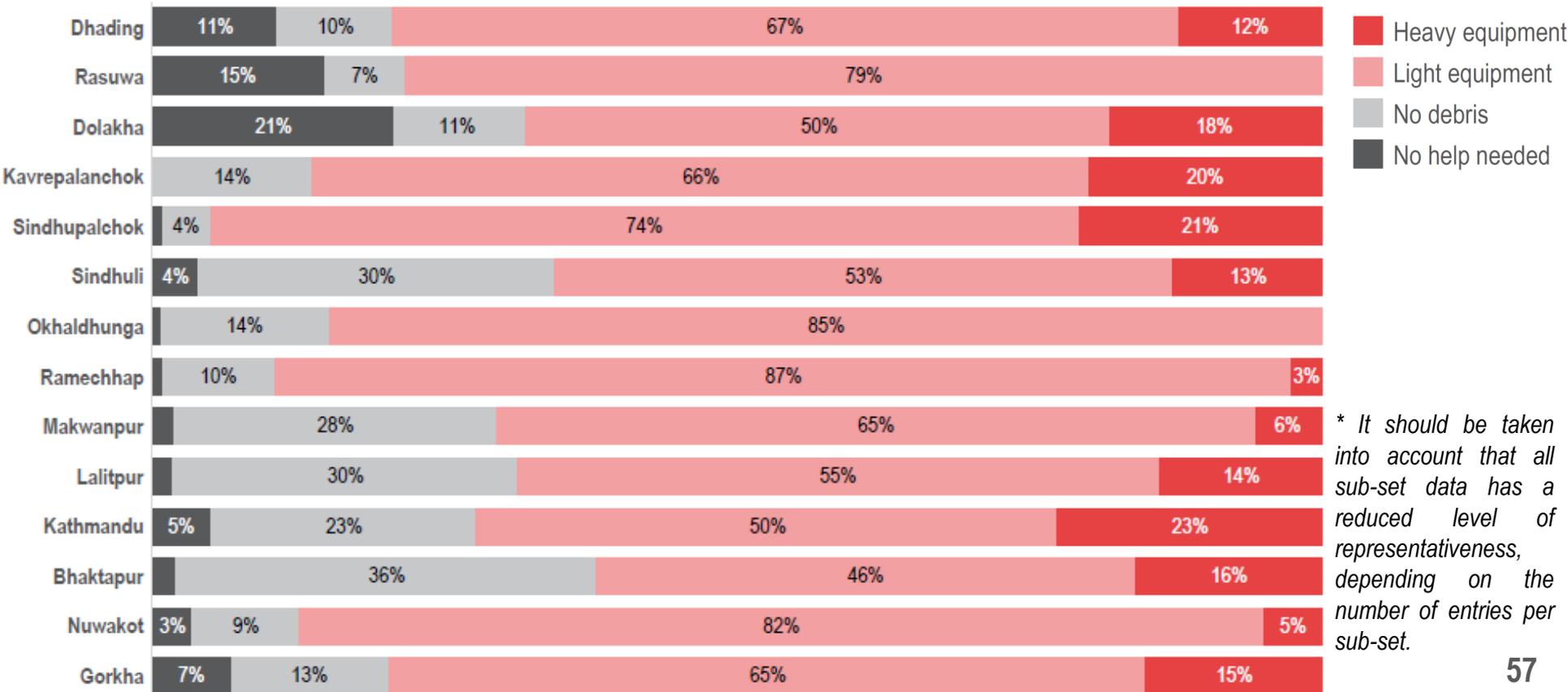


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56

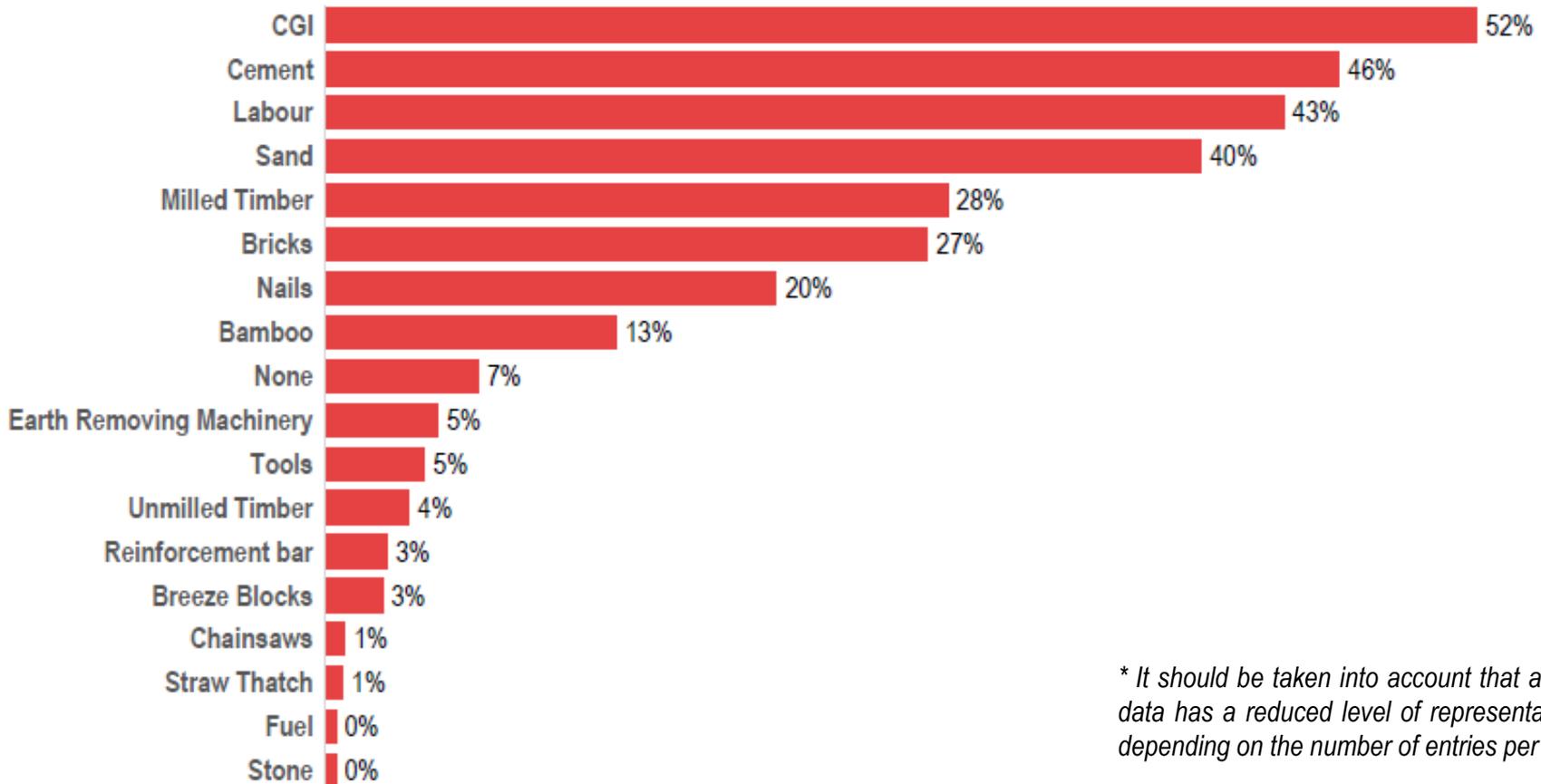
DEBRIS REMOVAL ASSISTANCE

76% of all households with damaged housing* reported that they need some form of debris removal assistance



RECOVERY MATERIAL NEEDS

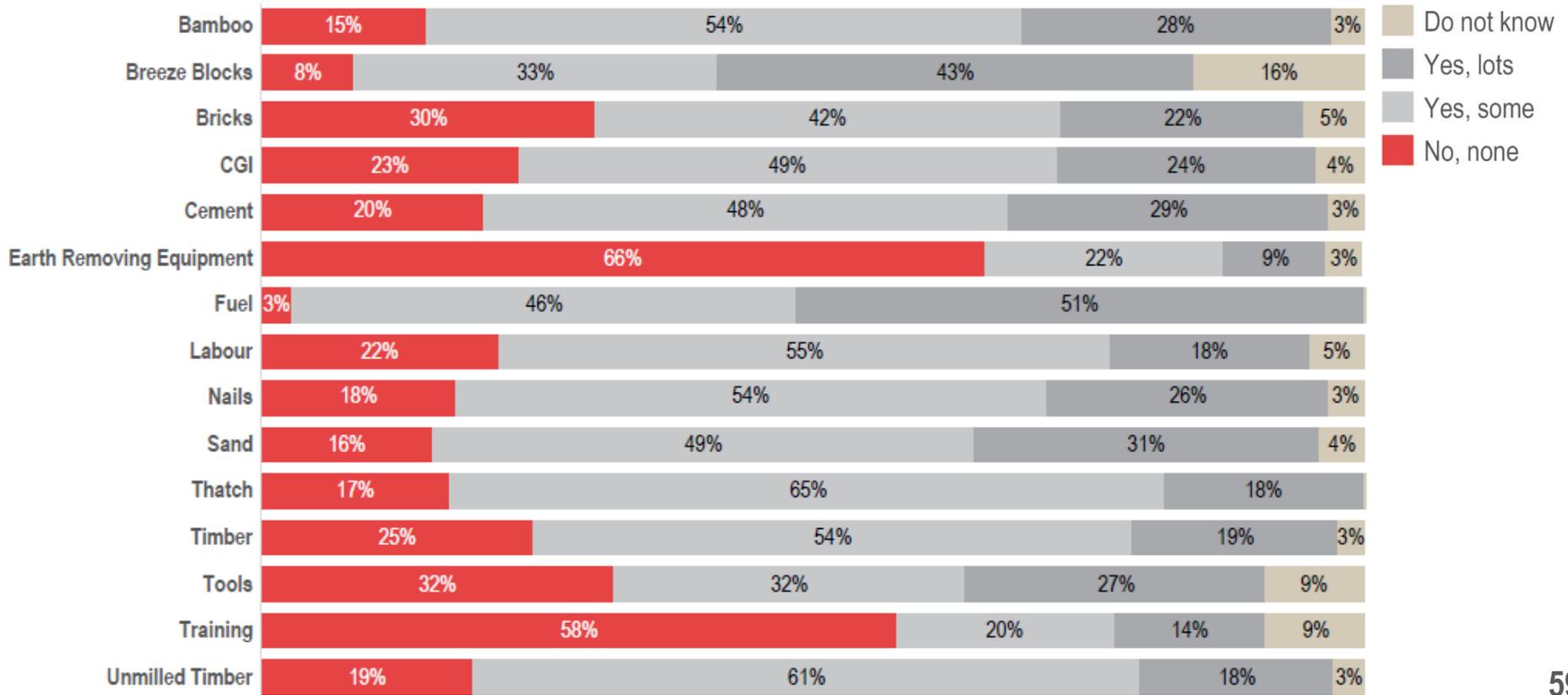
52% of all households with damaged homes* reported that CGI is their primary material need for housing recovery/rebuild



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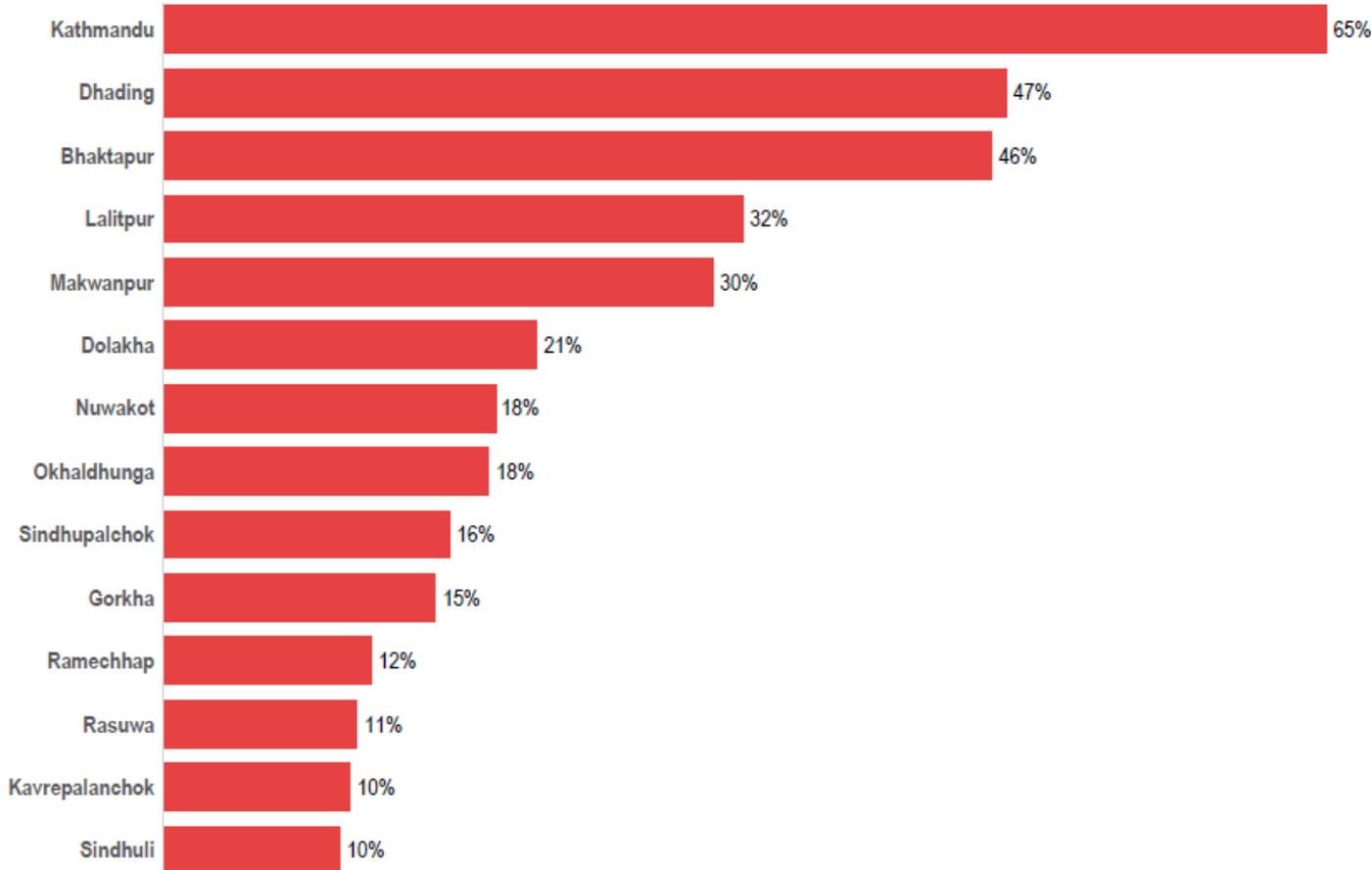
MATERIAL ACCESS

Of all households in the priority districts that cited CGI as their primary need, **24%** do not have any access to CGI, while **49%** only reported some access



INFORMATION ON SAFE CONSTRUCTION

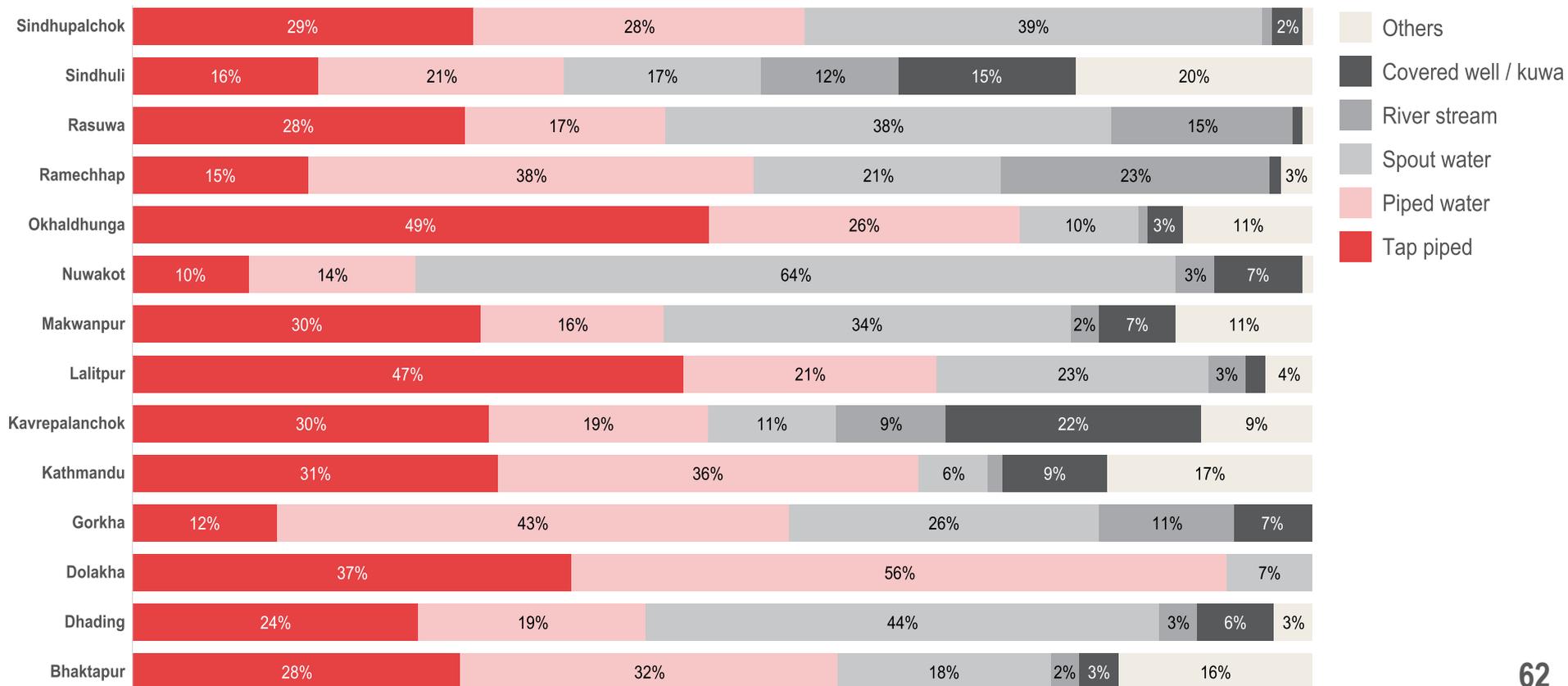
36% of households with damaged housing reported that they have ever received information related to safer construction practices



WASH

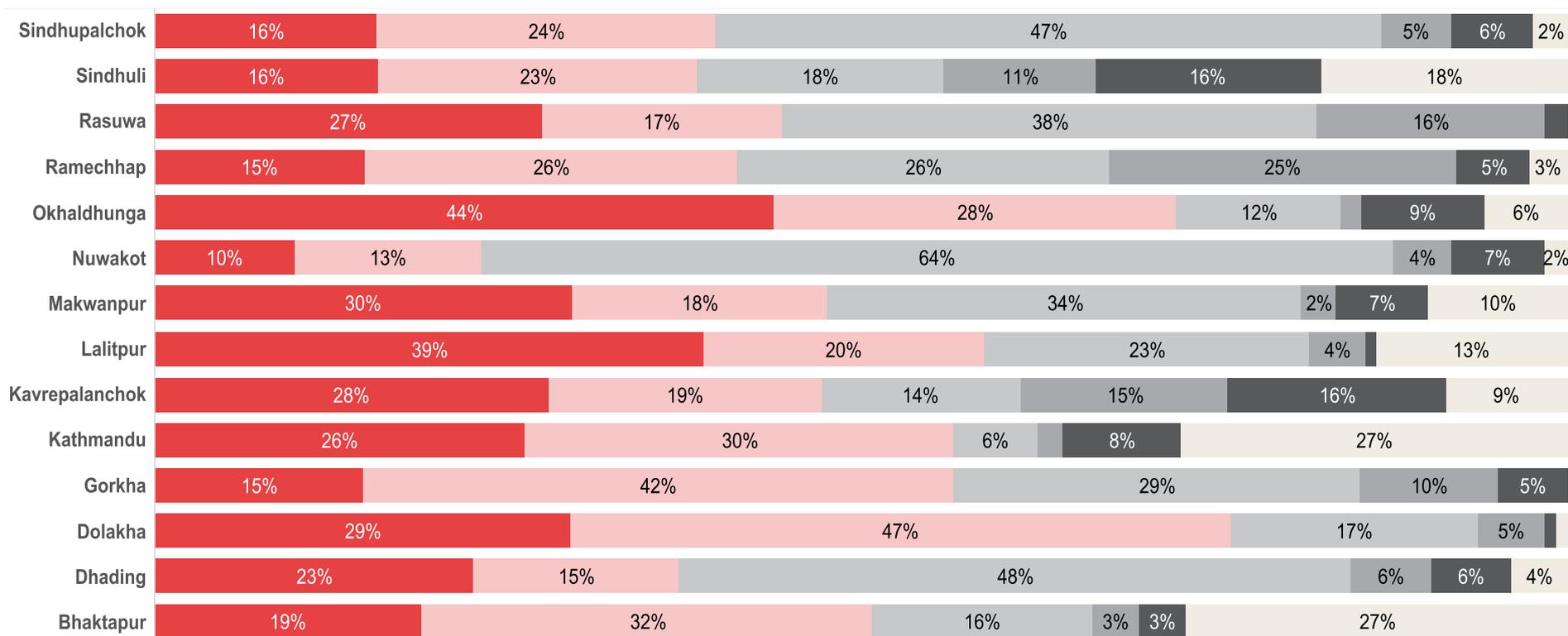
WATER SOURCE — PRE-CRISIS

29% of all households cited municipal piped tap water as their main pre-crisis water source, while an equal **29%** cited private piped water
[Only 5 most predominant types are displayed]



WATER SOURCE — POST-CRISIS

25% of all households reported that municipal piped tap water is their current water source, while the usage of bottled water intake increased from **4% pre-crisis to 8% post-crisis** [Only 5 most predominant types are displayed]



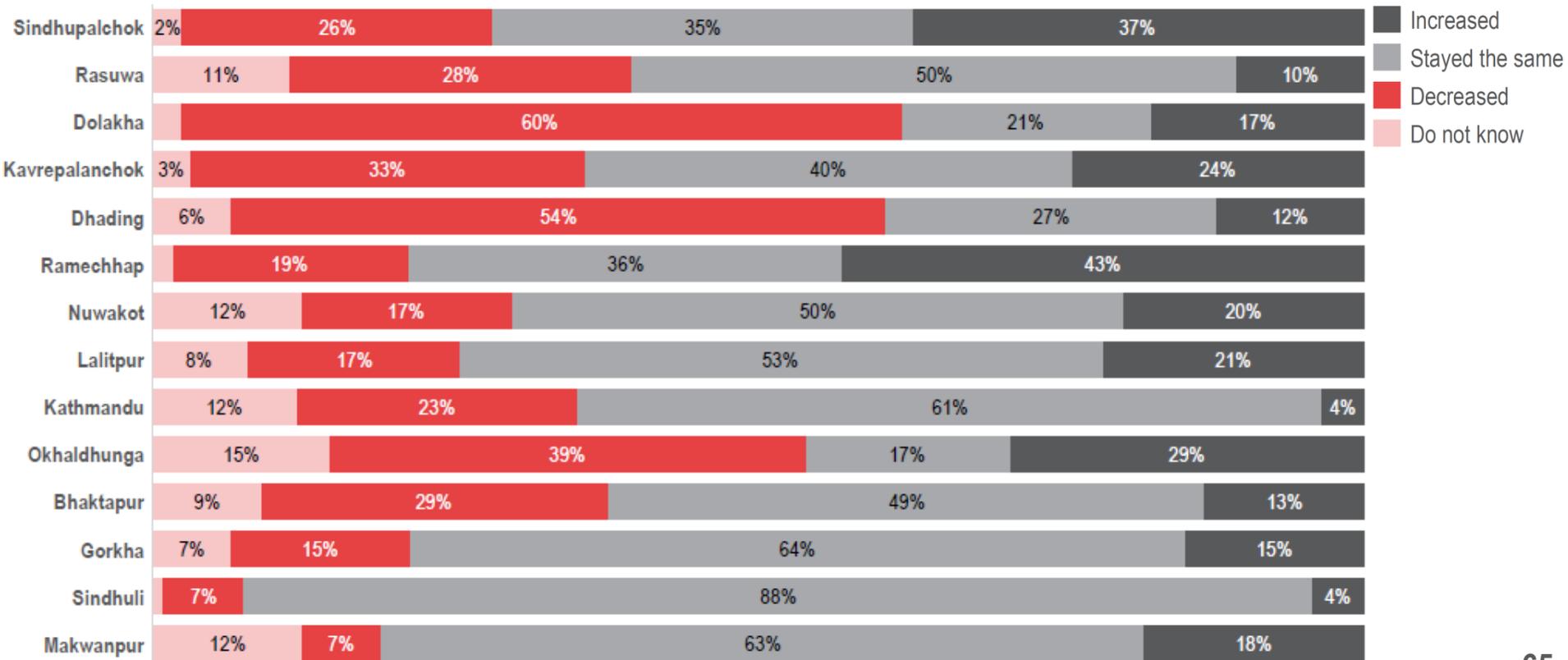
WATER SOURCE DAMAGE

86% of all households reported that their water source was **not** damaged by the crisis



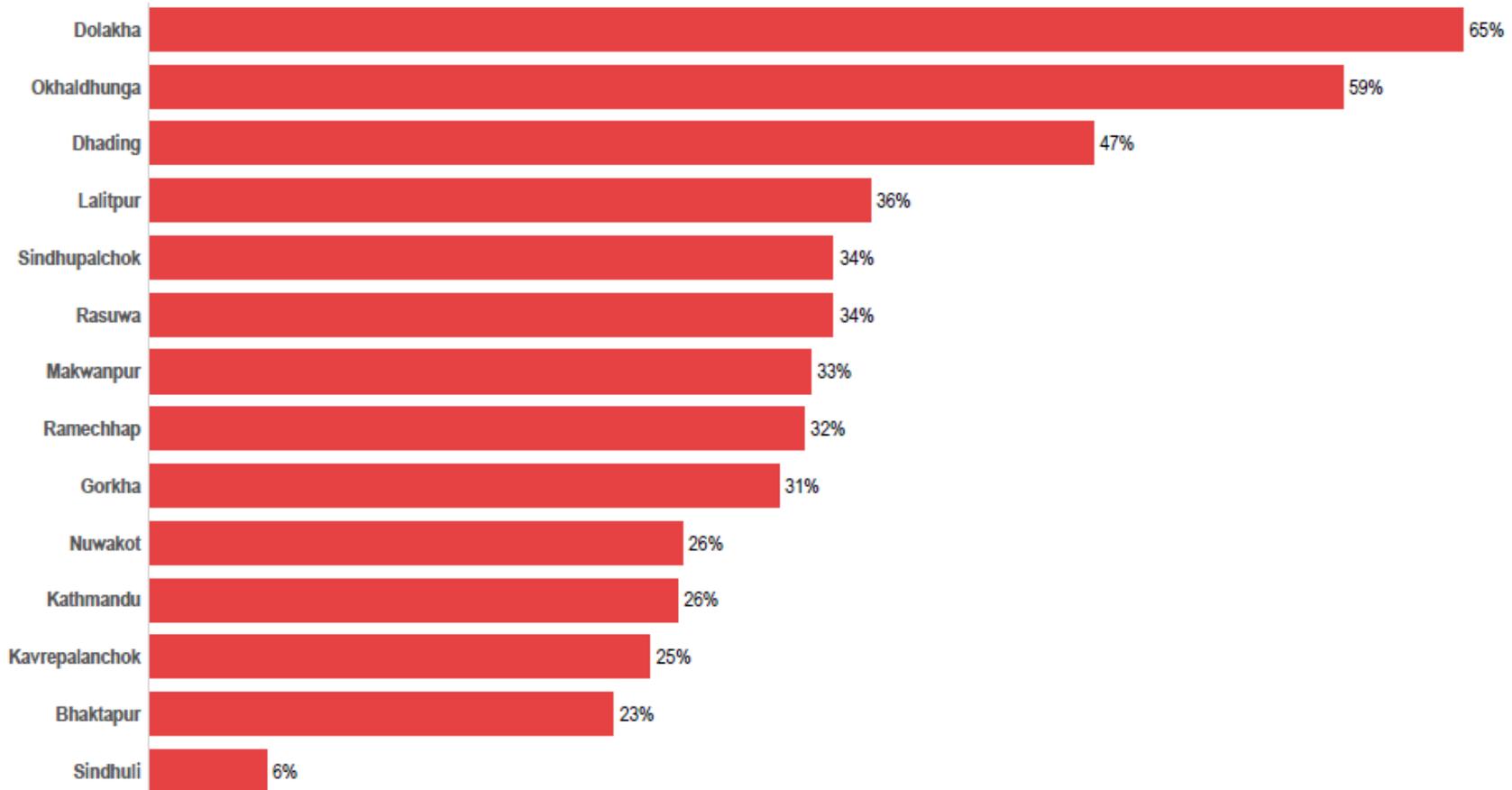
EFFECT ON WATER QUANTITY

24% of all households reported that the quantity of their drinking water had decreased since the crisis



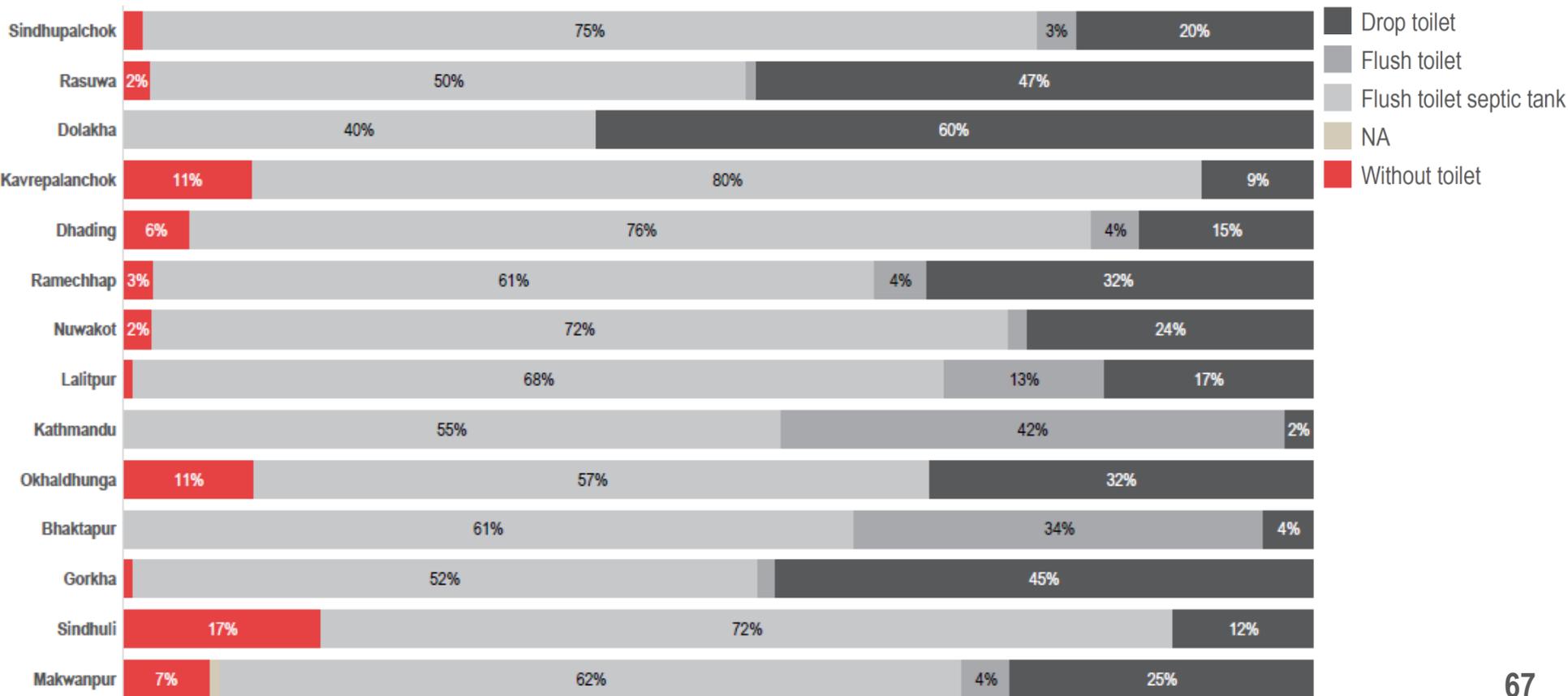
EFFECT ON WATER QUALITY

31% of all households in the priority districts reported that the quality of their drinking water had declined



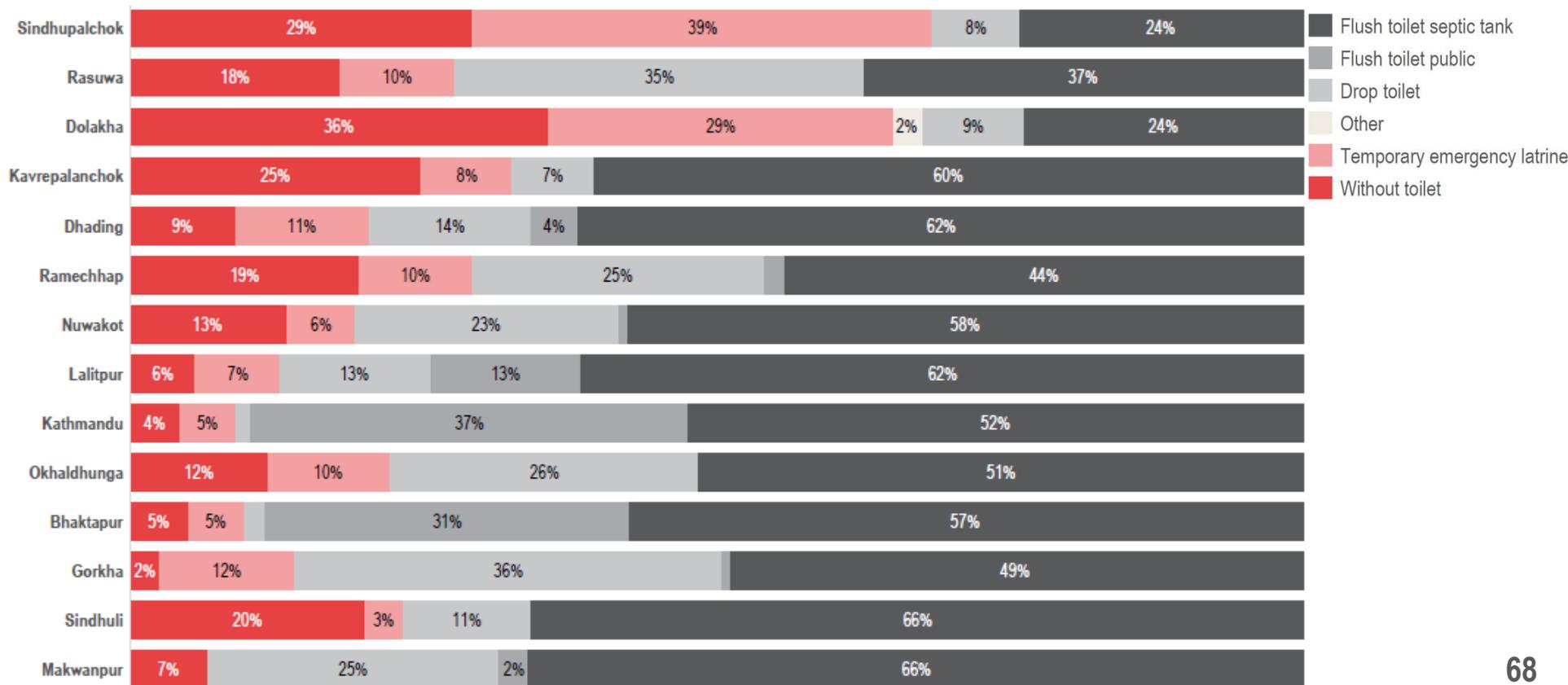
TOILET FACILITIES — PRE-CRISIS

3% of all households in the priority districts reported that they did not have access to any toilet prior to the crisis



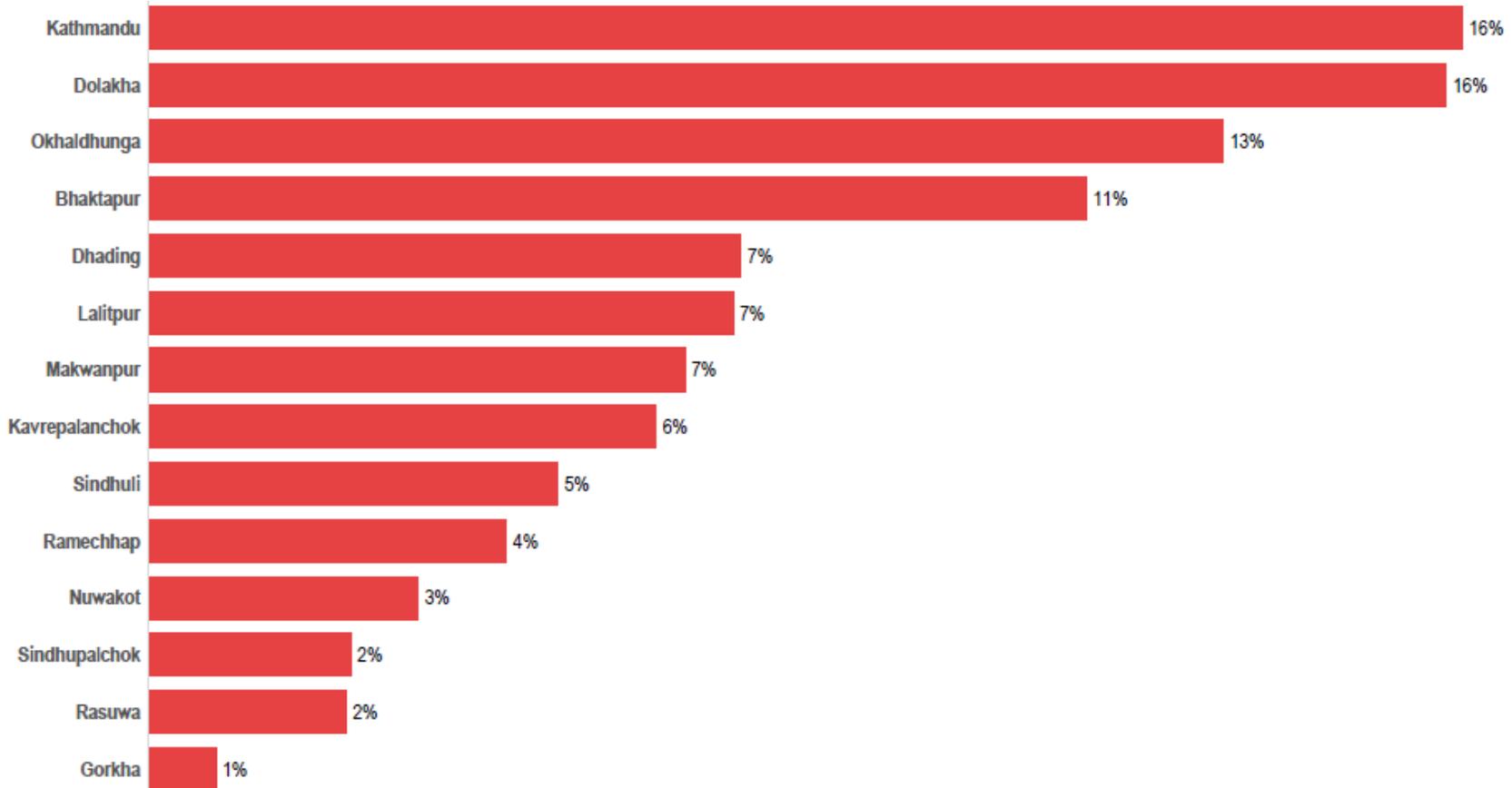
TOILET FACILITIES — POST-CRISIS

11% of all households in the priority districts reported that they currently do not have access to any toilet



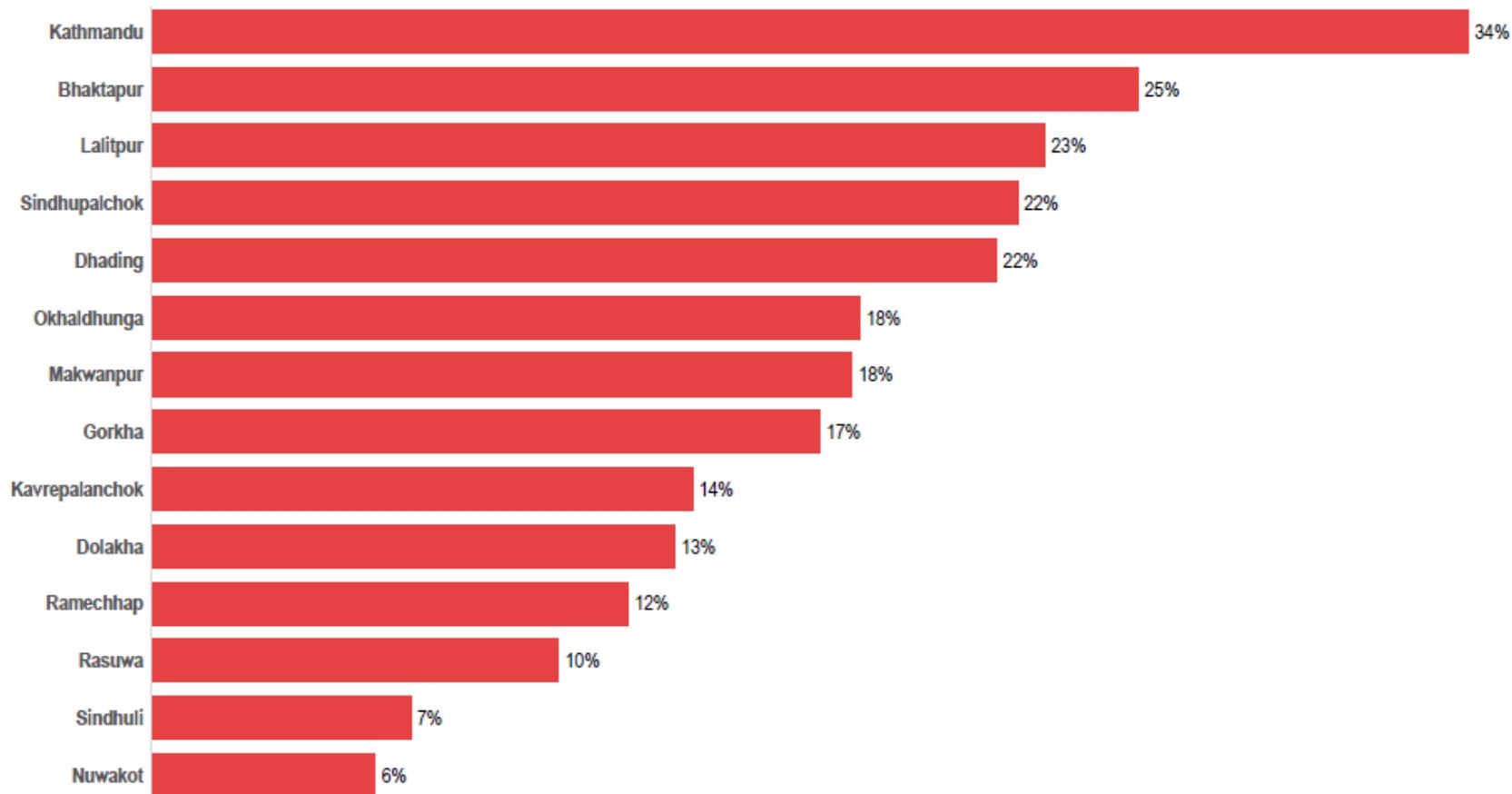
TOILET FACILITY SHARING — PRE-CRISIS

10% of all households in the priority districts reported sharing a toilet with one or more households prior to the crisis



TOILET FACILITY SHARING — POST-CRISIS

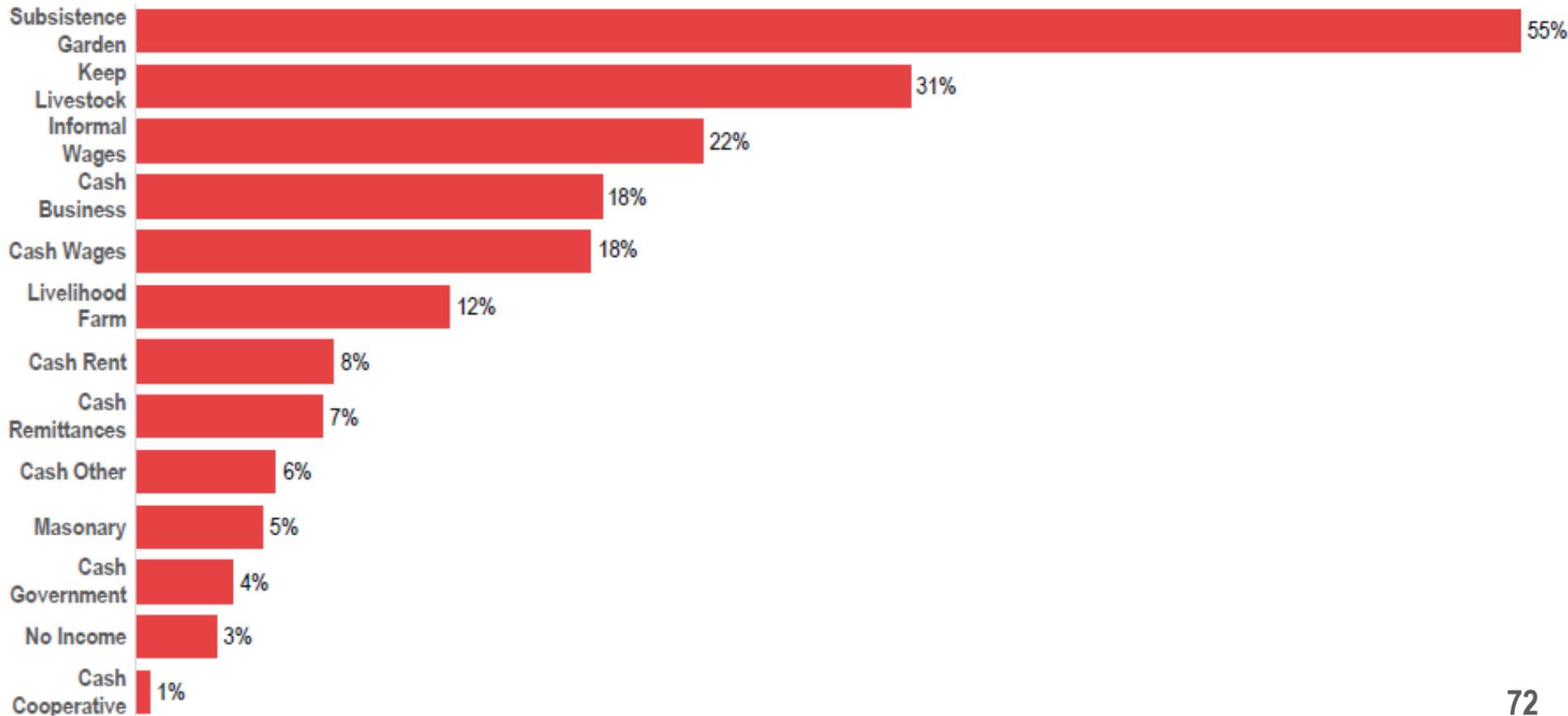
22% of all households in the priority districts reported sharing a toilet with one or more households after the crisis



LIVELIHOODS

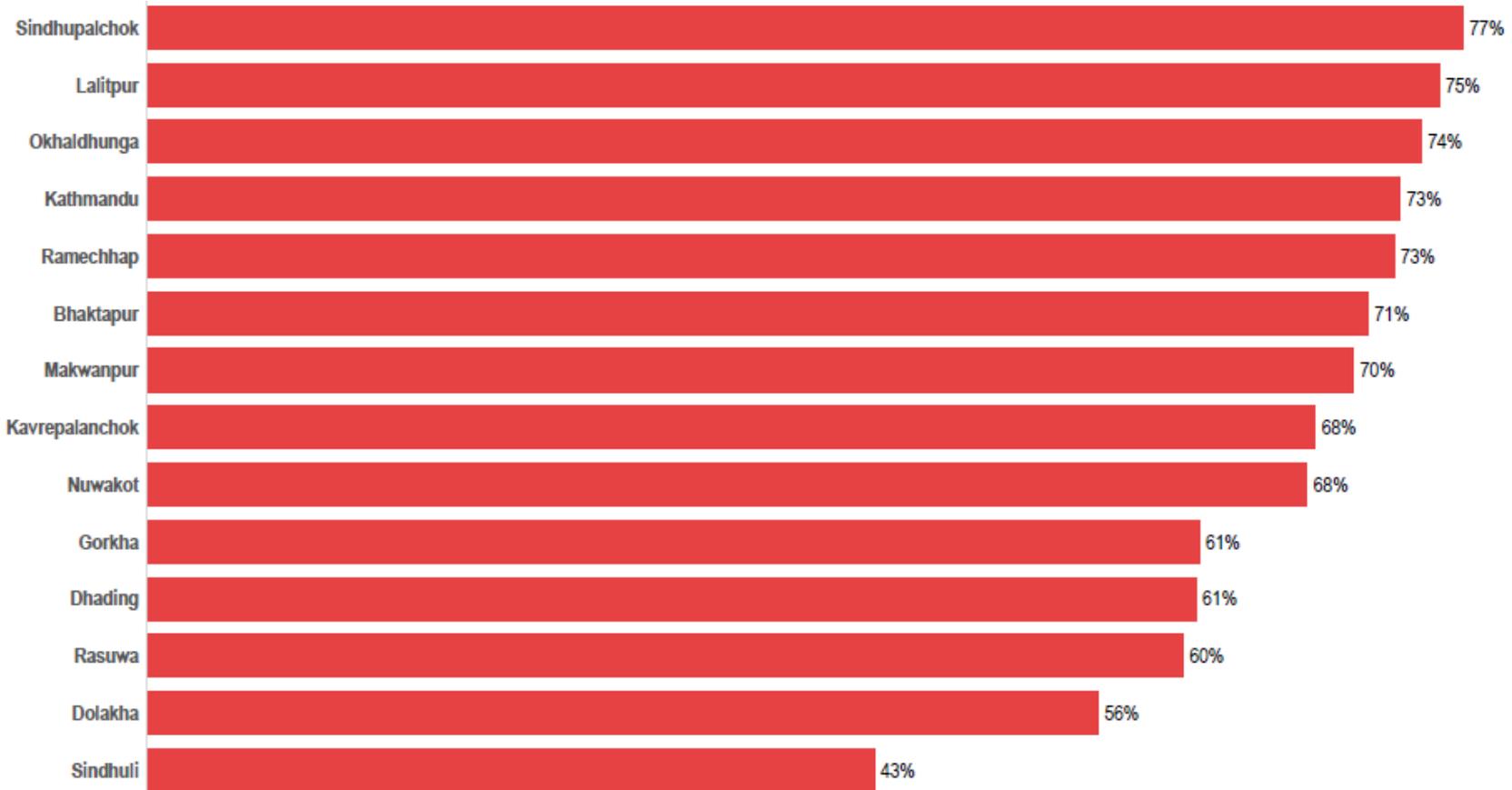
REPORTED LIVELIHOODS

At **55%**, subsistence gardening was the most reported livelihood of all households in the priority districts



LOSS OF INCOME

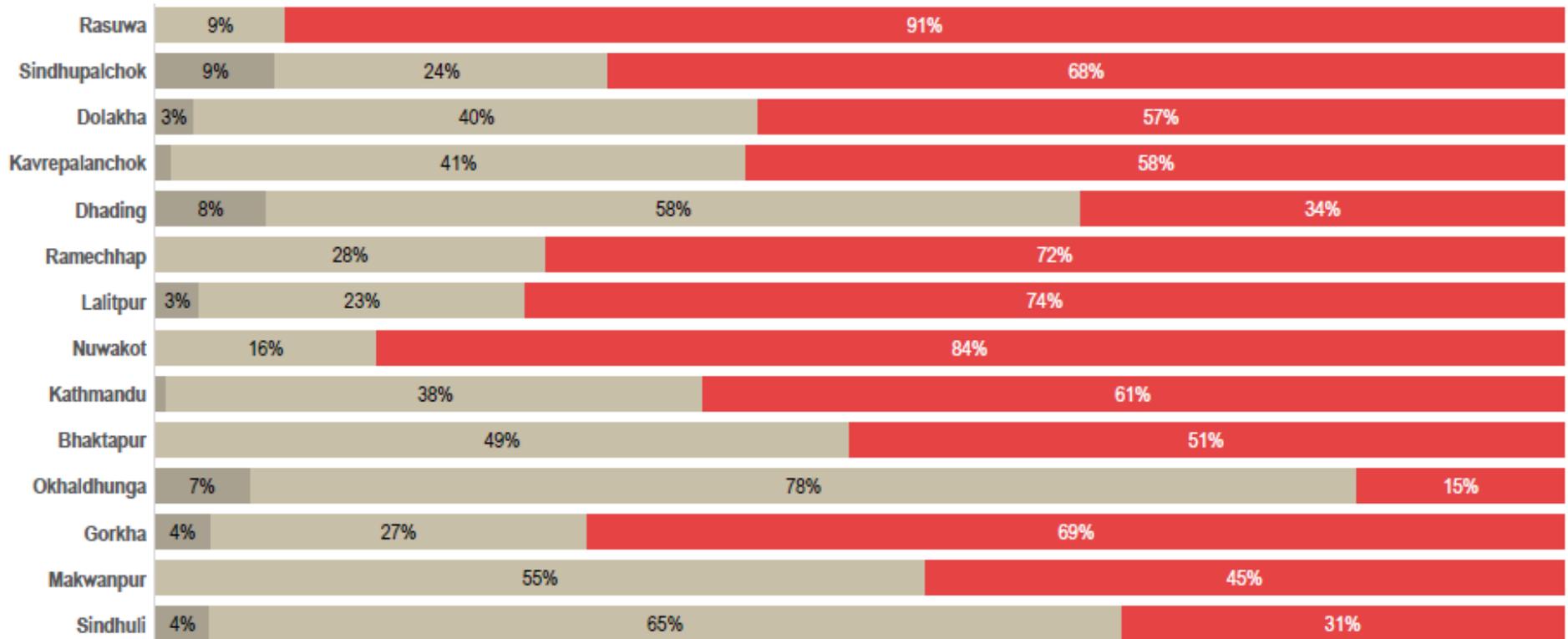
69% of all households in the priority districts reported that their income had decreased as a result of the earthquakes



INCOME RECOVERY

Of all households that reported a decreased in income, **59%** said their income has not been restored at all since the crisis*

Income Restored
■ Not at all
■ Partially restored
■ Totally restored

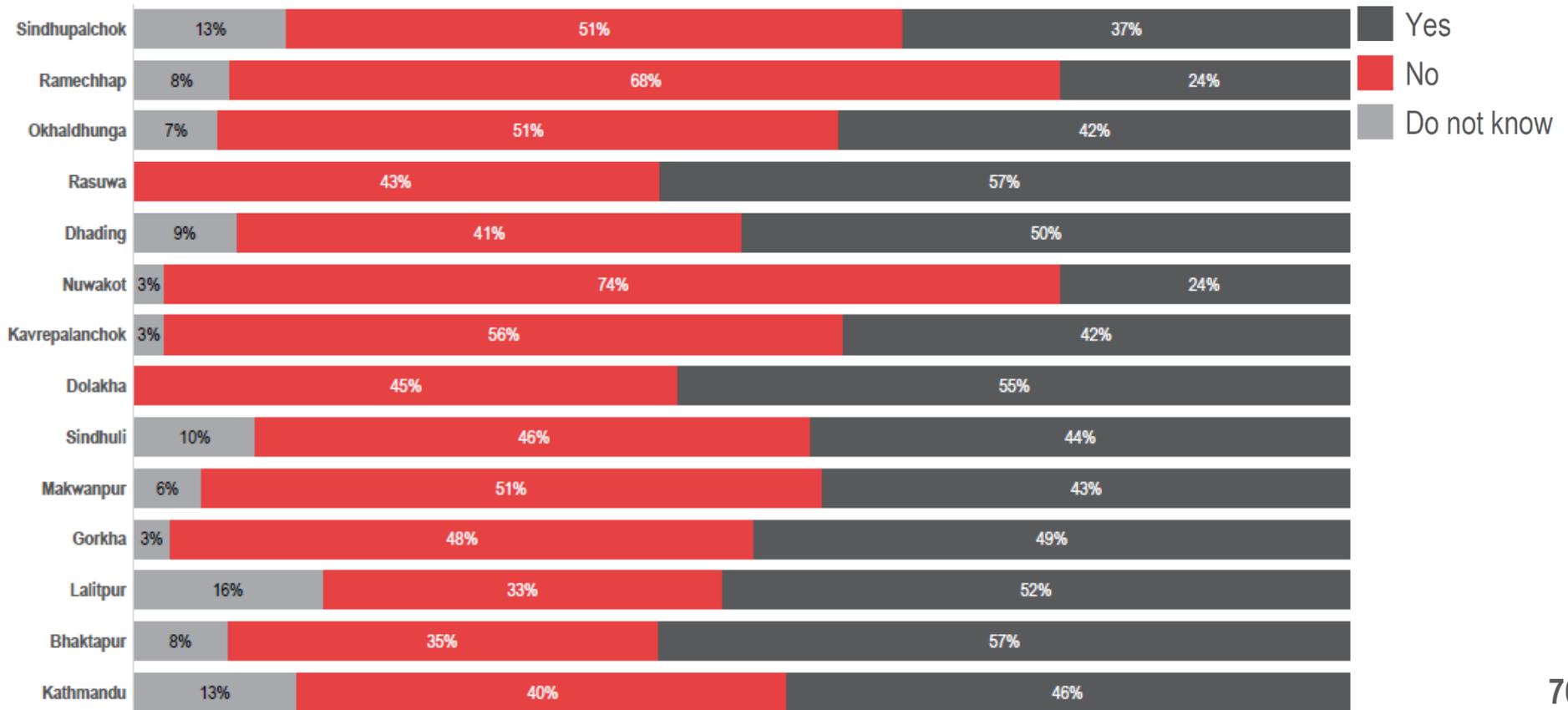


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COMMUNICATION

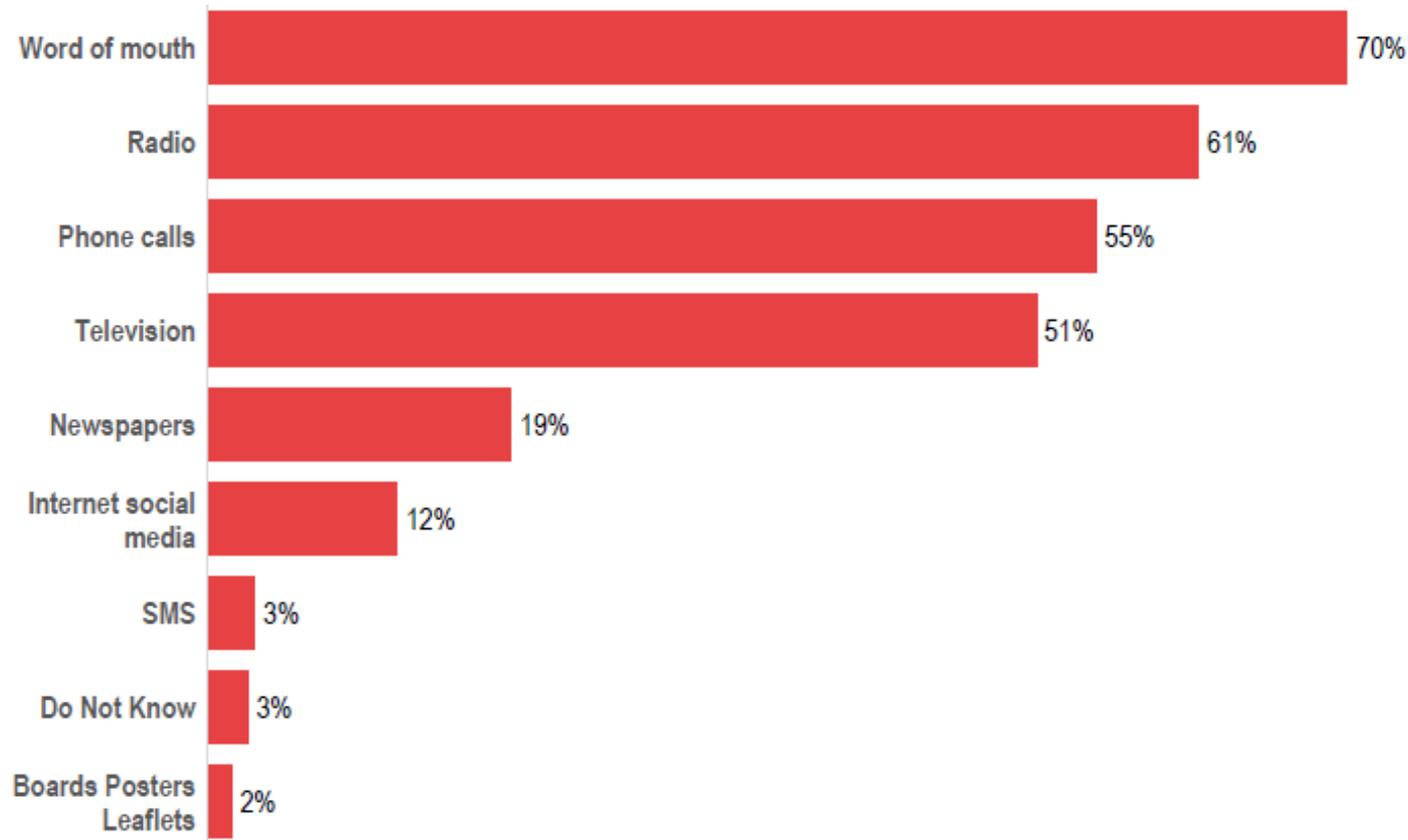
COMMUNITY CONSULTATION

44% of all households in the priority districts reported that their community was consulted prior to receiving assistance



WAYS OF RECEIVING PUBLIC INFORMATION

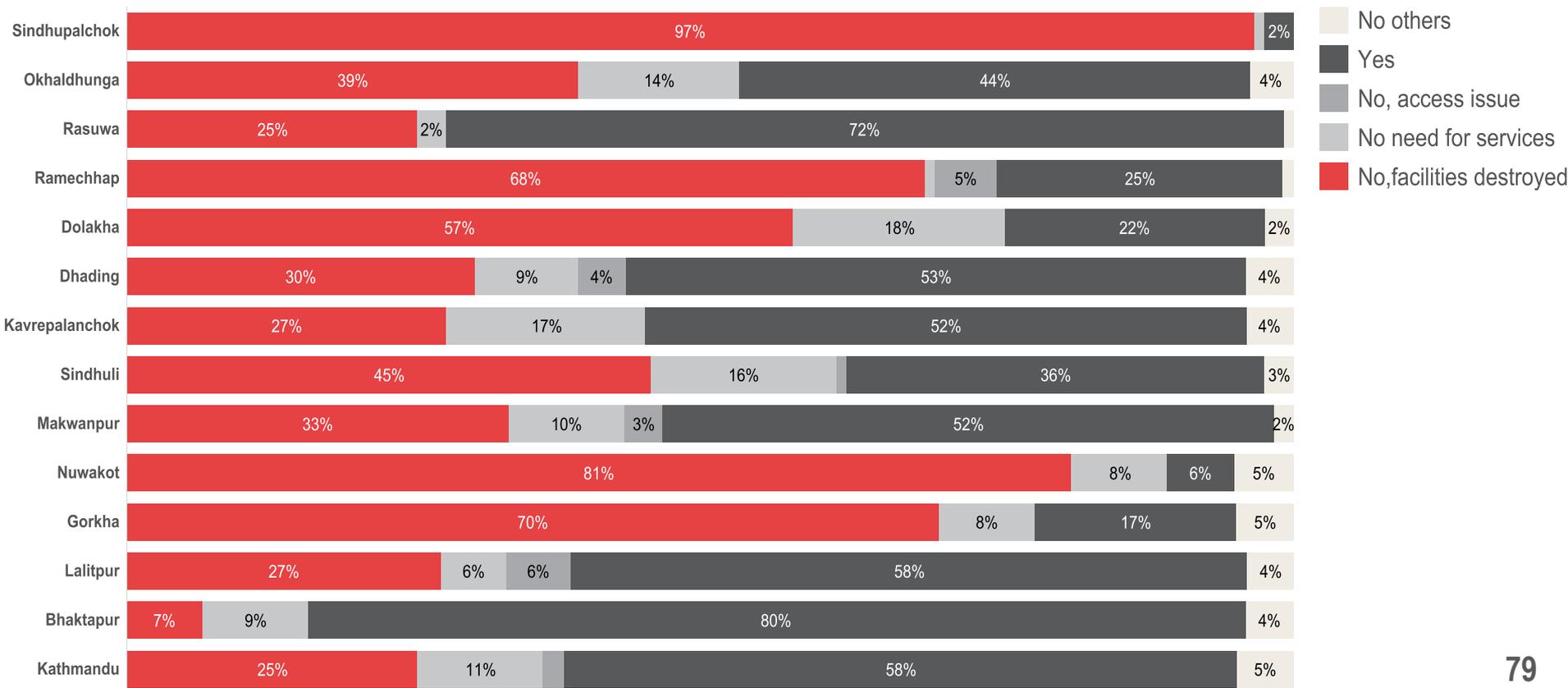
70% of all households in the priority districts reported that word-of-mouth is their primary way of receiving information



ACCESS TO PUBLIC SERVICES

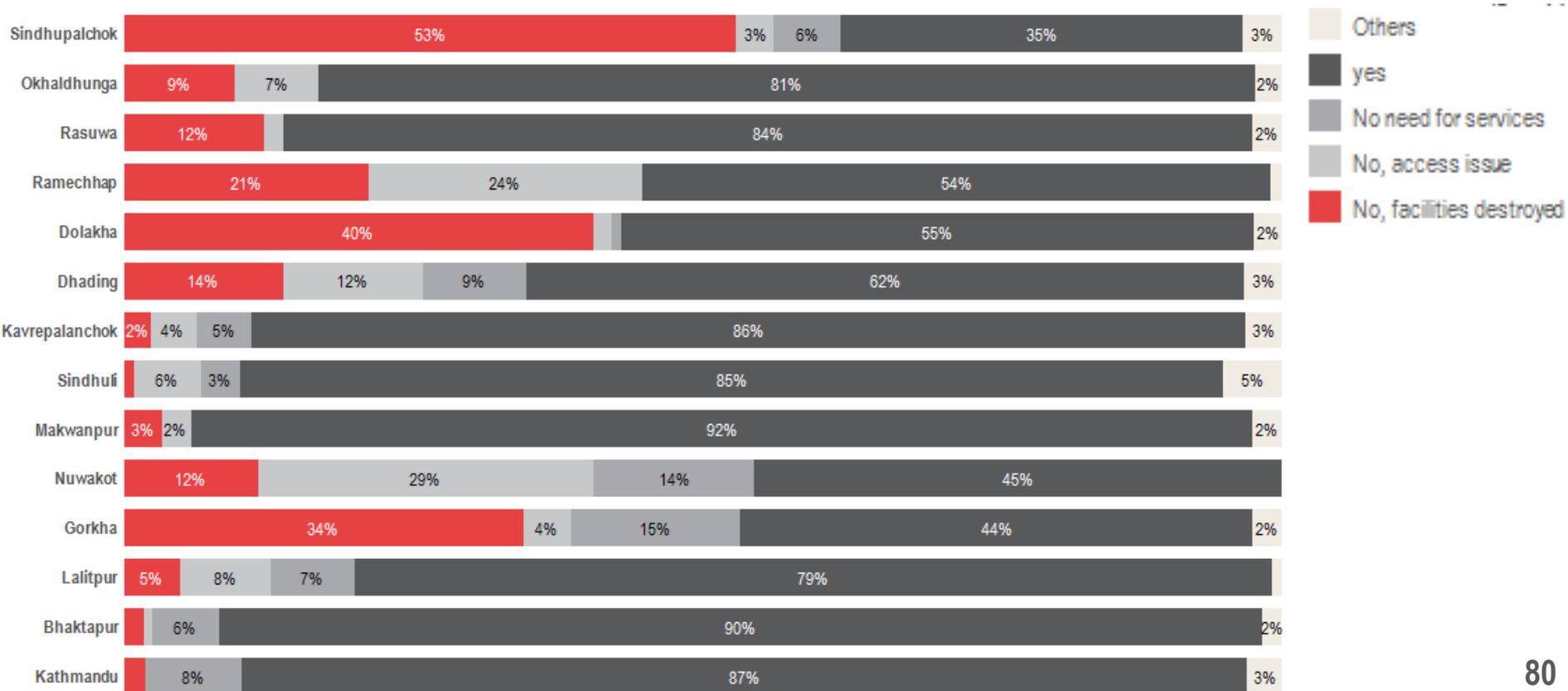
ACCESS TO EDUCATION

39% of all households reported that they did not have access to education services because their facilities were destroyed
[only households reporting no access to services are depicted]



ACCESS TO HEALTH SERVICES

10% of all households reported that they did not have access to health services because their facilities were destroyed *[only households reporting no access to services are depicted]*



NEEDS

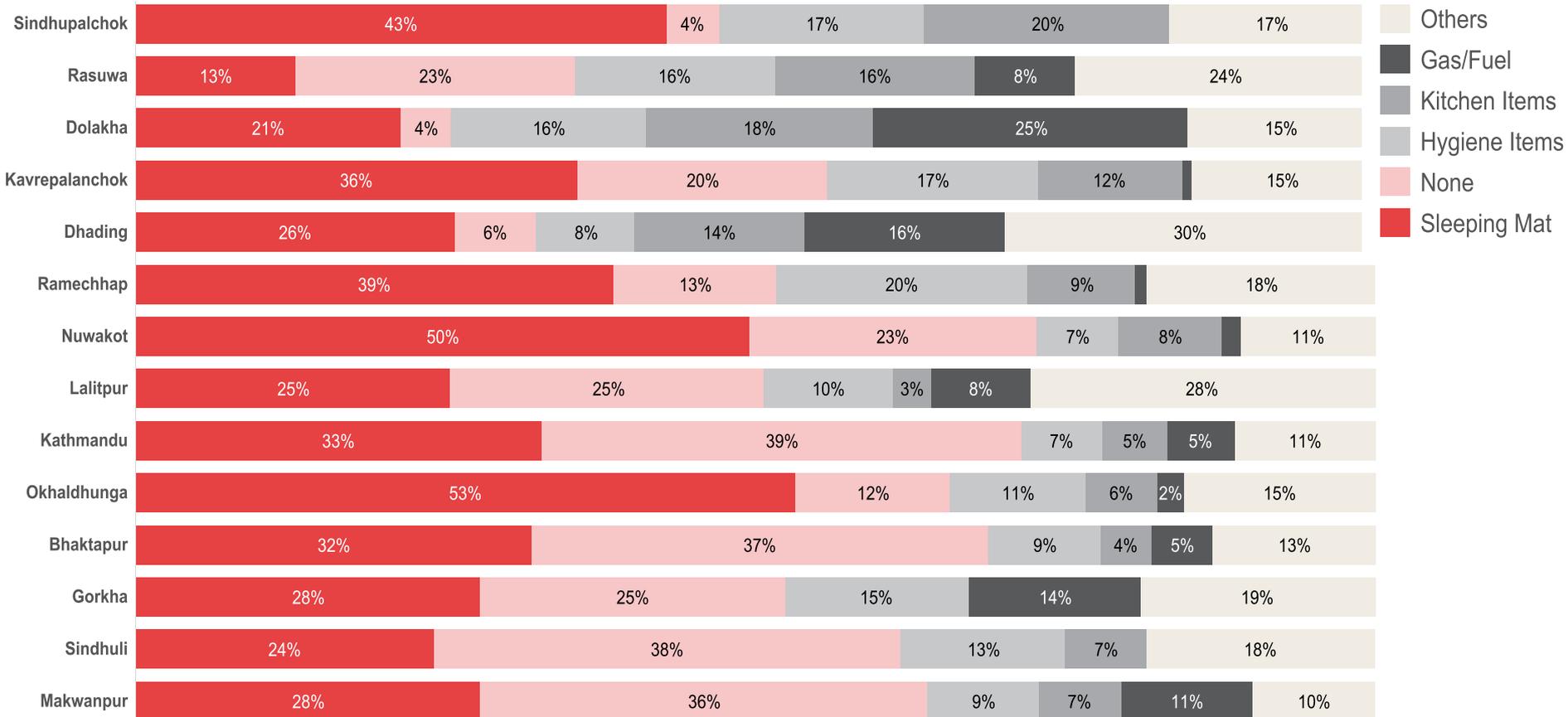
PRIMARY NFI NEEDS

33% of all households in the priority districts cited sleeping mats as their primary NFI need

	First	Second	Third
Sleeping mat	33%	13%	0%
None	28%	39%	49%
Hygiene items	11%	9%	10%
Kitchen items	8%	13%	6%
Gas fuel	7%	5%	5%
Torches	6%	7%	6%
Clothing	3%	7%	10%
Gas cooker	3%	1%	1%
Jerrycans	2%	5%	5%
Footwear	0%	1%	2%
Tarpaulin	0%	0%	5%
Cash	0%	0%	0%

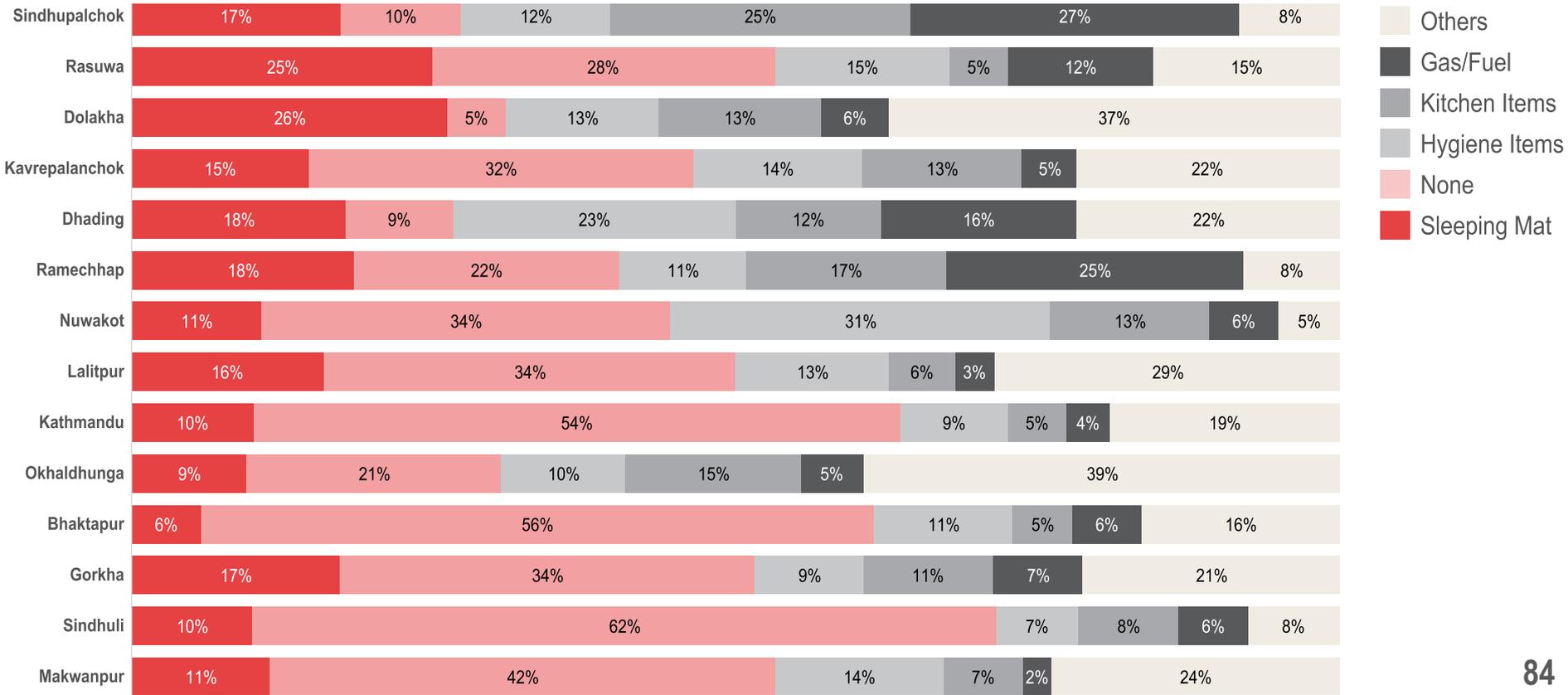
PRIMARY NFI NEEDS

[only 5 most predominant needs are depicted]



SECONDARY NFI NEEDS

39% of all households in the priority districts reported that they had no secondary NFI need *[only 5 most predominant needs are depicted]*



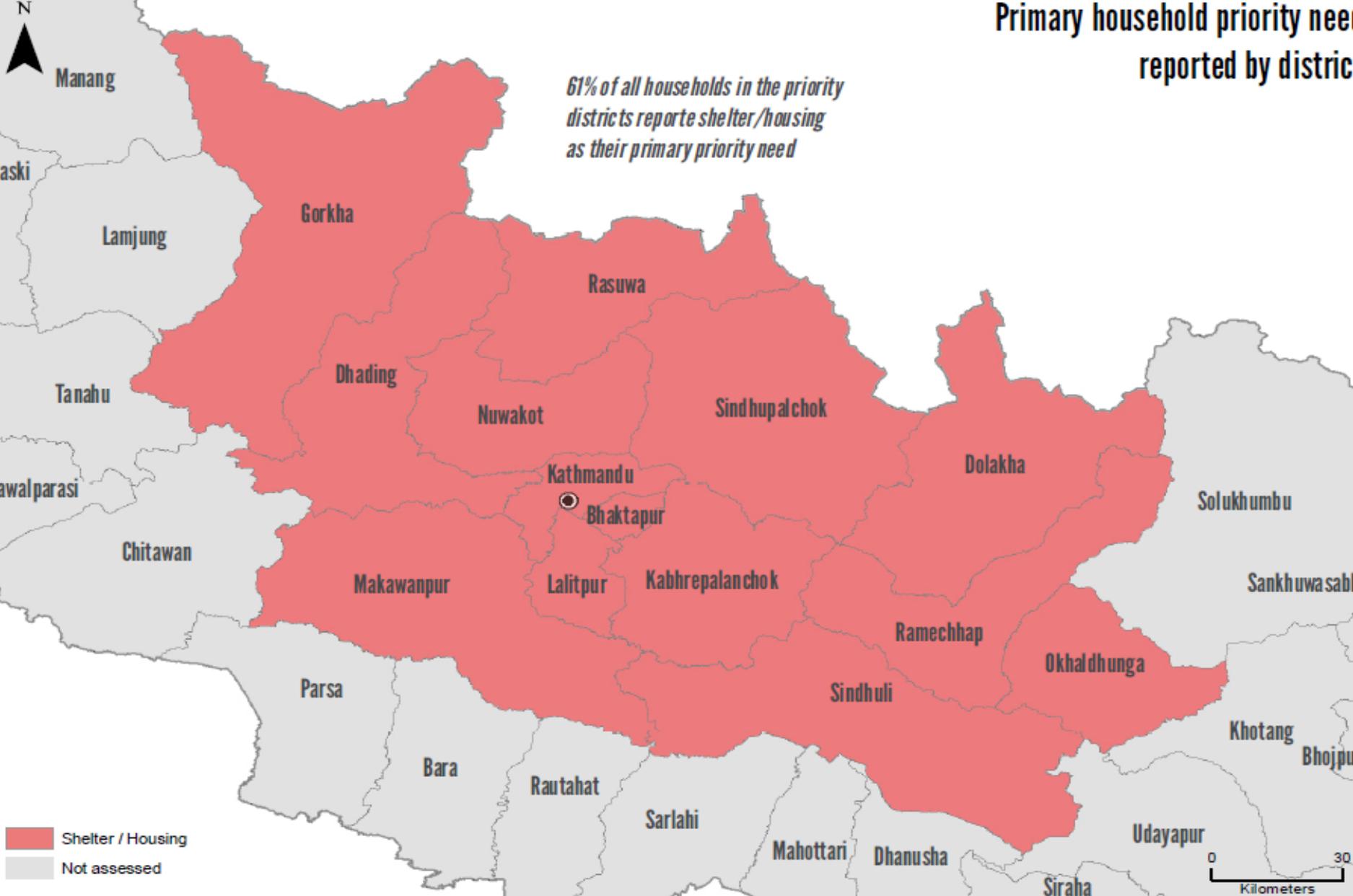
PRIMARY HOUSEHOLD PRIORITY NEEDS

61% of all households in the priority districts cited shelter/housing as their primary household priority need

	First	Second	Third
Shelter / Housing	61%	8%	4%
None	9%	6%	24%
Drinking water	8%	12%	4%
Employment / Jobs	4%	13%	9%
Building tools	3%	11%	8%
Food	3%	17%	7%
Wastewater disposal systems	2%	1%	2%
Hygiene items	2%	3%	6%
Security / Policing	2%	4%	3%
Health	1%	5%	8%
Education	1%	5%	6%
Solid waste management	1%	2%	2%
Electricity supply	1%	6%	5%

Primary household priority need reported by district

61% of all households in the priority districts report shelter/housing as their primary priority need

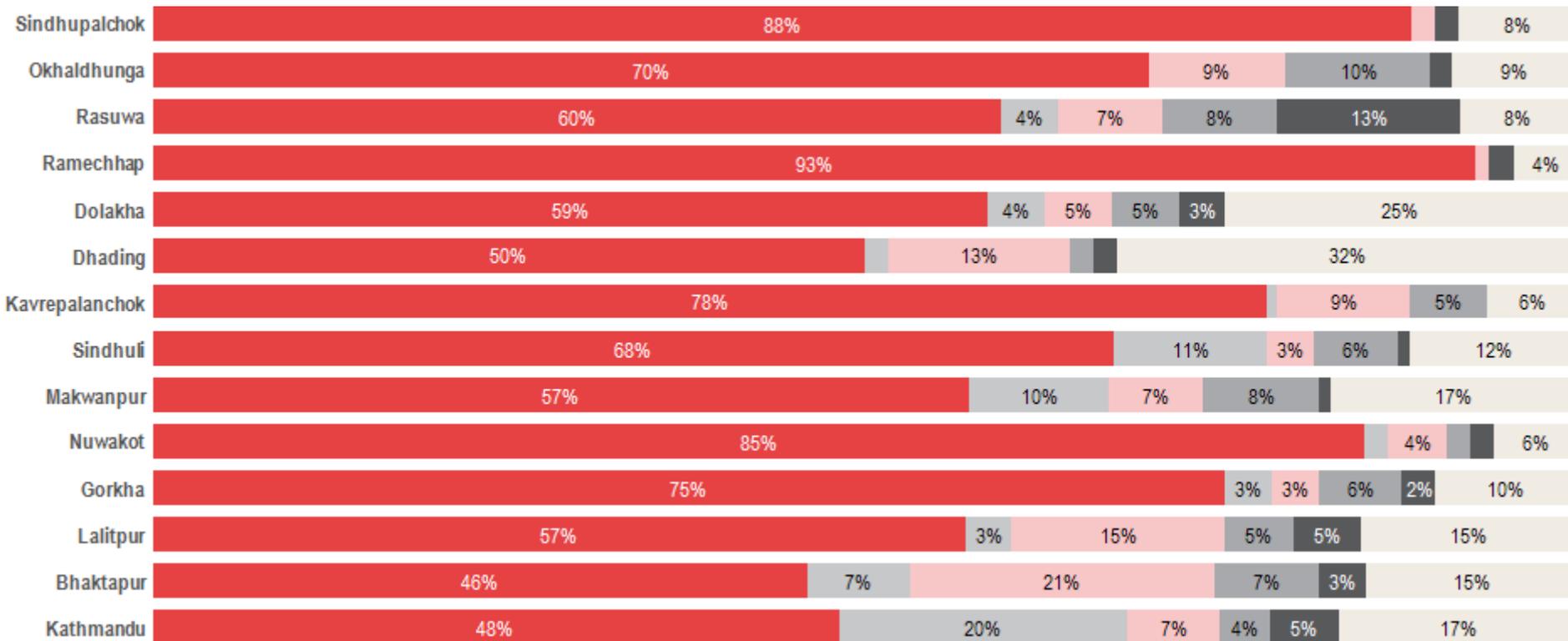


Shelter / Housing
Not assessed

0 30
Kilometers

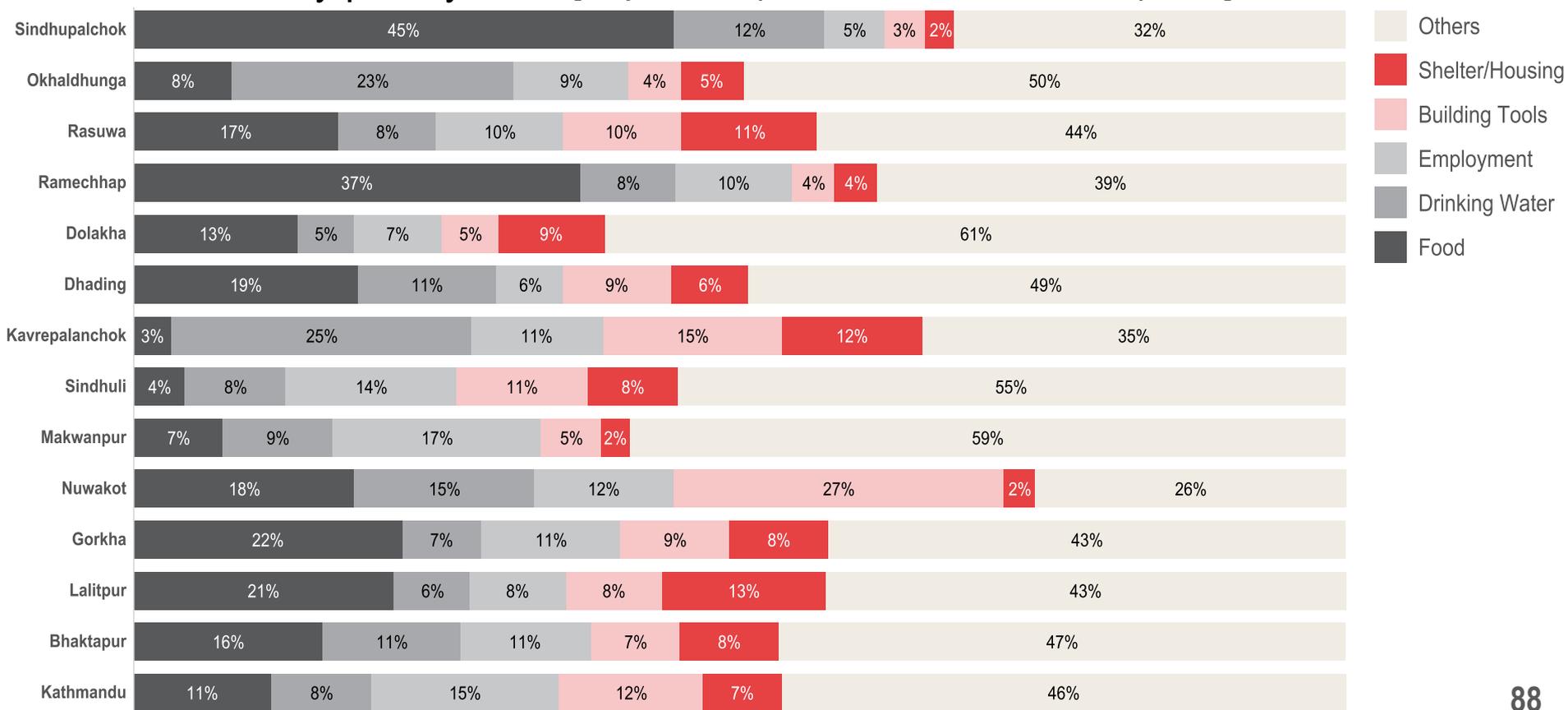
PRIMARY HOUSEHOLD PRIORITY NEEDS

[only 5 most predominant needs are depicted]



SECONDARY HOUSEHOLD PRIORITY NEEDS

17% of all households in the priority districts cited food as their secondary priority need *[only 5 most predominant needs are depicted]*



WHAT IS NEXT?

- Please provide written feedback by **8 June 6:00pm**
to: philip.bato@reach-initiative.org
- Tentative publishing date Final Report: **15 June**
Incl. integration of difficult to access areas
- Longitudinal analysis

About REACH Initiative

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. All REACH activities are conducted through interagency aid coordination mechanisms. For more information, you can write to our global office: geneva@reach-initiative.org.

Visit www.reach-initiative.org and follow us @REACH_info

THANK YOU