EARTHQUAKE RESPONSE RAPID NEEDS ASSESSMENT

15 February 2023 | Northwest Syria

SITUATION OVERVIEW

KEY MESSAGES

- Key reported **needs for newly arrived IDPs were winterisation and shelter** support, while **winterisation and multi-purpose cash assistance (MPCA) were most reported for pre-earthquake populations** in affected communities.
- **Damage was particularly often reported in Greater Idleb near the Turkish border, and in Afrin district** in Northern Aleppo. Residential buildings were reportedly strongly impacted.
- Access to key services was reportedly low, with **no access to healthcare reported in 20% of assessed communities,** which were directly impacted.

85%
of communities were reportedly directly impacted by the earthquake or new IDP arrivals

55,000*
HHs estimated as displaced, either within or between assessed communities

50,000*
HHs estimated to be in need of tents or emergency shelter

* Approximate figures

METHODOLOGY OVERVIEW

This RNA was conducted using a key informant (KI) methodology at the community level. REACH enumerators based in Idleb and enumerators based in Northern Aleppo interviewed 1 KI per community, either in-person or remotely, relying on REACH's extensive KI network in NWS.

The situation overview presents information gathered from **604 communities** across Greater Idleb and Northern Aleppo. **Data was collected between 9-11 February 2023 from 604 KIs**. All indicators refer to the situation since the earthquake. Findings are indicative rather than representative and should not be generalised across the population and the region.

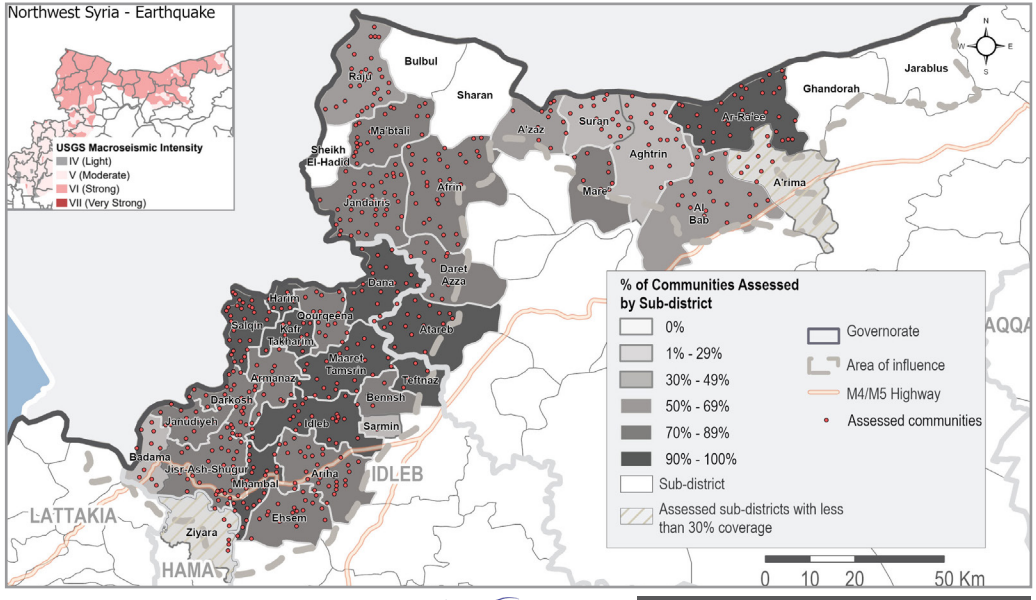
You can keep up-to-date with REACH's latest earthquake-related information products by checking our **IMPACT communications thread.**

CONTEXT & RATIONALE

Two earthquakes hit south-eastern Türkiye on 6 February, with a magnitude of 7.7 and 7.6, respectively. To date, more than 40,000 people are estimated to have died in Türkiye and Northwest Syria (NWS),[1] however search and rescue operations are still ongoing. These earthquakes have resulted in damage to both residential buildings and critical infrastructure, some of which was either completely destroyed or severely damaged.

In the aftermath of the earthquakes, it is paramount to have reliable information to assess the conditions of the affected areas and population. To inform the humanitarian response, REACH has developed a rapid needs assessment (RNA) to analyse the scope and scale of the earthquakes' impact on affected residents and newly-arrived IDPs in communities across NWS. The RNA aims to inform early stages of NWS earthquake response and support initial prioritisation and planning.

COVERAGE MAP



[1] New York Times (February 14,2023). Quake Updates: Toll in Turkey and Syria Surpasses 40,000 Dead.

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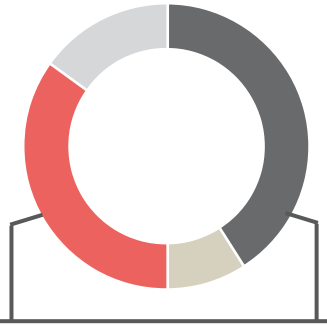
COMMUNITIES AFFECTED BY THE EARTHQUAKES AND IDP ARRIVALS, AS REPORTED BY KIs

% of assessed communities where KIs reported direct earthquake impacts (damage/service disruption) or arrival of new IDP HHs



41% Direct impacts only
9% New IDP arrivals only
35% Both
15% Neither

All assessed communities where KIs reported direct impacts had composite damage scores above zero, reflecting that at least some degree of damage had occurred to buildings and/or key infrastructures.

REPAIR, REHABILITATION, AND DEBRIS REMOVAL NEEDS

Most commonly reported first, second, and third and overall priority needs for non-shelter-related repair and rehabilitation (by % of 456 assessed communities reporting direct earthquake impacts) [2,3]

	FIRST	SECOND	THIRD	OVERALL
1	Electricity networks	Telecomms and internet	Healthcare facilities	Telecomms and internet 47%
2	Telecomms and internet	Education facilities	Sanitation infrastructure	Electricity networks 42%
3	Education facilities	Telecomms and internet	Healthcare facilities	Education facilities 38%

43% Communities

in which KIs reported the community needs **assistance to clean up debris/rubble** created by the earthquake

PRIORITY NEEDS FOR AFFECTED HOUSEHOLDS

Most commonly reported first, second, and third and overall priority needs for the pre-earthquake[4] population (by % of 456 assessed communities reporting direct earthquake impacts) [2,3]

	FIRST	SECOND	THIRD	OVERALL
1	MPCA	Shelter	Winterisation	Winterisation 79%
2	Winterisation	Food	MPCA	MPCA 62%
3	Winterisation	Food	Nutrition	Shelter 46%

Most commonly reported first, second, and third and overall priority needs for newly-arrived IDPs (by % of 271 assessed communities reporting new IDP arrivals) [2,3]

	FIRST	SECOND	THIRD	OVERALL
1	Shelter	MPCA	Winterisation	Winterisation 71%
2	Winterisation	Food	MPCA	Shelter 70%
3	Winterisation	NFIs	MPCA	MPCA 58%

Ability of households to cook and store food

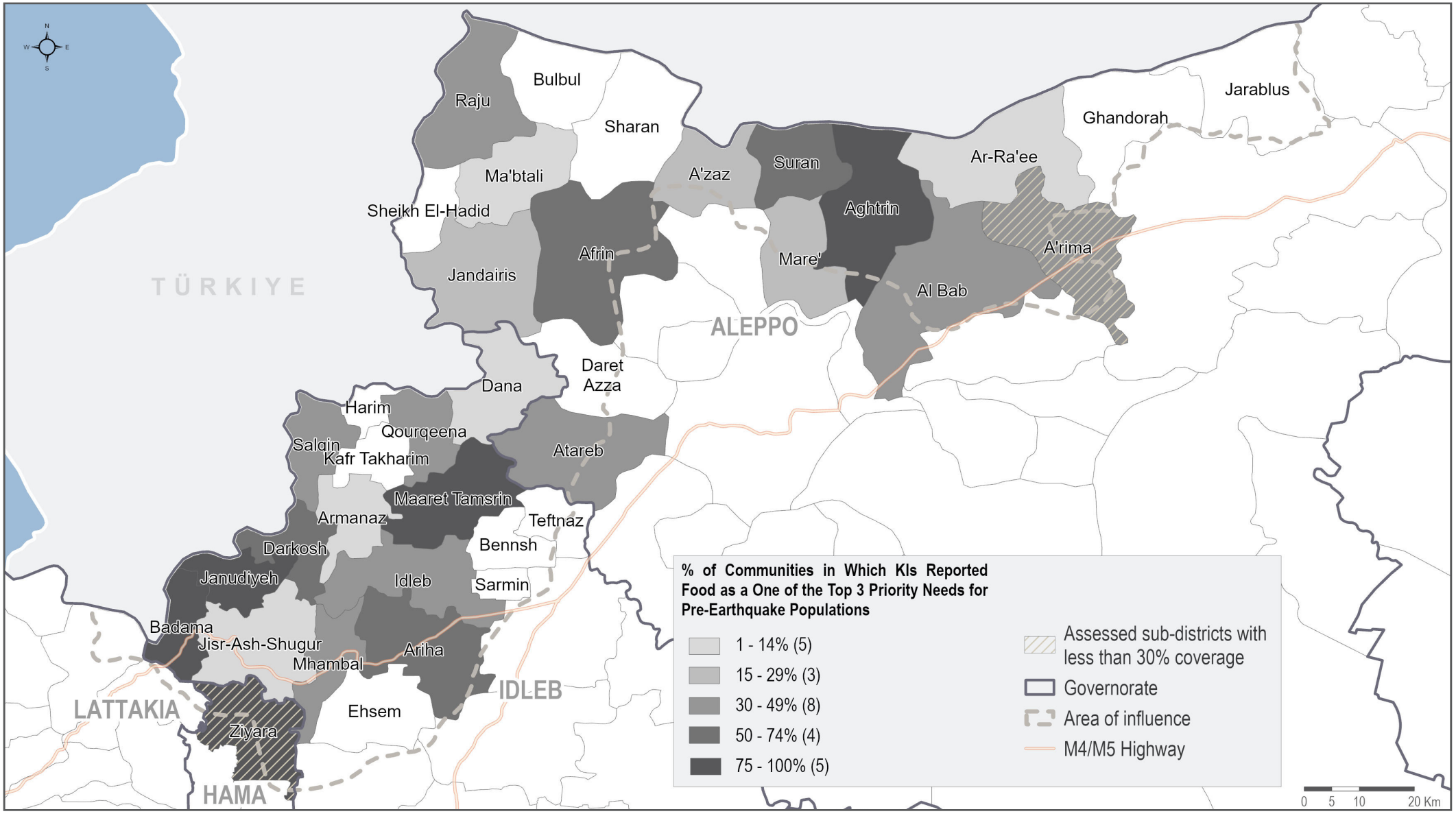
(by % of communities that selected food as a top 3 need for new IDPs (124) and pre-earthquake (171))

56%	Majority can both cook and store food	50%
28%	Majority can cook food only	19%
13%	**Majority can neither cook or store food**	**24%**
4%	Majority can store food only	6%

[2] KIs were asked to select a first, second, and third highest priority needs in their communities. The ranking shows the sectors most frequently chosen as either first, second or third highest priority. The overall priority need refers to the frequency a sector was selected across all three categories (first, second or third highest priority).
[3] KIs could select three answers, thus findings might exceed 100%.
[4] Pre-earthquake population includes all persons who were residing in the assessed communities at the time of the earthquakes, including resident/host community members and IDPs.

MAP 1: PROPORTION OF COMMUNITIES WHERE **FOOD** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **PRE-EARTHQUAKE POPULATIONS**

As reported by KIs in assessed communities



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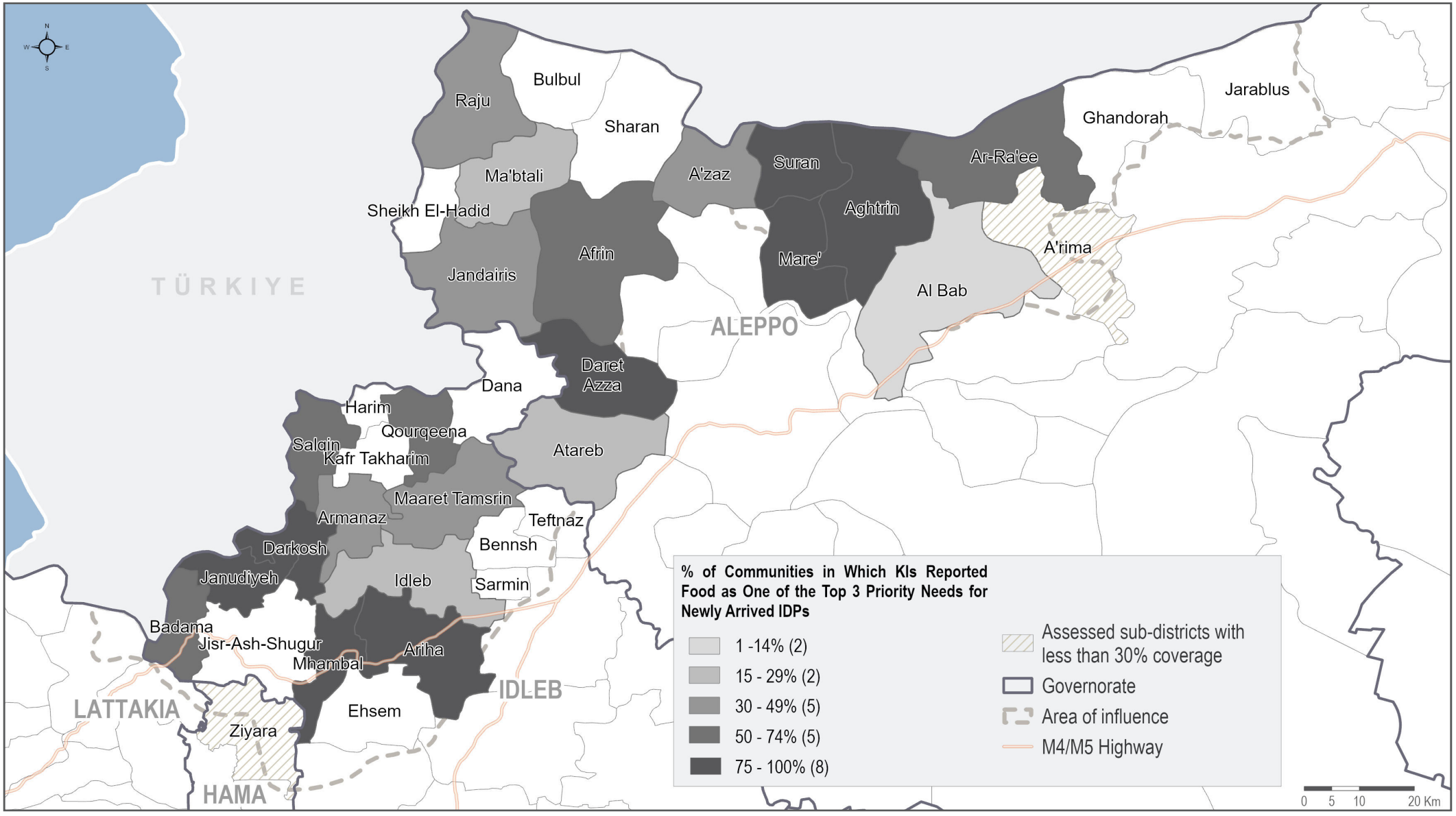
MAP 2: PROPORTION OF COMMUNITIES WHERE **FOOD** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **NEWLY ARRIVED IDPs**

As reported by KIs in assessed communities



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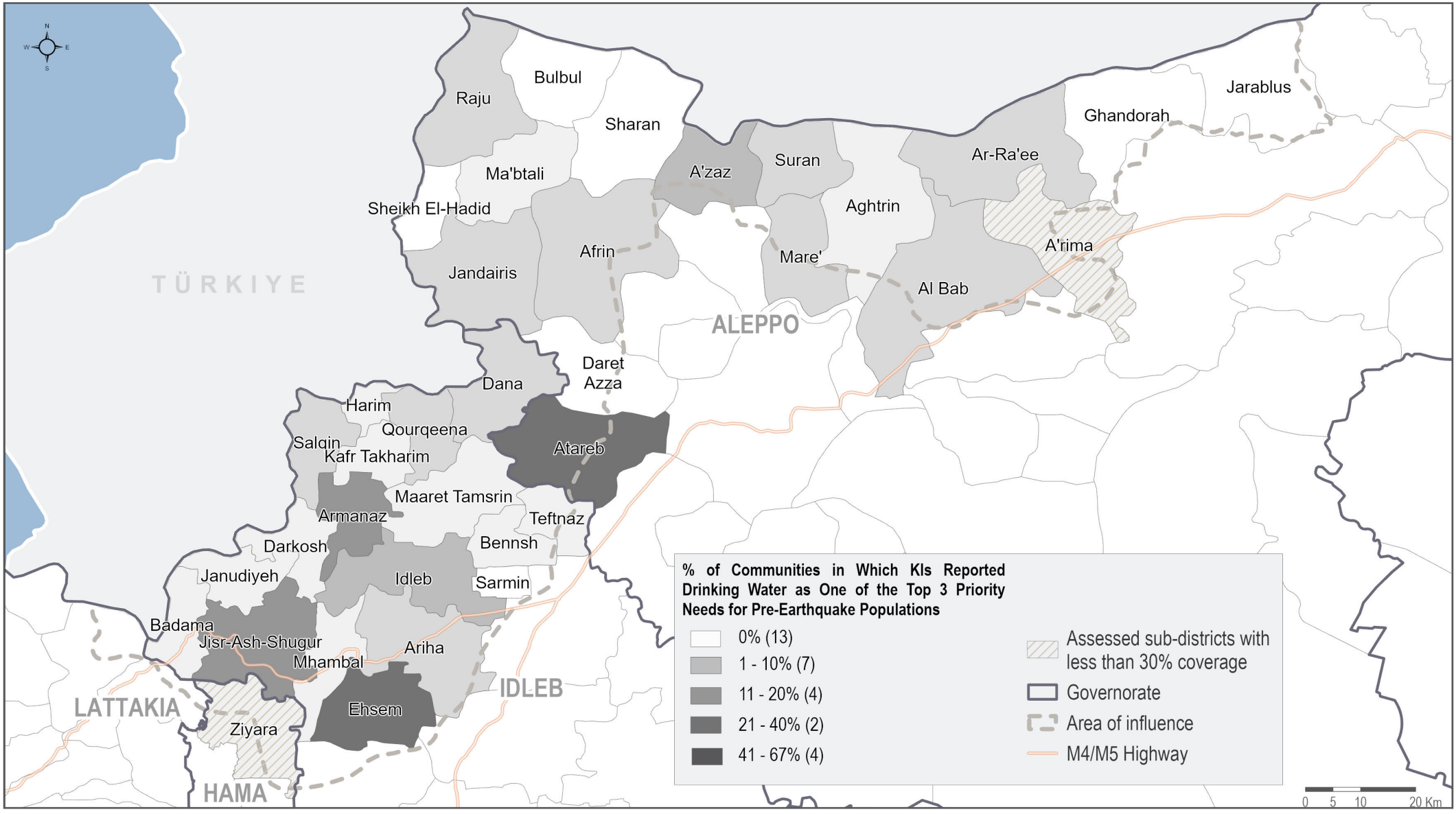
MAP 3: PROPORTION OF COMMUNITIES WHERE **DRINKING WATER** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **PRE-EARTHQUAKE POPULATIONS**

As reported by KIs in assessed communities



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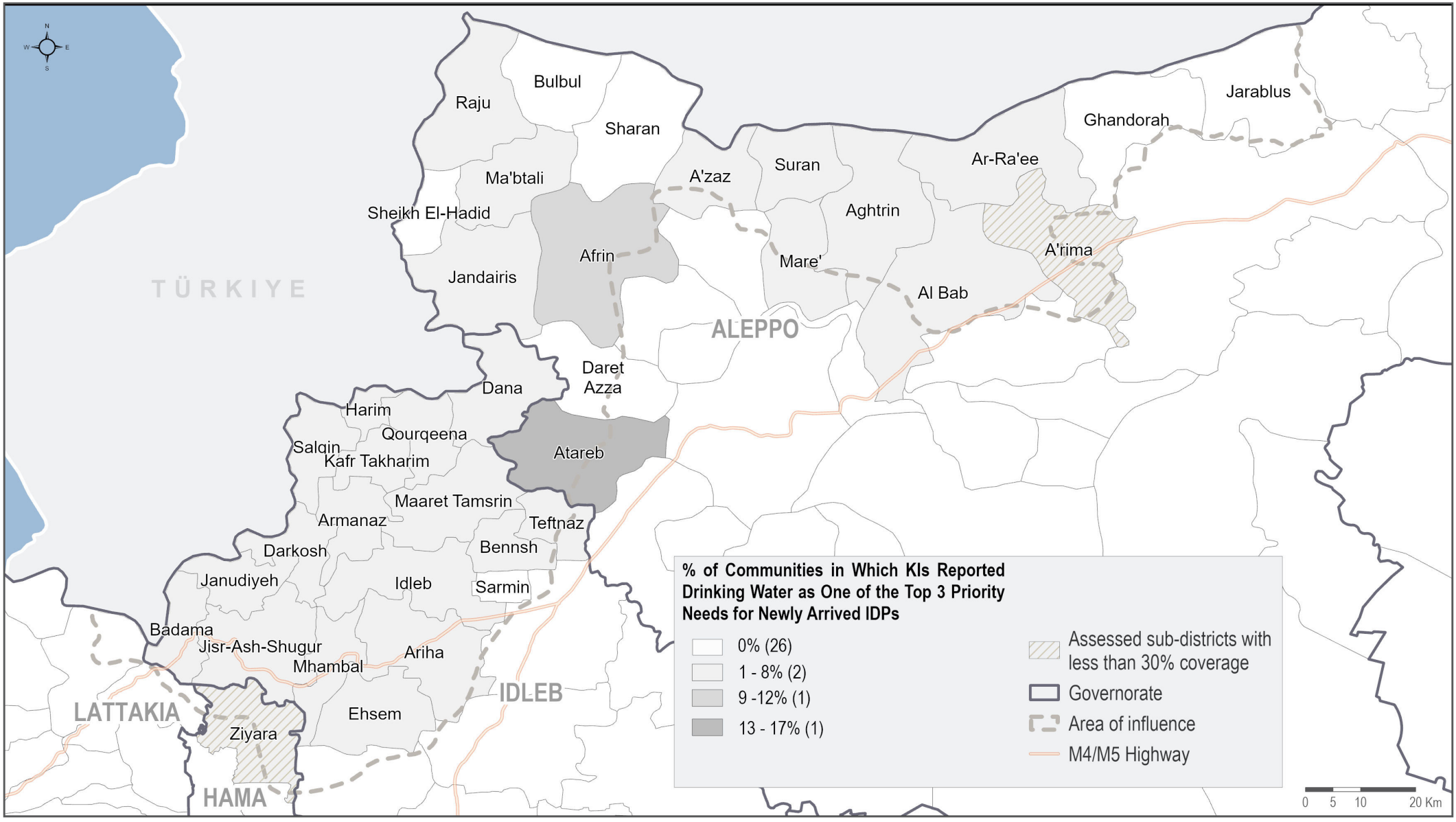
MAP 4: PROPORTION OF COMMUNITIES WHERE **DRINKING WATER** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **NEWLY ARRIVED IDPs**

As reported by KIs in assessed communities



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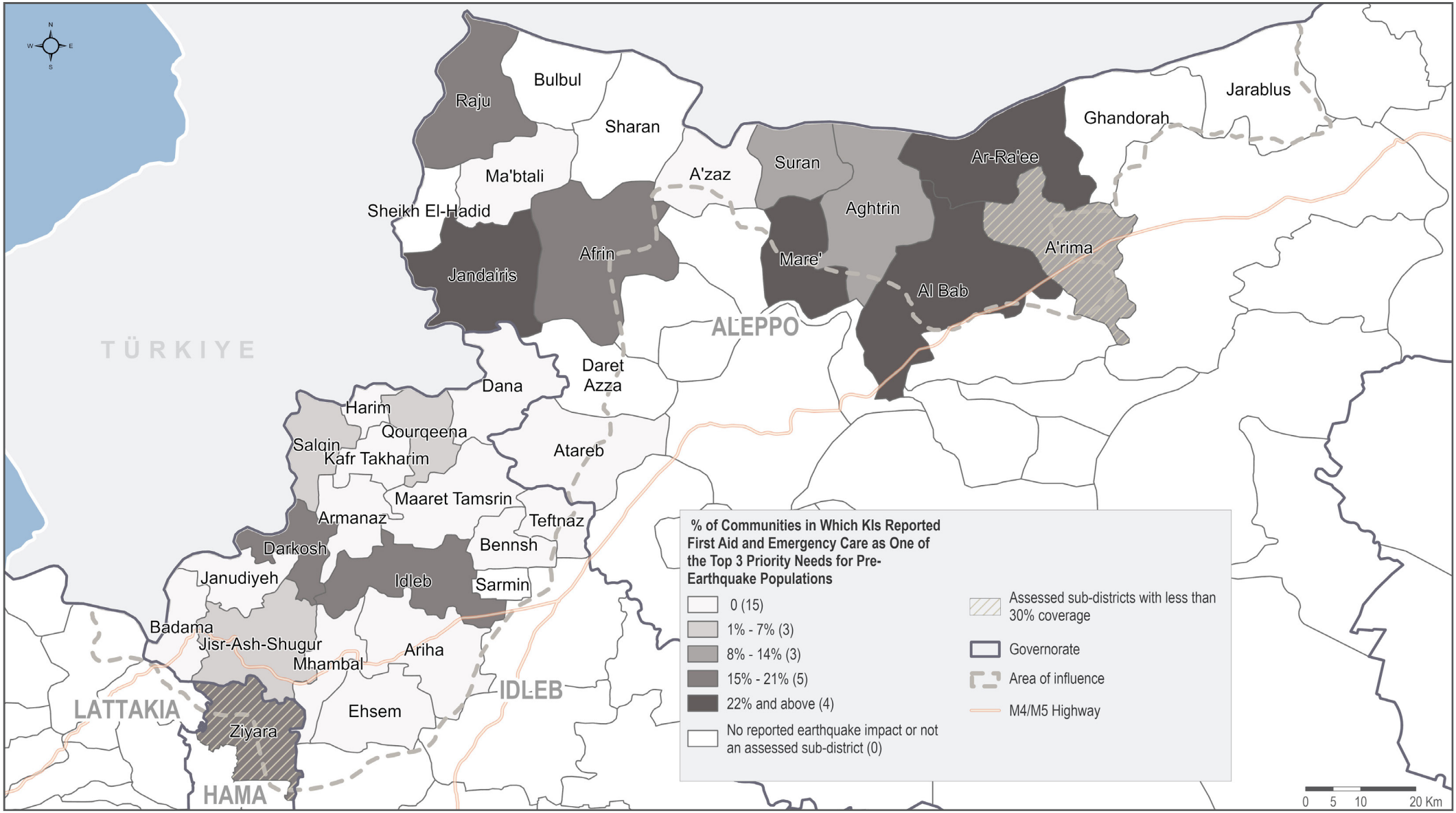
MAP 5: PROPORTION OF COMMUNITIES WHERE **FIRST AID AND EMERGENCY CARE** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **PRE-EARTHQUAKE POPULATIONS**

As reported by KIs in assessed communities



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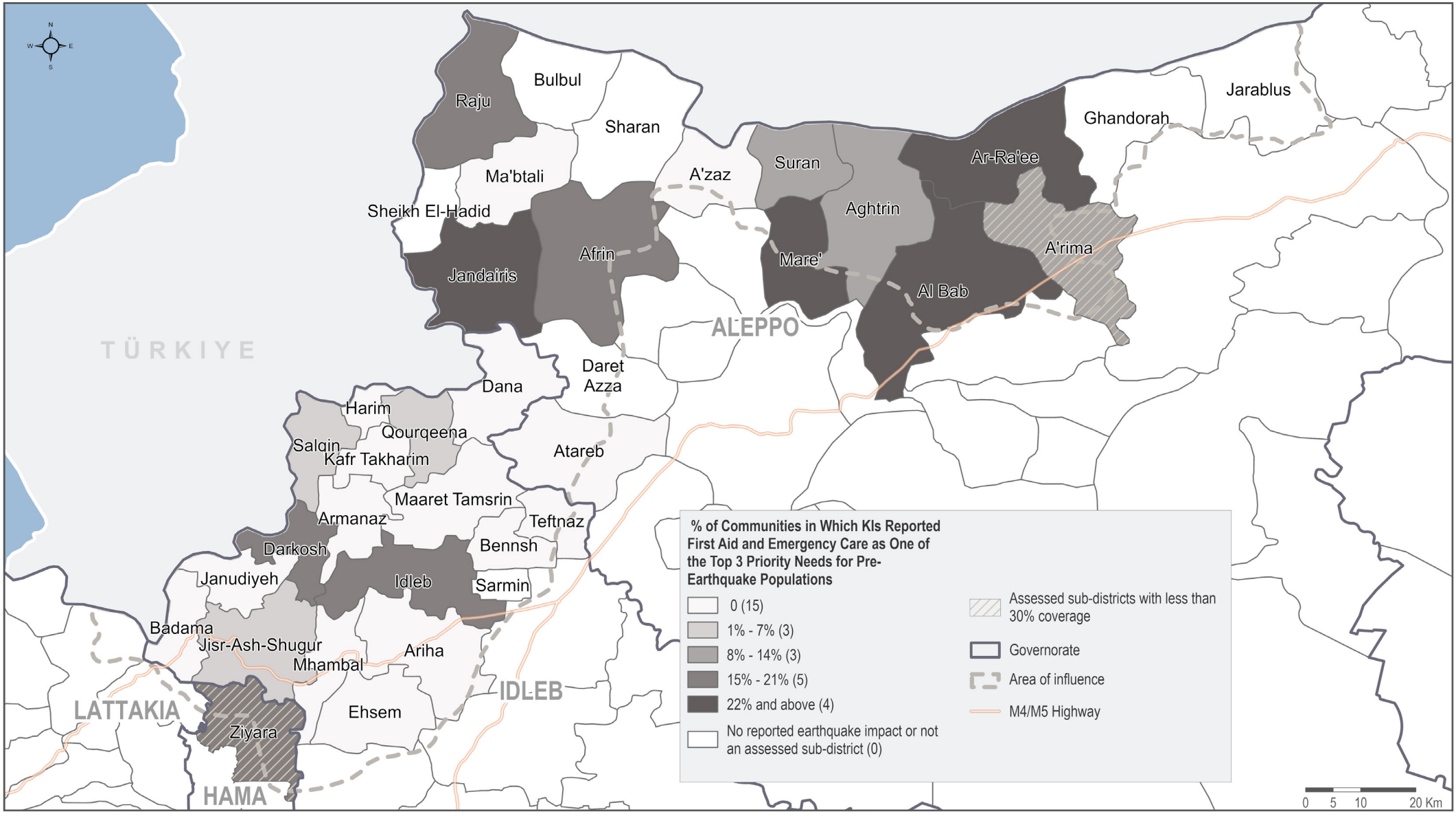
MAP 6: PROPORTION OF COMMUNITIES WHERE **FIRST AID AND EMERGENCY CARE** WAS REPORTED AS ONE OF THE TOP 3 PRIORITY NEEDS FOR **NEWLY ARRIVED IDPs**

As reported by KIs in assessed communities



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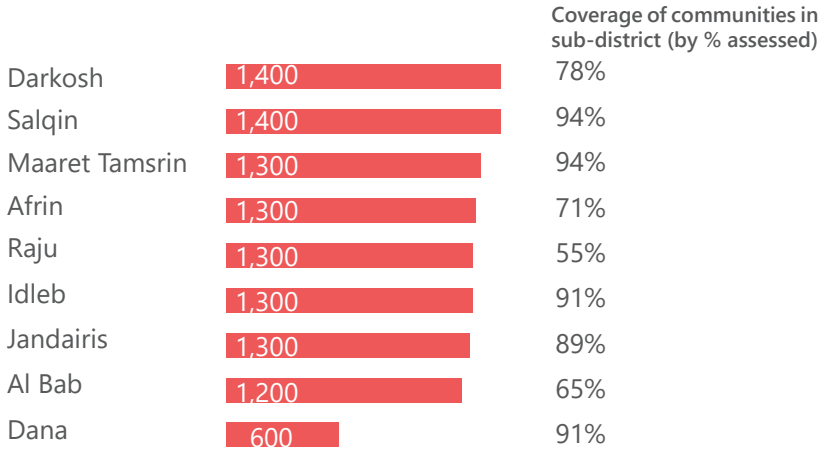
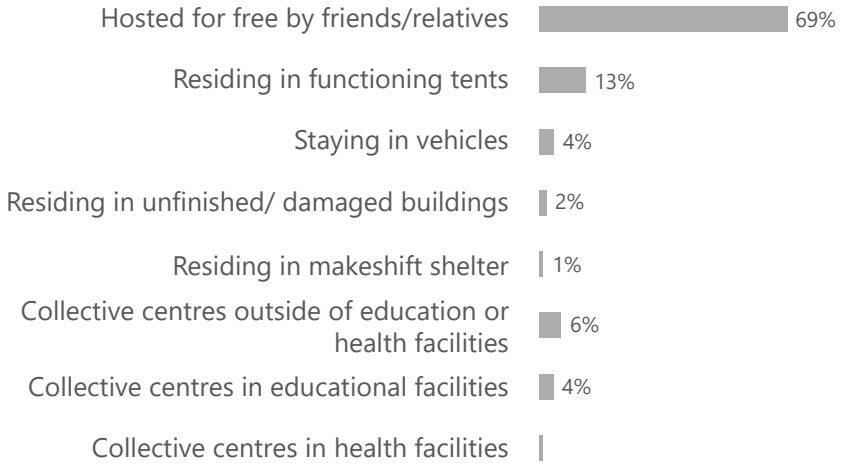
NEW IDP ARRIVALS

15,000 **New IDP households** reportedly arrived in assessed communities between the first earthquake and data collection

Estimated post-earthquake IDP household arrivals to assessed communities (as reported by KIs who were able to estimate the number of IDP HH arrivals; 579 communities)

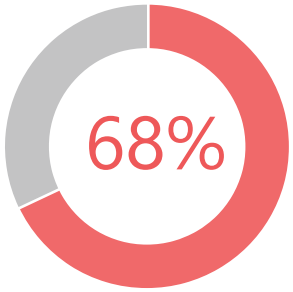


Average proportion of newly arrived IDPs currently residing in different shelter types (as reported by KIs in 251 communities that received new IDPs)



Estimated IDP movements between sub-districts since the earthquakes (based on KI information on the primary community of origin; 248 assessed communities with new arrivals and where origin was known)

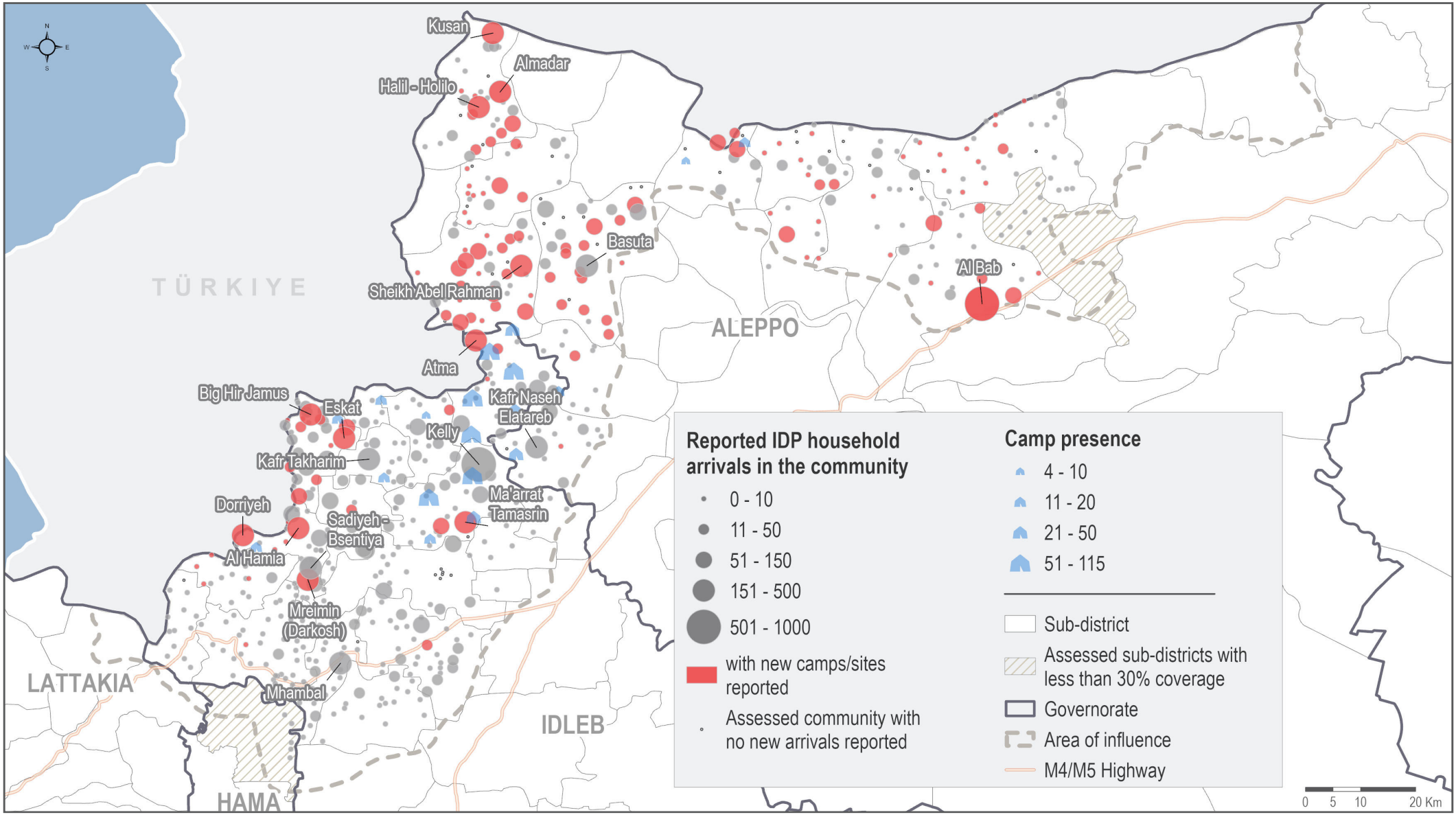
Sub-district of Origin	Sub-district of Arrival	# of assessed communities in sub-district of arrival which reported the main community of origin in the sub-district of origin	For these communities, estimated total number of IDP arrivals
Salqin	Salqin	25	1,400
Jandairis	Jandairis	21	1,200
Jandairis	Afrin	18	700
Harim	Maaret Tamsrin	11	1,000
Jandairis	Dana	7	400
Jandairis	Ma'btali	7	100



Communities in which KIs reported that the **main community of origin for new IDPs was outside of their sub-district** (as reported by KIs in 265 communities that received new IDPs and knew primary area of origin)

MAP 7: ESTIMATED **NUMBER OF IDP ARRIVALS** (HOUSEHOLDS) BETWEEN 6 FEBRUARY AND TIME OF DATA COLLECTION

As reported by KIs in assessed communities



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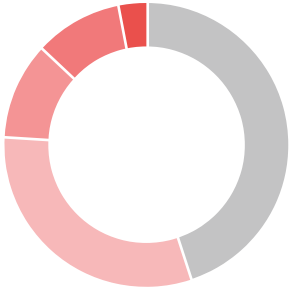
SHELTER & NFI

Average % of residential buildings falling into each damage category[4] following the earthquakes (by % of 456 assessed communities reporting direct earthquake impacts)



45% No damage
31% Minor damage
11% Major damage
10% Severe damage
3% Completely destroyed

Across assessed sub-districts, the highest average proportions of **completely destroyed** residential buildings were reported in **Jandairis** (15%) and **Harim** (9%).

KIs in assessed communities of **Janudiyeh**, **Jandairis**, **Afrin**, and **Ma'btali** sub-districts reported the highest averages for percentage of residential buildings severely damaged, with averages of 25%, 21%, 18%, and 18% of residential buildings **severely damaged**, respectively.

Average % of pre-earthquake households displaced *within* their community residing in different shelter types (by % of 329 assessed communities reporting direct earthquake impacts and HHs displaced within the community)

87%

Of communities saw pre-earthquake households displaced *within* their communities, summing to

40,000

Households reportedly **displaced within their own communities**

of which **13,000** were in Salqin sub-district

50,000* HHs

Estimated number of households in need of **tents and emergency shelter at collective centres**, as reported in 225 communities where KIs were able to provide estimates (for both the pre-earthquake population and newly-arrived IDPs)

88,000* HHs

Estimated number of households in need of **mattresses, high thermal blankets, and clothing**, as reported in 240 communities where KIs were able to provide estimates (for both the pre-earthquake population and newly-arrived IDPs)

* Approximate figures

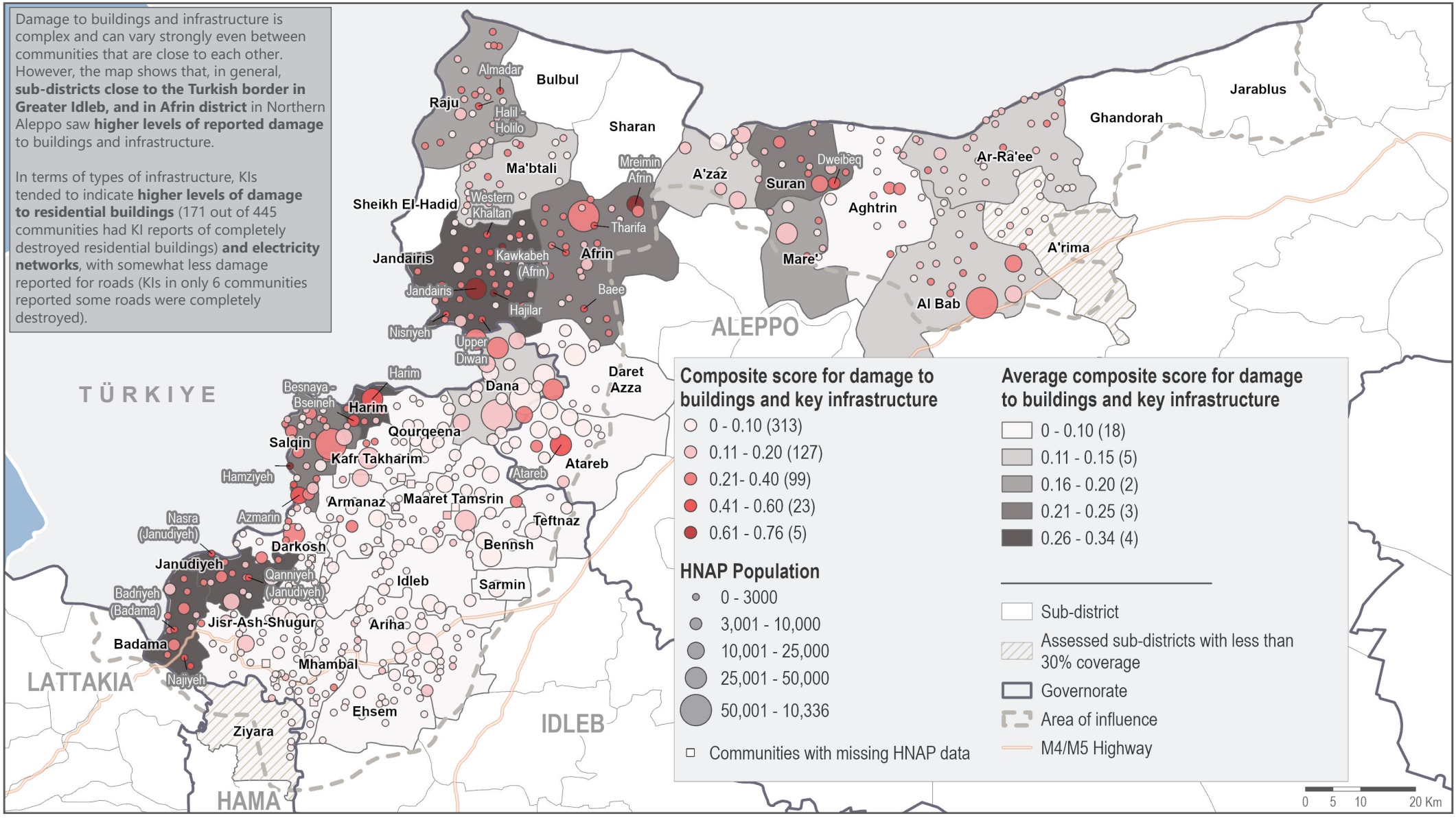
[5] **Building damage definitions: Completely destroyed** - Structural damages so significant that rehabilitation is not possible; **Severe damage** - Significant structural damage to columns, slabs, or load-bearing walls, cracking, steel elements and deformations visible in concrete - building requires extensive repairs; **Major damage** - Extensive damage to window frames and doors, but no structural damage to columns, slabs, or load-bearing walls; **Minor damage** - Cracks in walls, leaking roof, need of new doors & window repairs, etc.

MAP 8: **DAMAGE** TO BUILDINGS AND KEY INFRASTRUCTURE

Composite score[5] of KI damage estimates for residential buildings and key types of infrastructure (see Annex for methodology description)

Damage to buildings and infrastructure is complex and can vary strongly even between communities that are close to each other. However, the map shows that, in general, **sub-districts close to the Turkish border in Greater Idleb, and in Afrin district** in Northern Aleppo saw **higher levels of reported damage** to buildings and infrastructure.

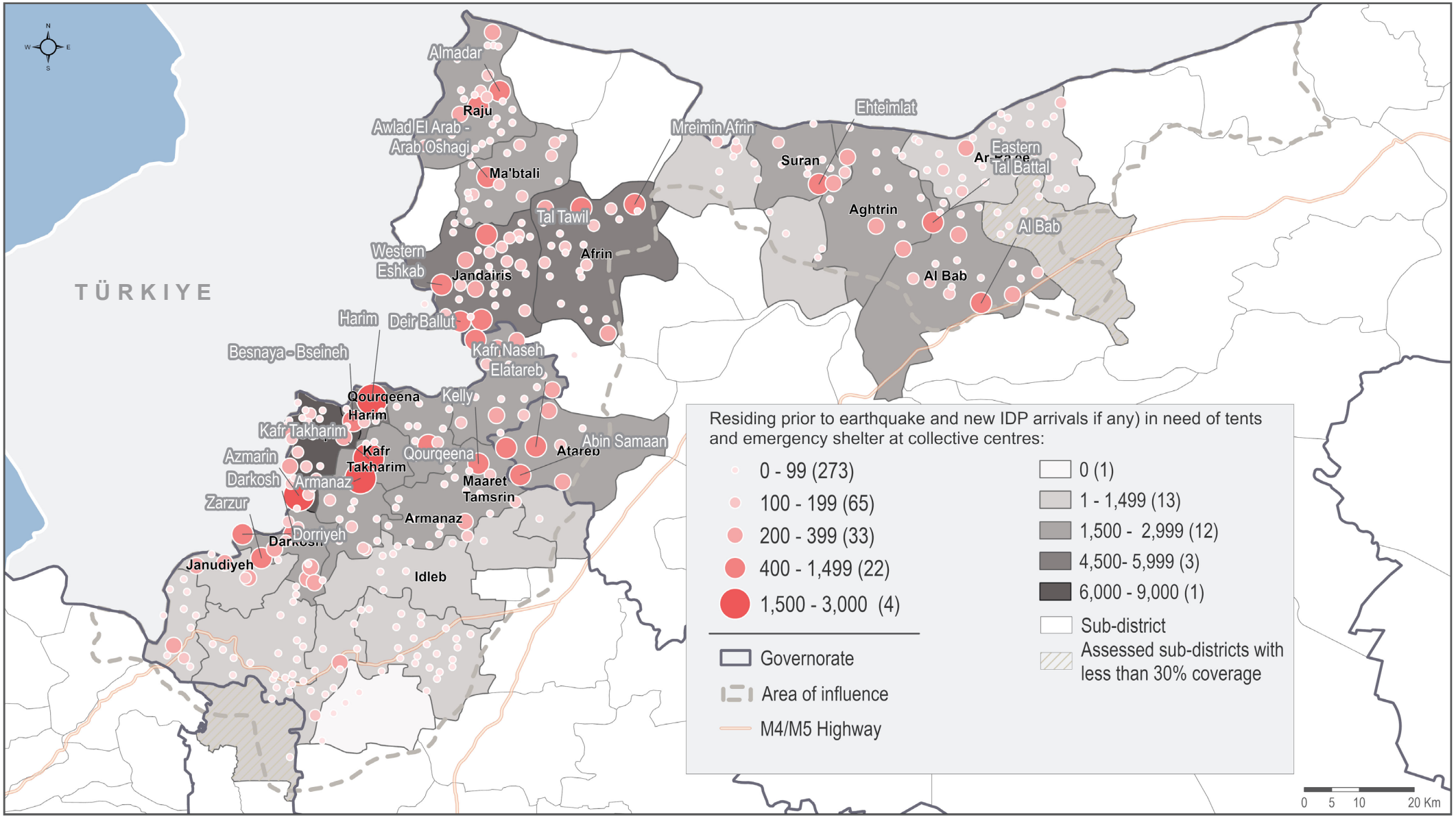
In terms of types of infrastructure, KIs tended to indicate **higher levels of damage to residential buildings** (171 out of 445 communities had KI reports of completely destroyed residential buildings) **and electricity networks**, with somewhat less damage reported for roads (KIs in only 6 communities reported some roads were completely destroyed).



[5] This score combines information on the level of damage of key infrastructure. Specifically, residential buildings, markets, health facilities, water networks/ wells, roads, electricity networks, telecommunications/ internet infrastructure, and education facilities are included. Residential buildings, markets, health facilities, water networks/ wells, and roads are weighted twice as highly. A score of 0 indicates that no infrastructure was damaged while a score of 1 indicates that all infrastructure was completely destroyed.

MAP 9: ESTIMATED NUMBER OF **HOUSEHOLDS IN NEED OF TENTS OR EMERGENCY SHELTER** AT A COLLECTIVE CENTRE

As reported by KIs in assessed communities



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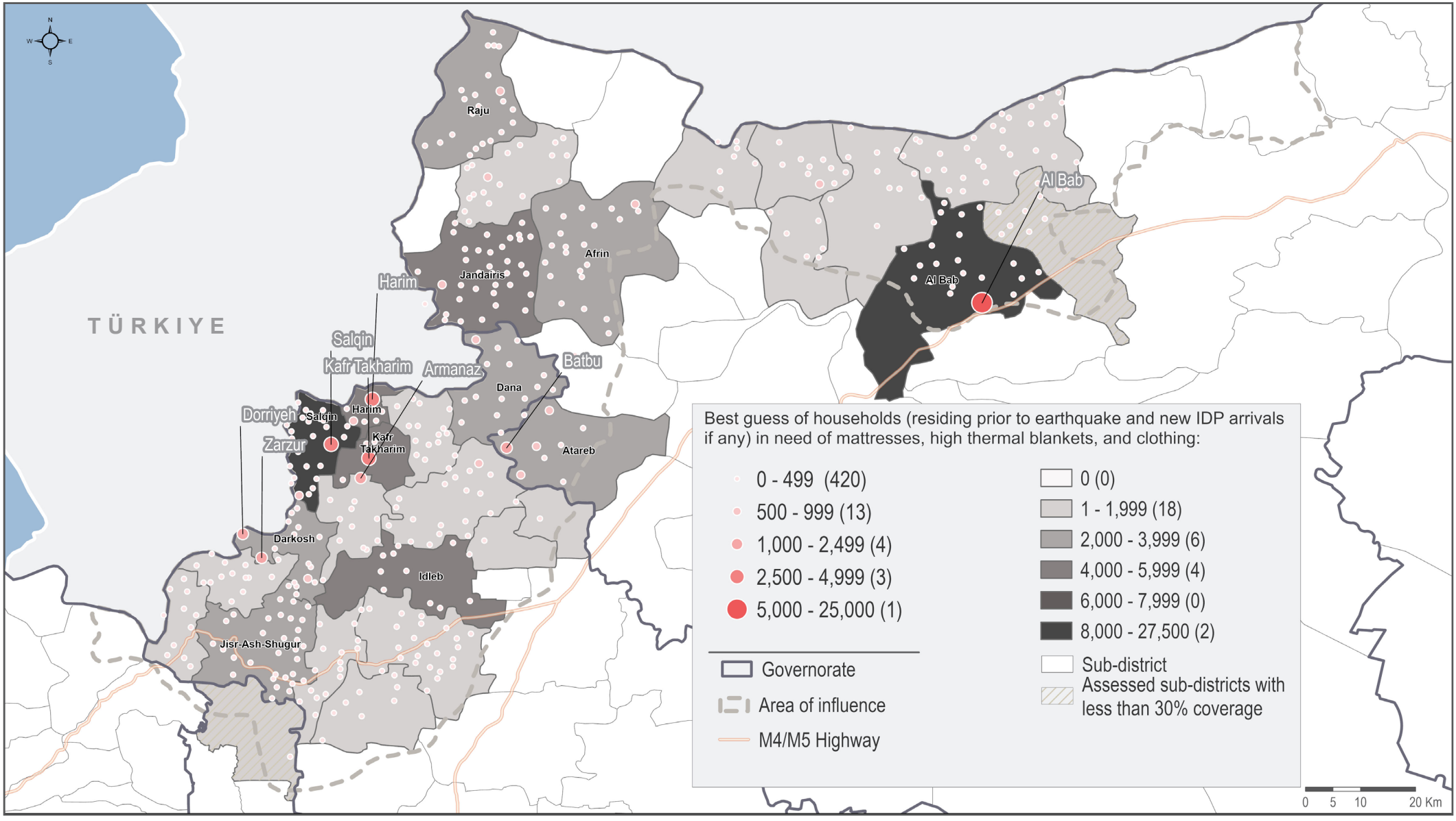
MAP 10: ESTIMATED NUMBER OF **HOUSEHOLDS IN NEED OF MATTRESSES, THERMAL BLANKETS, AND WINTER CLOTHING**

As reported by KIs in assessed communities



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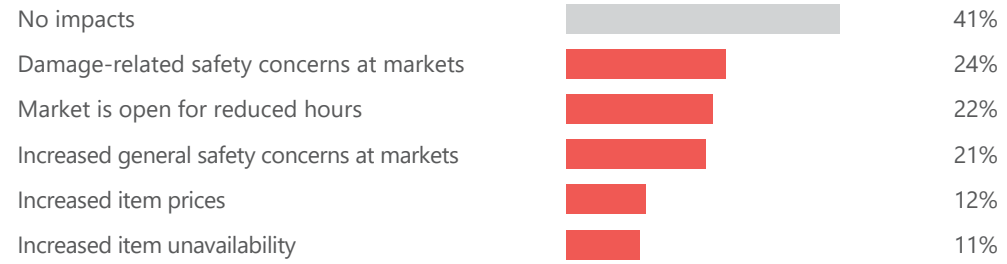
KEY SERVICE ACCESS

Reported levels of access to key services (by % of 456 assessed communities reporting direct earthquake impacts)

	Accessible to all	Accessible to most	Accessible to half	Accessible to few	Accessible to none
Water Services	45%	32%	7%	**8%**	7%
Electricity Services	**22%**	30%	12%	8%	**28%**
Health Services	**32%**	**19%**	15%	**14%**	**20%**
Markets	49%	**27%**	14%	7%	4%

Most commonly reported earthquake impacts on access to markets that are within assessed communities (by % of 456 assessed communities reporting direct earthquake impacts)



Accessibility of main services for the three sub-districts with most severe access scores[6] (by % of communities reporting services accessible to all, most, half, few, or none of the population)

		Accessible to all	Accessible to most	Accessible to half	Accessible to few	Accessible to none
Badama	Water Services	54%	8%	0%	38%	0%
	Health Services	15%	15%	0%	0%	69%
	Markets	69%	0%	0%	15%	15%
Harim	Water Services	0%	17%	17%	33%	33%
	Health Services	17%	50%	33%	0%	0%
	Markets	0%	67%	33%	0%	0%
Janudiyeh	Water Services	0%	27%	47%	27%	0%
	Health Services	0%	21%	50%	29%	0%
	Markets	7%	14%	71%	7%	0%

ABOUT REACH

REACH Initiative 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. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).

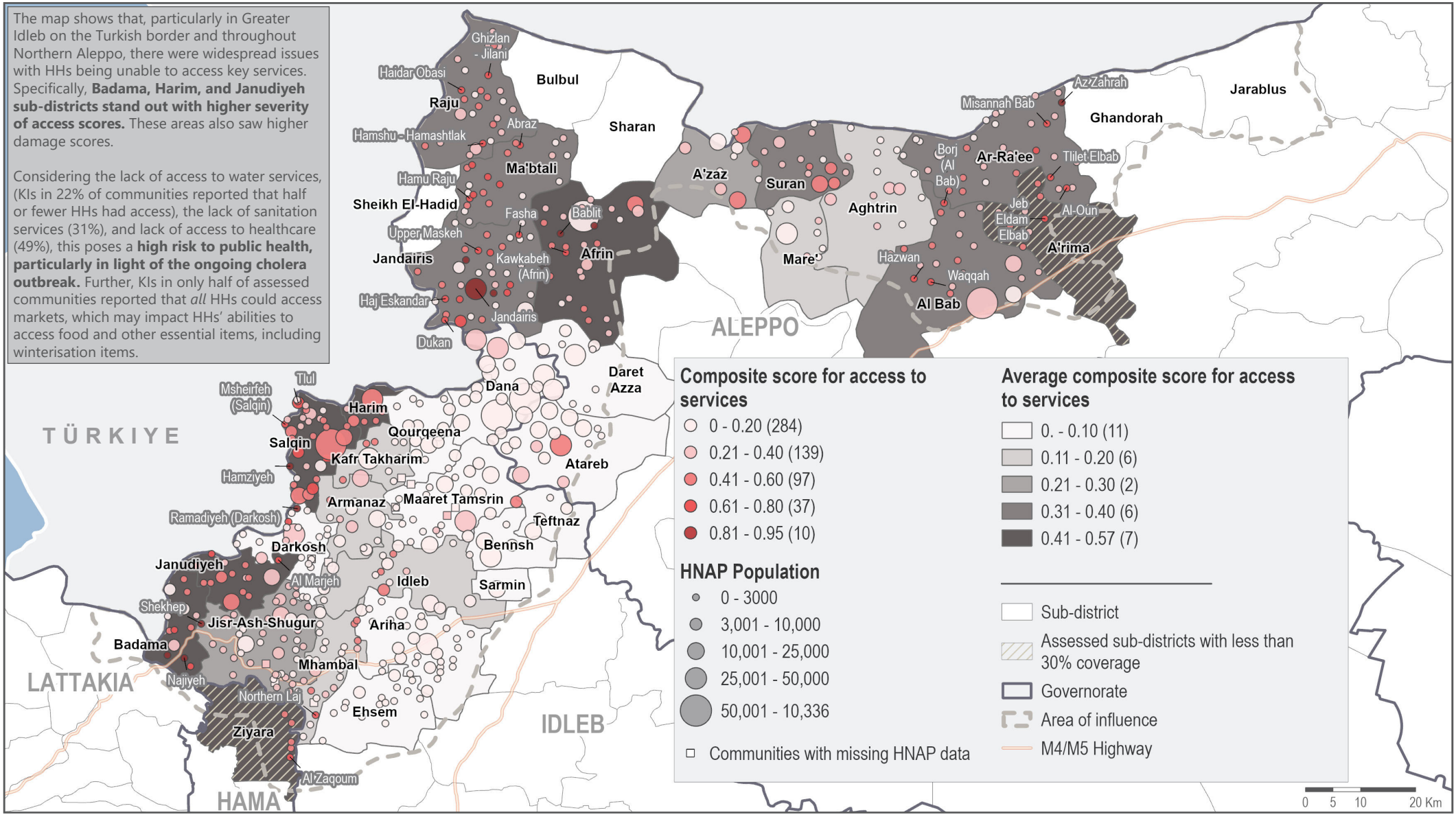
[6] This score combines information on the proportion of people in the community that were able to access services for water, health, electricity, sanitation, telecommunications/ internet, education, and markets. Water, health, and markets are weighted twice as highly. A score of 1 indicates that nobody in the community was able to access any of the services. A score of 0 indicates that all services were accessible by all households, or that the community was not impacted by the earthquakes.

MAP 11: POPULATION **ACCESS TO KEY SERVICES**

Composite score[6] of KI access estimates for key types of services (see Annex for methodology description)

The map shows that, particularly in Greater Idleb on the Turkish border and throughout Northern Aleppo, there were widespread issues with HHs being unable to access key services. Specifically, **Badama, Harim, and Janudiyeh sub-districts stand out with higher severity of access scores.** These areas also saw higher damage scores.

Considering the lack of access to water services, (KIs in 22% of communities reported that half or fewer HHs had access), the lack of sanitation services (31%), and lack of access to healthcare (49%), this poses a **high risk to public health, particularly in light of the ongoing cholera outbreak.** Further, KIs in only half of assessed communities reported that *all* HHs could access markets, which may impact HHs' abilities to access food and other essential items, including winterisation items.



[6] This score combines information on the proportion of people in the community that were able to access services for water, health, electricity, sanitation, telecommunications/ internet, education, and markets. Water, health, and markets are weighted twice as highly. A score of 1 indicates that nobody in the community was able to access any of the services. A score of 0 indicates that all services were accessible by all households, or that the community was not impacted by the earthquakes.

ANNEX 1: Composite Scores – Methodology Notes

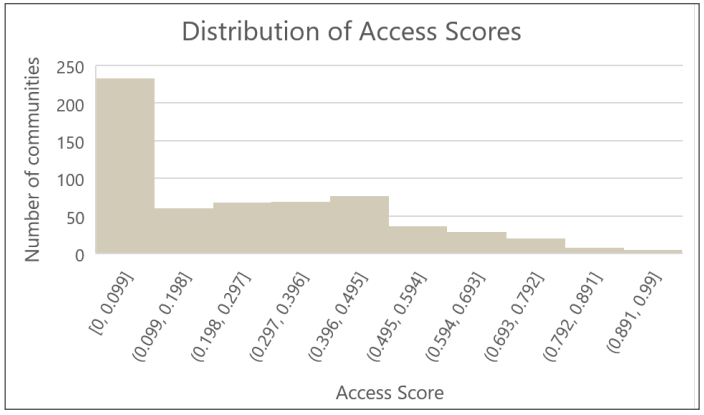
Access Score

The aim of this composite indicator is to summarise whether households in communities are struggling to access essential services.

Key informants were asked what proportion of households in their community were able to access specific services. These services were water, health, electricity, sanitation, telecommunications and internet, education, and markets. As the focus was on essential services necessary for survival, several sectors were weighted more heavily in the composite. Specifically, these are water, health, and market services, where markets are an indication of food availability. For simplicity, the weight for these sectors was twice as high as for the others.

The answer options to the question were that all households, most, half, less than half, or none were able to access the service. These were translated into numerical values between 0 and 1, where "none" received a score of 1 (highest severity) and "all" received a score of 0 (lowest severity). Key informants also had the option to indicate that they did not know the proportion. In these cases, the average of the subdistrict was used.

The final score was then calculated as a weighted average, i.e. the sum of all service scores divided by the sum of the weights. For communities that reported no impact from the earthquake, the score was set to 0.



Damage Score

The aim of this composite indicator was to give an idea of the extent of damage to residential buildings and essential infrastructure in communities.

Key informants were asked what percentage of buildings or infrastructure type fell into each damage category. The structure types included here were residential buildings, markets, health facilities, water networks/ wells, roads, electricity networks, telecommunications/ internet infrastructure, and education facilities. Other infrastructure types were also assessed, notably sanitation networks, but were excluded either because too few communities had this infrastructure type, or because categories overlapped. Furthermore, for water infrastructure, the average of damage to water networks and wells was used. This is because many communities only had one of the two water sources. Please note that secondary data suggests that water trucking is one of the most common sources of water; however, damage to these could not be captures as this largely originates in damage to road and water infrastructure outside of the assessed community.

As the focus was on essential structures necessary for survival, several types of buildings and infrastructure were weighted more heavily in the composite. These were residential buildings, markets (as an indication of food availability), health facilities, water, and roads. For simplicity, the weight for each of these sectors was twice as high as for the others.

The answer options were the proportions of the infrastructure that fell into each of the damage categories – completely destroyed, severe damage, major damage, minor damage, and no damage. The damage categories were transformed into numerical values where completely destroyed is 1 and no damage is 0. Using the percentages given by the KIs, we calculated the average damage to the infrastructure. Where the infrastructure didn't exist, this value was left empty. Where the key informant said that they did not know the level of damage, the value was imputed using the average damage to that infrastructure in the subdistrict.

The final score was then calculated as a weighted average, i.e. the sum of all service scores divided by the sum of the weights. For communities that reported no impact from the earthquake, the score was set to 0.