

# Examining Access to Public Schools for Syrian Refugees in Lebanon

## School Accessibility, 2016

### Informal Settlements

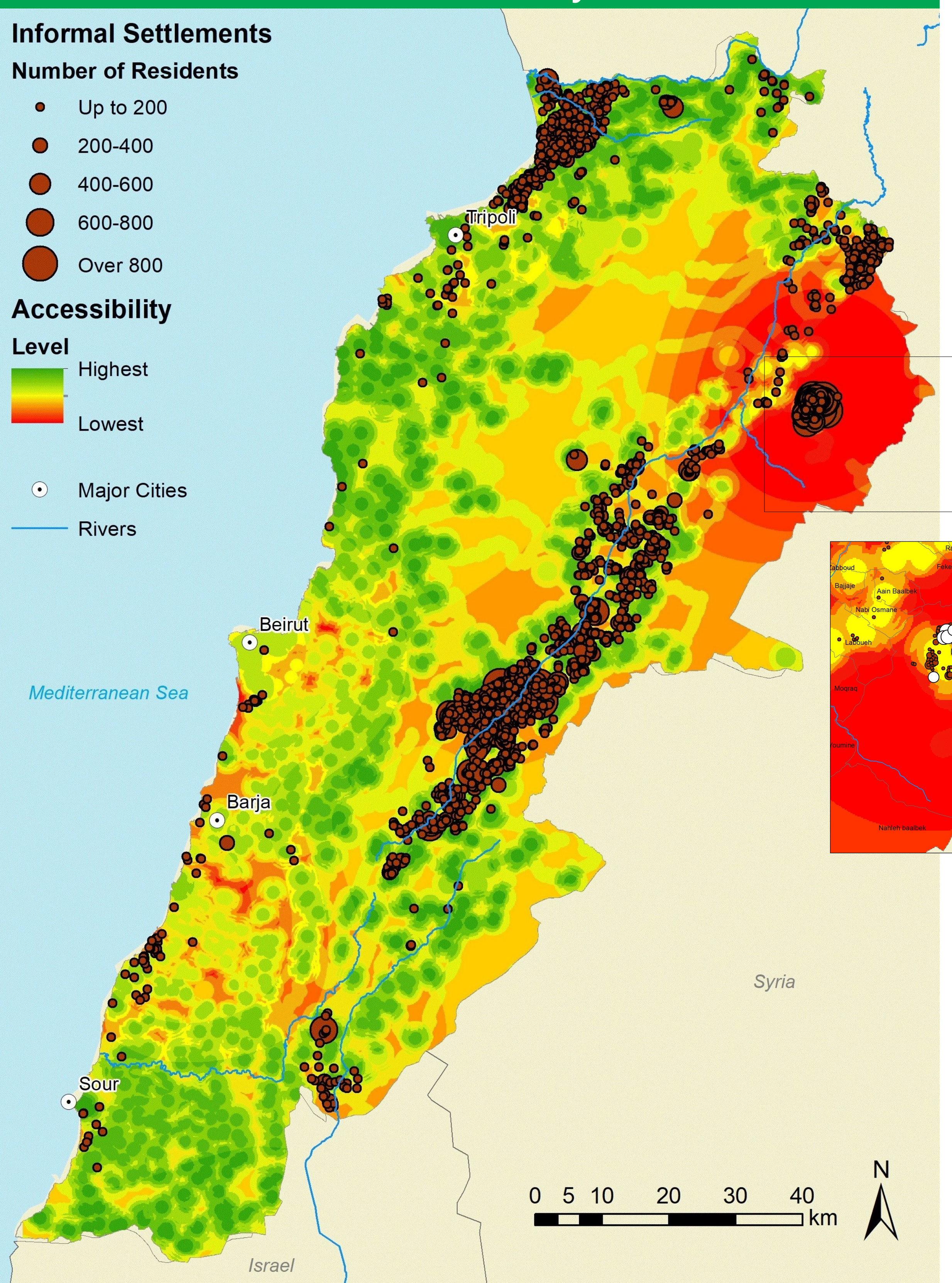
#### Number of Residents

- Up to 200
- 200-400
- 400-600
- 600-800
- Over 800

#### Accessibility Level

- Highest
- Lowest

- Major Cities
- Rivers



## Background

Millions of Syrians have fled their home country since its civil war began in 2011, mostly to surrounding countries. According to UNHCR, there are over 950,000 Syrian refugees currently living in Lebanon. About half of these refugees are school-aged children, 59% of which did not receive any kind of formal education in 2017. Lebanon has made some progress in educating Syria's children, instituting second-shifts in most public schools to try to close the gap. However, many Syrian refugee children lack access to Lebanon's public school system.

Most Syrian refugees in Lebanon live in residential areas, but a good proportion of them—about 17%, or over 210,000—live in informal settlements, in rural areas or on the outskirts of cities, with limited access to traditional infrastructure. Do children living in these settlements have reasonable access to public schools?

This analysis focused on factors that could impede Syrian children's ability to get to public schools in their area, such as distance to schools, access to roads, access to public transportation, and relative safety of the area. Together, these factors determined which refugee communities have good access to schools, which have insufficient access, and which are most in need of assistance in this capacity.

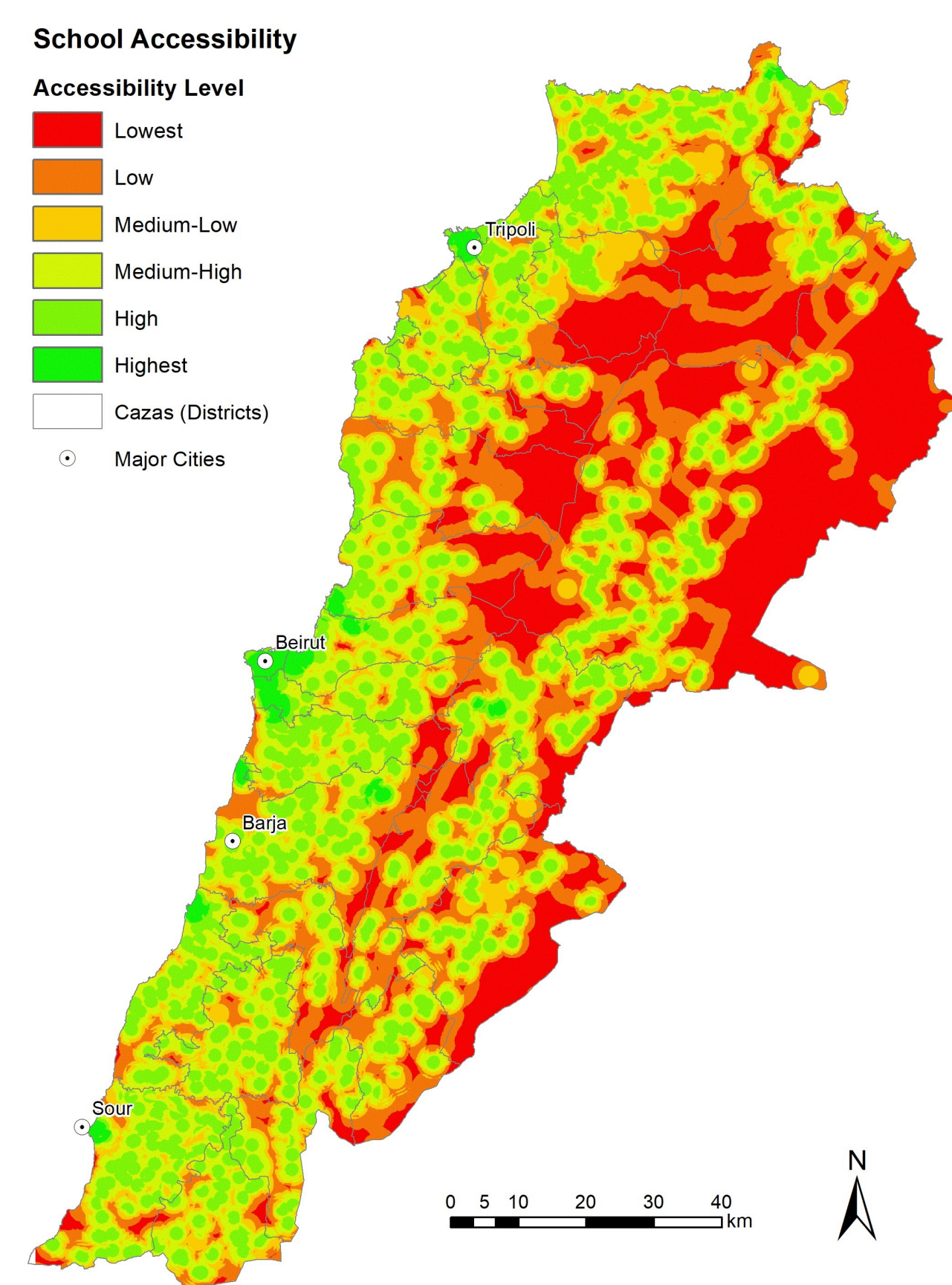
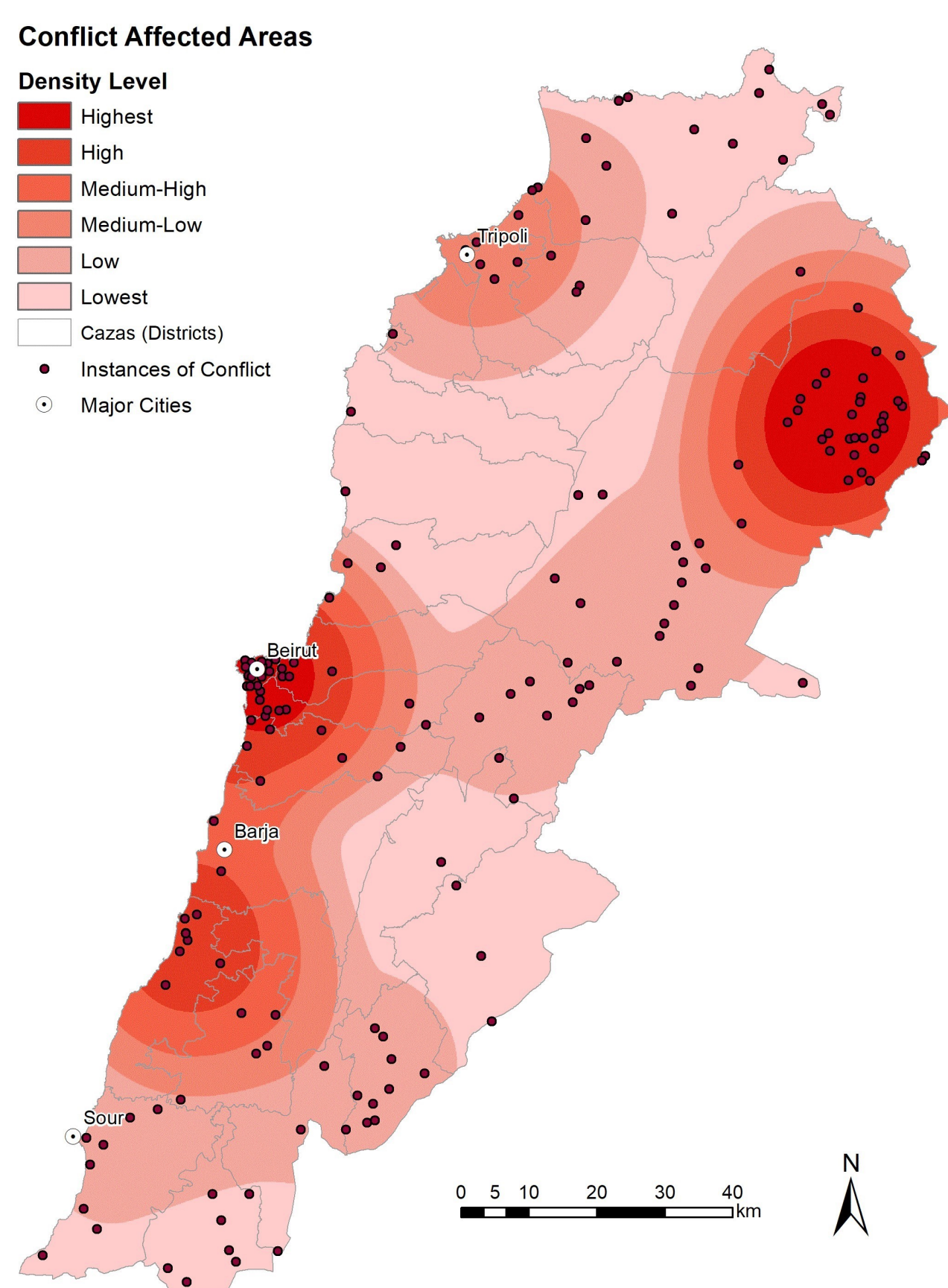
## Methodology

To first analyze the physical accessibility of Lebanon's public schools, the author created a composite map of distance to schools, access to main roads, and access to bus stops. The Euclidean Distance tool was used on each of these point data sets individually, using maximum break values of 2.5 km, 1.5 km, and 2.5 km for schools, main roads, and bus stops respectively. Each of these rasters was ranked from 0 to 4, with 0 being the lowest or least accessible, and 4 being the highest or most accessible. The author then combined these rasters, used the raster calculator to calculate the overall suitability scores (2-12), and reclassified those to values of 1-6, with 1 being the lowest or least accessible and 6 being the highest or most accessible. Next, to figure out where conflict was occurring in Lebanon, the author imported point data on conflict from 2016 to 2018 and used the Kernel Density analysis tool to find the hot spots of conflict. Each level of conflict was reclassified from 1 to 6, with 1 being the highest level of conflict and 6 being the lowest.

Finally, the author created a composite of these two maps, calculated their combined suitability scores, and reclassified the values to get a final raster accessibility score map, with 1 being the lowest or least overall accessible and 6 being the highest or most overall accessible. Point data on informal settlements of Syrian refugees was then brought in and was ranked by settlement population (1-5, with 1 being the highest population and 5 being the lowest). The author extracted data to points to assign a raster value from the accessibility map to each settlement. The population value of each settlement was added to its raster accessibility value to produce a final vulnerability score for each settlement, which took into account the settlement's access to schools and how many children likely live there. The author also used population figures from the settlements data set to calculate how many people are living at each distance range from a school (less than 1 km, 1-1.5 km, 1.5-2 km, 2-2.5 km, and more than 2.5 km) in order to further highlight distance to schools as a most crucial factor when analyzing accessibility.

## Conflict Affected Areas, 2016-2018

## Access to Schools, Bus Stops and Main Roads, 2016



## Limitations

There were several limitations to this analysis, mostly related to the availability of data. Data on public transportation was particularly difficult to find, with limited data on bus stops and routes and hardly any data on railways. Public transportation is an important factor in the life of refugees, as they frequently do not have access to cars.

Economic data for each region was also unavailable, which would have added a lot of value when considering the safety and quality of the areas in which Syrian refugees are living. There was also a lack of age-disaggregated data, which would have allowed for an analysis based on numbers of school-aged children specifically. It was also challenging to reconcile the dates of the data used, as the dates ranged from 2016 to 2018.

## Results

The analysis found that, overall, there are over 36,000 refugees living out of reasonable walking distance to a school. (See Table 2) Given that about half of the refugees in Lebanon are school-aged children, this means that over 18,000 Syrian children out of about 107,000 live outside of an acceptable walking distance to a public school. Beyond that, they may be living in an area with little access to roads, public transportation, and where conflict may be likely to happen.

This analysis also found that the ten informal settlements in Lebanon with the least access to public schools were all in the northeastern Aarsal district, which closely borders Syria. (See Table 1 and inset map) These settlements are home to over 9,100 refugees.

## Results Tables

**Table 1: Settlements with the Lowest Access to Schools**

**Table 2: Distance to Schools**

Local Settlement Name	Cadaster (District)	Number of Tents	Number of Individuals	Vulnerability Score
Almouhajirin	Aarsal	118	860	2
Wafaa Oumani	Aarsal	244	1165	2.6
Al Rahma	Aarsal	144	720	3
Al Nakheel	Aarsal	191	1200	3.2
Attaa	Aarsal	224	1075	3.2
Al Salam	Aarsal	170	800	3.2
Alshouhada	Aarsal	141	700	3.6
(None)	Aarsal	153	750	3.6
Baraa	Aarsal	158	860	3.8
Al Malab	Aarsal	206	1030	3.8
<b>Total:</b>		<b>1,749</b>	<b>9,160</b>	

Distance	Affected Population
Over 2.5 km	36,944
2-2.5 km	24,117
1.5-2 km	33,077
1-1.5 km	47,076
Less than 1 km	73,476
<b>Total</b>	<b>214,690</b>

School locations, roads, public transportation, and instances of conflict are, of course, not the only factors that contribute to the accessibility of schools for refugees. They are, though, crucial factors to take into account when considering which communities are at risk of being left behind.

