

# Vulnerability Assessment : Syrian Refugees in Turkey in 2017

## Background

Since the Civil War broke out in Syria in 2011, Turkey has become a country which hosts the largest number of Syrian refugees. As of April 2017, 2,992,567 Syrian refugees are officially registered in Turkey, and the number is still increasing. The Turkish government has granted Syrian refugees 'temporary protection' status and work permit, but the enormous number of Syrian refugees in its territory adds challenges to Turkey's domestic economic situation.

While the Turkish government is running 26 temporary accommodation centers, only 10 percent of Syrian refugees reside in these facilities. The majority of them are scattered across the entire country. As the Turkish government's budget and capacity are limited to reach every region where Syrian refugees are currently residing, it is important to prioritize the most vulnerable populations. This project aims to reveal areas with the highest vulnerability scores through a geospatial vulnerability assessment, and offer a valuable insight on where Syrian refugees are in the most need.

## Methodology

This project aims to determine "where Syrian refugees are most populated in Turkey," and "of those regions where Syrian refugees are the most vulnerable." To answer these research questions, this project collected data for a vulnerability assessment at the level of province (level 1) and district (level 2) in Turkey.

To create a vulnerability score, 11 different factors were included as follows: *unemployment rate*; *poverty rate* (economy);



*population of non-Syrian refugees and asylum seekers* (demography); *number of physicians* (health); *population without primary education* (education); *population marginalized from water supply* (water); *density of relief facilities* (external assistance); *density of terrorist attacks* (security); *risk of flood, landslide, and earthquake* (natural disaster).

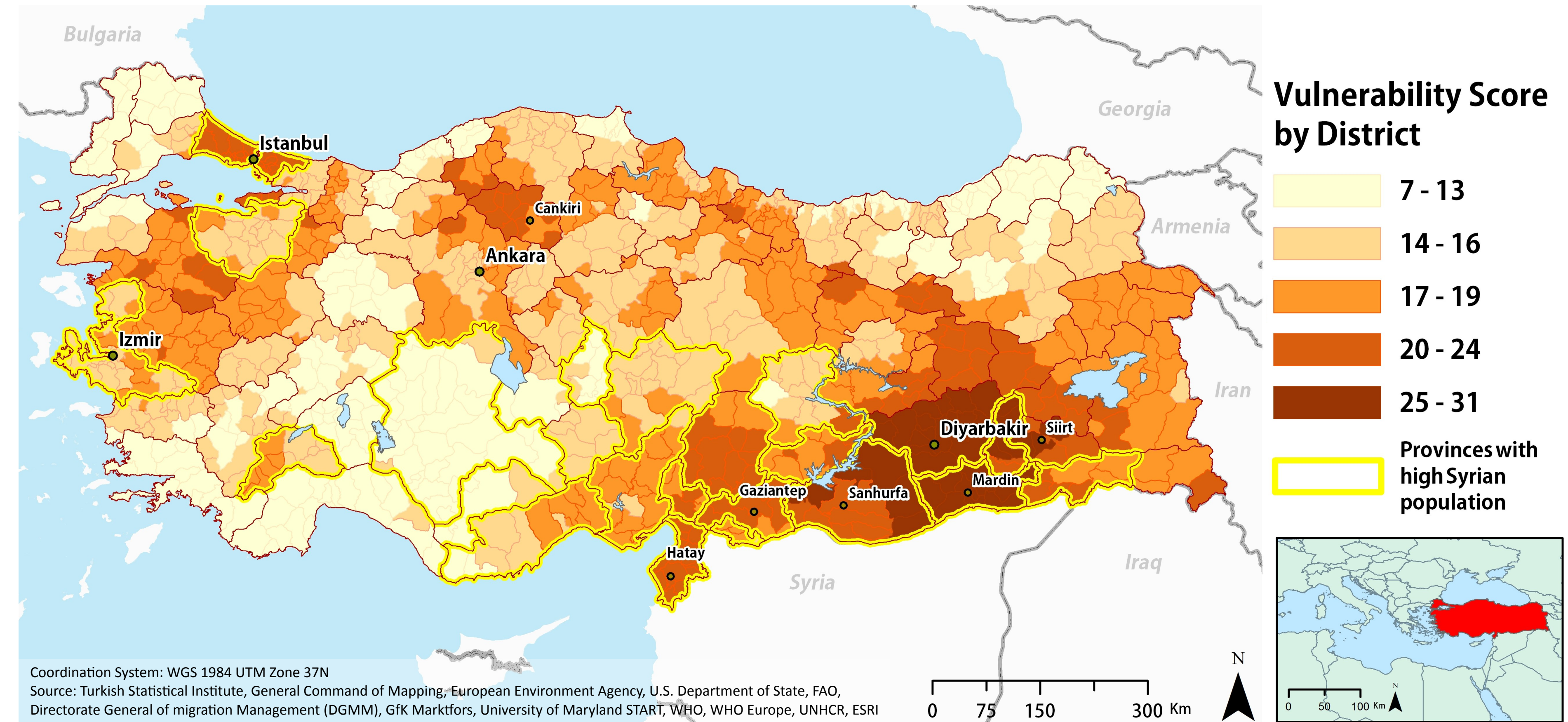
Each attribute was given scores based on natural breaks (Jenks), with four representing the most vulnerable and zero the least vulnerable districts. The vulnerability scores of districts were aggregated, and a final map was created to show the total vulnerability scores of each district. Districts with the highest vulnerability scores were considered the most vulnerable areas for Syrian refugees.

## Conclusion

To answer the first research question, a map is created to show the number of Syrian refugees registered in Turkey by province. The number of Syrian population was normalized by the total population of each province. The province with the biggest number of Syrian refugees is *Kilis* province, about 95 percent of whose population is actually Syrian refugees. It is followed by *Hatay* (24.7%), *Sanliurfa* (21.7%), and *Gaziantep* (16.7%).

According to the results of a vulnerability assessment, the most vulnerable districts are mostly located in the southeastern part of Anatolia. They are found in *Mardin*, *Diyarbakir*, *Sanliurfa*, *Batman*, and *Siirt* province. Outside the southeastern region, neighboring areas of *Istanbul* and *Cankiri* province show high vulnerability scores. Interestingly, areas where Syrian refugees are most populated are not overwhelmingly overlapped with areas with the biggest vulnerability scores.

Since the statistics of Syrian refugees registered in Turkey were only available in the province level, I estimated the population at district level by dividing the population in a province by the ratio of population of each district in a province. Despite the issue of imprecision, the most vulnerable Syrian refugees are assumed to be five percent of the total population. The second most vulnerable group is assumed to be 28 percent of the total population. Although the majority of Syrian refugees are still found in



relatively secure areas, this result suggest that the Turkish government and international society should prioritize these populations in the most vulnerable areas.

## Limitation

Some data were not available at the district level. Also, for some factors, data as of 2017 were not available, and they were analyzed by data in previous years. The difference in time frame might hinder the accurate reflection of situations on the ground in 2017. Lastly, each factor was equally weighted, but in the Turkish context some factors could have more serious effect on the vulnerability of Syrian refugees. Therefore, due to the lack of a basis of weight among factors, the nuanced analysis might have been missed.

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May 8, 2017  
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