

# UKRAINE – Infrastructure and Facilities Damage Analysis Summary

## Northern districts of Kharkiv, February-May (July) 2022 (v.1.1)

Proportion and number of damaged facilities recorded per district in Northern Kharkiv.

Proportion of damaged facilities per district of Kharkiv City



**21/272**  
**33/266**

pharmacies were damaged.

schools, kindergartens, colleges and universities were damaged.

Damaged industrial facility in Kyivskiy District, Kharkiv City.



**DISCLAIMER.** This analysis only highlights destroyed and severely damaged facilities that are clearly visible on the high-resolution satellite image of Kharkiv City and is not intended to cover all existing damages of city infrastructure.

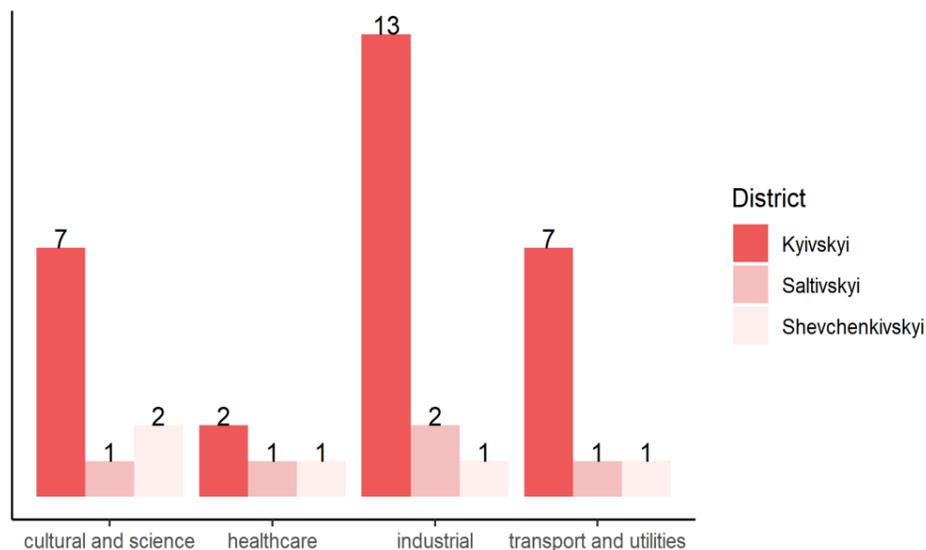
Since the start of the Russian invasion on the 24 February 2022, Kharkiv City, the second largest city of Ukraine, located just 40 km off the Russian border, has suffered numerous damages to facilities and infrastructure, with the northern districts of Saltivskiy, Kyivskiy, and Shevchenkivskiy [being the most affected](#).

To support the humanitarian response, IMPACT Initiatives has conducted an Infrastructure and facilities damage analysis to estimate the degree of damage to essential services in northern Kharkiv. The analysis is based on recent high-resolution satellite imagery (acquired on 22 May, 2022) and data obtained from the [Karta Ruynuvan](#) ("Map of Destructions", open source damage monitoring project) (reflective of the situation as of 23 July, 2022).

In total, 137 non-residential facilities were found to be damaged in Kyivskiy District, 54 in Shevchenkivskiy District and 36 in Saltivskiy District. It should be noted that only 23 of the identified facilities, all of which were located in Saltivskiy District, were found through using satellite imagery. The other 13 detected damaged structures are derived from the Karta Ruynuvan. This highlights the main limitation of using satellite imagery to estimate damage extent; the ability to discern damaged infrastructure from satellite imagery strongly depends on the type of damage (i.e., it is only possible to detect damage that is visible from above, such as damage to roofs and exterior walls), as well as the temporal availability of such data.

Most of the detected damaged infrastructure in Saltivskiy and Shevchenkivskiy Districts consists of grocery shops, pharmacies, and other small facilities rather than larger objects such as schools or hospitals. In Kyivskiy, on the other hand, analysis indicates that 22 educational facilities (of 86 in total in District) were damaged.

Estimated number of damaged non-residential buildings in northern Kharkiv, per district.



Damaged apartment building with grocery shop in Saltivskiy District, Kharkiv City.



**22/227**  
**27/377**

financial facilities were damaged.

supermarkets and shops selling food items were damaged.

Supported by:



Global Affairs Canada  
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**UHF**

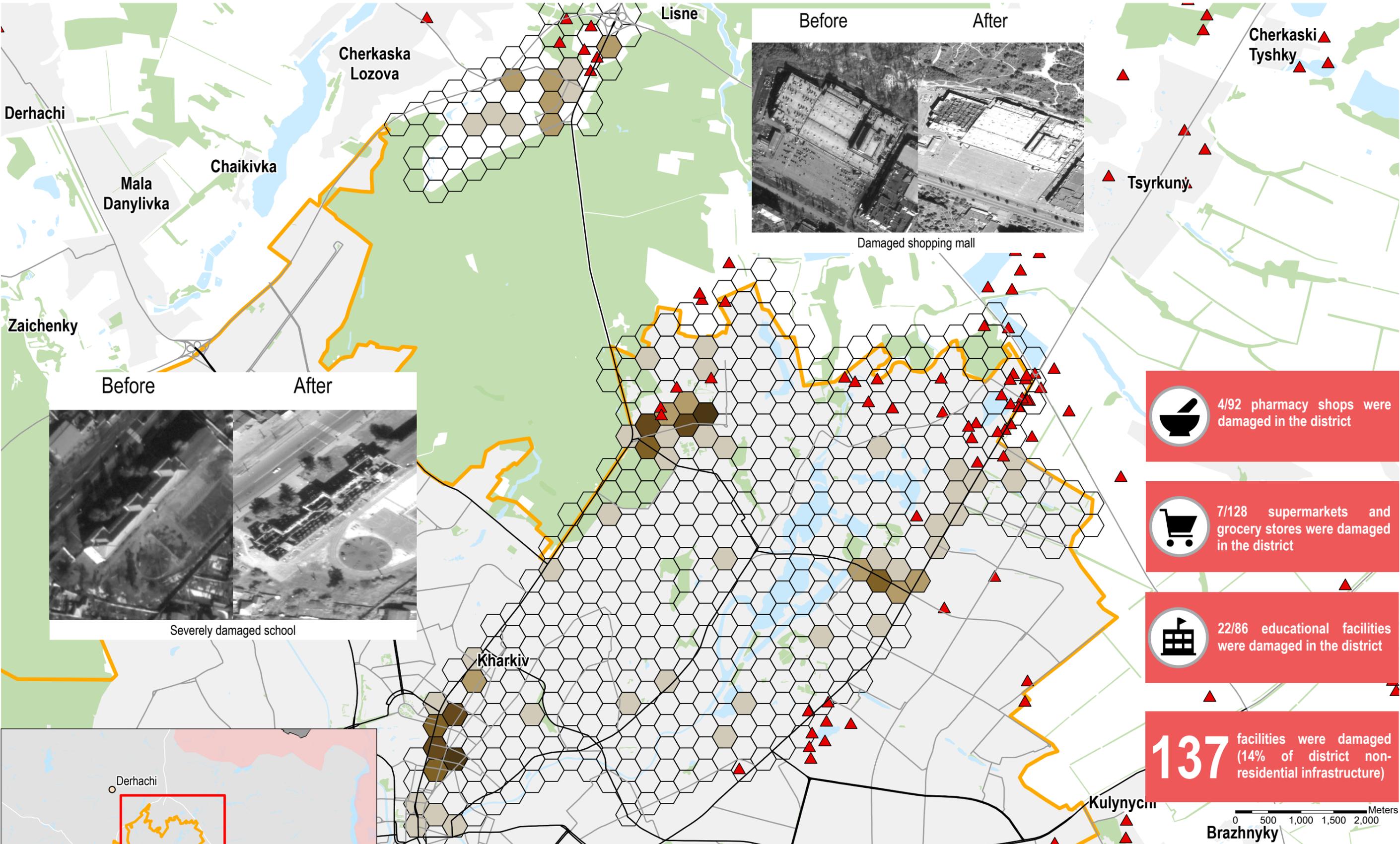
Ukraine Humanitarian Fund



Japan International Cooperation Agency

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Kyivskiy district, Kharkiv, February-May (July) 2022 (v.1.1)

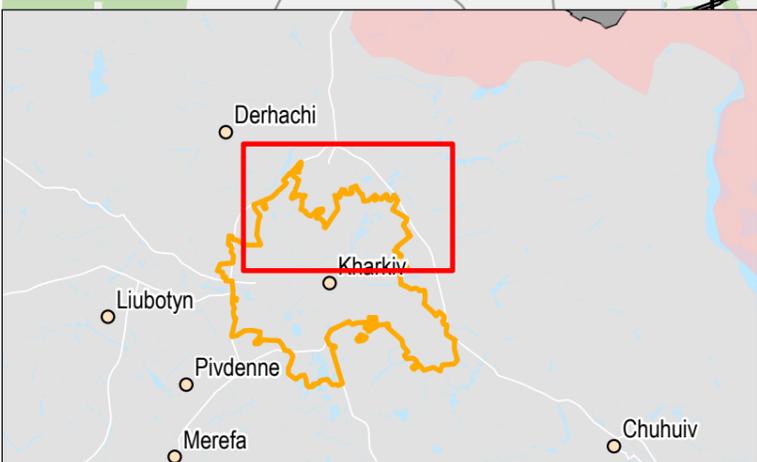
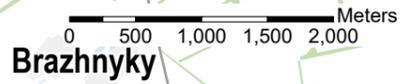


 4/92 pharmacy shops were damaged in the district

 7/128 supermarkets and grocery stores were damaged in the district

 22/86 educational facilities were damaged in the district

**137** facilities were damaged (14% of district non-residential infrastructure)



**Number of damaged facilities within hexagon**

	1		6-7
	2-3		8-9
	4-5		Kharkiv City boundaries

 Primary roads  
 Other streets and roads  
 Thermal hotspots \*  
 \* possible indication of conflict-related fire

Data sources:  
 administrative boundaries - OCHA  
 land cover - OpenStreetMaps Contributors  
 infrastructure damage analysis - IMPACT  
 conflict area - LiveUA  
 fire density - MODIS, Suomi VIIRS

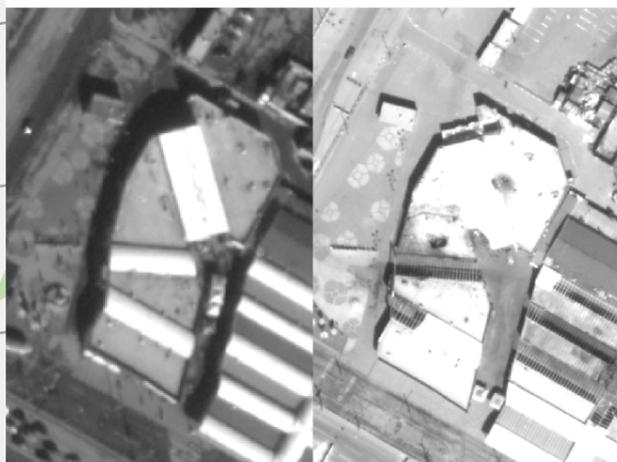
Coordinate System: WGS 1984 UTM Zone 37N  
 Contact: [mapping@impact-initiatives.org](mailto:mapping@impact-initiatives.org)

Note: Data, designations, and boundaries contained on this map are not warranted to be error-free.

# UKRAINE – Infrastructure and Facilities Damage Analysis Summary

Saltivskiy district, Kharkiv, February-May (July) 2022 (v.1.1)

Before After



Civil market damage being visible on satellite image

View above Onground



College being shelled with no visible damage from above

Bobrivka

Kharkiv

Brazhnyky

Peremoha

Zaiky



6/78 pharmacy shops were damaged in the district



9/124 grocery shops were damaged in the district



6/49 financial facilities were damaged in the district

**36**

facilities were found to be damaged (6% of district non-residential infrastructure)

0 500 1,000 1,500 2,000 Meters



- Conflict area (22 June 2022)
- tree vegetation
- water bodies

**Number of damaged facilities within hexagon**

- |  |  |
|--|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #d2b48c; border: 1px solid black; margin-right: 5px;"></span> 1   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #8b4513; border: 1px solid black; margin-right: 5px;"></span> 6-7 |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #c8a2c8; border: 1px solid black; margin-right: 5px;"></span> 2-3 | <span style="display: inline-block; width: 15px; height: 10px; background-color: #654321; border: 1px solid black; margin-right: 5px;"></span> 8-9 |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #8b4513; border: 1px solid black; margin-right: 5px;"></span> 4-5 | <span style="display: inline-block; width: 15px; height: 10px; border: 2px solid orange; margin-right: 5px;"></span> Kharkiv City boundaries       |

- Primary roads
- Other streets and roads
- Thermal hotspots \*

\* possible indication of conflict-related fire

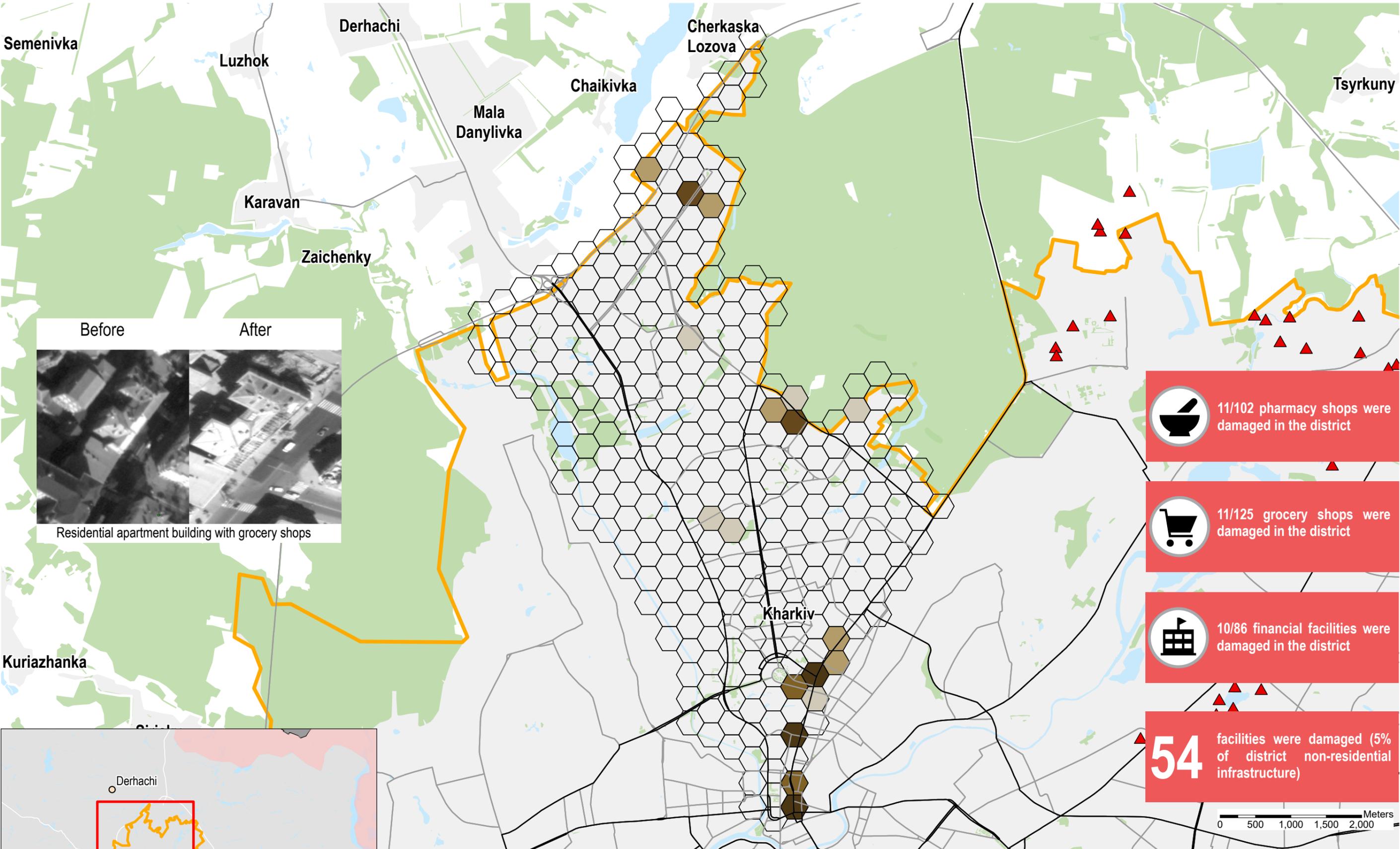
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# UKRAINE – Infrastructure and Facilities Damage Analysis Summary

Shevchenkivskyi district, Kharkiv, February-May (July) 2022 (v.1.1)

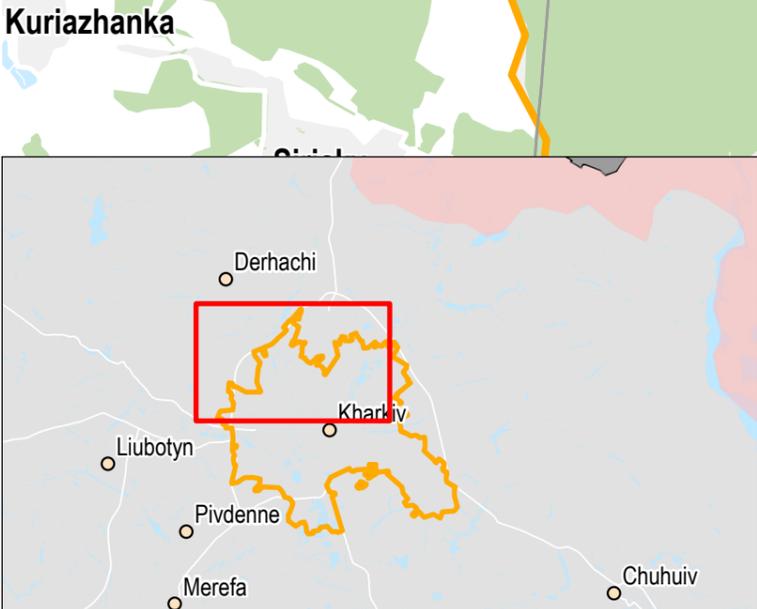


 11/102 pharmacy shops were damaged in the district

 11/125 grocery shops were damaged in the district

 10/86 financial facilities were damaged in the district

**54** facilities were damaged (5% of district non-residential infrastructure)



 Conflict area (22 June 2022)	 1	 6-7	 Primary roads
 tree vegetation	 2-3	 8-9	 Other streets and roads
 water bodies	 4-5	 Kharkiv City boundaries	 Thermal hotspots *
			* possible indication of conflict-related fire

Data sources:  
 administrative boundaries - OCHA  
 land cover - OpenStreetMaps Contributors  
 infrastructure damage analysis - IMPACT  
 conflict area - LiveUA  
 fire density - MODIS, Suomi VIIRS

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