

UKRAINE – Infrastructure and Facilities Damage Analysis Summary

Izium City, Kharkivska oblast, February-August 2022

DISCLAIMER. This analysis only highlights destroyed and severely damaged facilities that are clearly visible on the high-resolution satellite image of Izium 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, Izium City (48,000 inhabitants), a settlement in south-eastern part of Kharkivska oblast, has suffered numerous damages to facilities and infrastructure. The most intensive destructions were caused during March onground battles for the city.^a

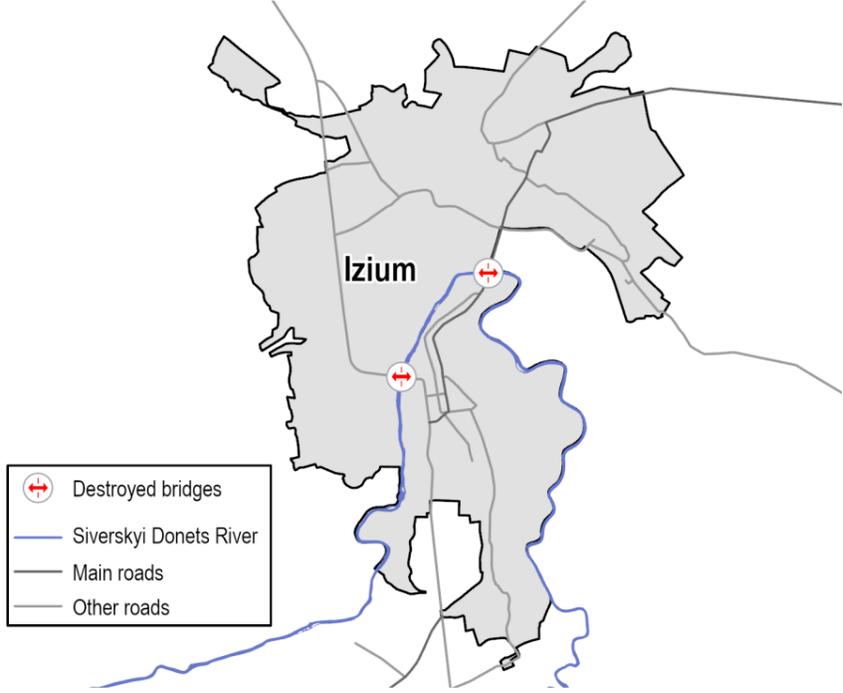
Ukraine regained control over Izium City in the beginning of September 2022.^b Local authorities reported that 80% of local infrastructure were damaged.^c Reported damage to utilities questions a capacity of Izium City to sustain heating supply facing an approaching winter.^d

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 Izium City. The analysis is based on recent high-resolution satellite imagery (acquired on 21 August, 2022).

In total, 102 non-residential facilities (31%) were found to be damaged in Izium City. More damaged facilities were detected in southern part of the settlement, on the right bank of Siverskyi Donets River: it was longer under onground hostilities in the beginning of spring 2022 than northern part of Izium City.

The highest relative damage was caused to industrial facilities and warehouses: 32 of them, or 54% of Izium respective infrastructure were damaged. As well, 44% of Izium educational (11 schools, kindergartens and college) facilities experienced the various degree of destructions.

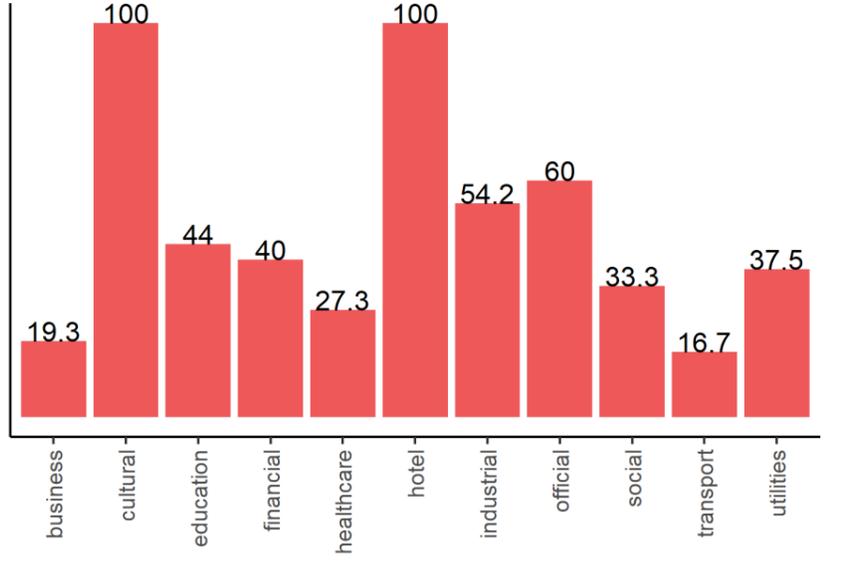
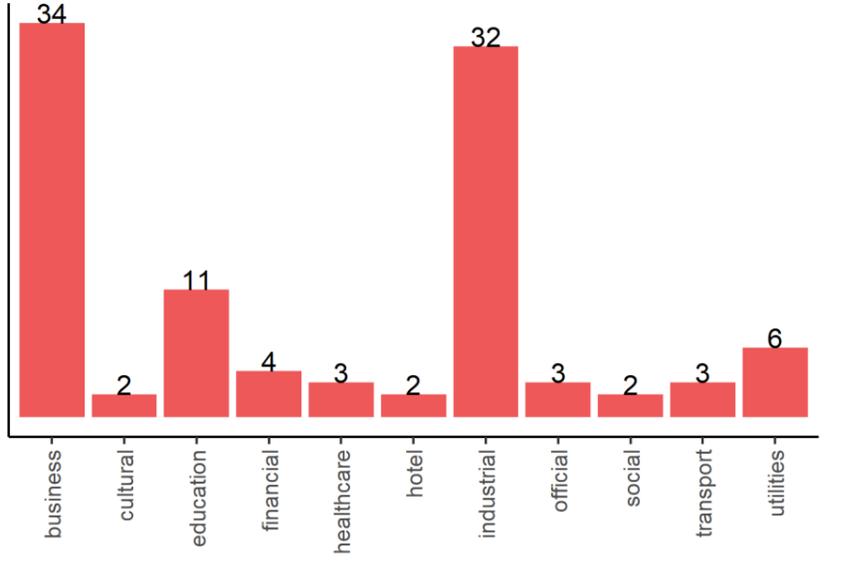
a Amnesty International, **Ukraine: Belegued town of Izium at breaking point after constant attack from Russian forces - new testimony**, 16 March 2022
 b abc.net.au, **Ukraine town of Izium liberated from Russians shows scale of destruction**, 14 September 2022
 c Novoe Vremia, **Izyum 80% destroyed by Russian invaders, at least 1,000 civilians killed**, 14 September 2022
 d Reuters, **'It's survival': Fear lingers in the ruins of Ukraine's liberated Izium**, 14 September 2022



Map depicts road networks and bridges over Siverskyi Donets River which divides Izium City on two parts.



Substantial forested areas were burned around Izium City during spring-summer hostilities. Both snag and live trees can be used to obtain fuelwood. However, wood-processing infrastructure also appeared to be damaged (image shows destroyed sawmill near Izium and burned trees nearby).



The barcharts show the number (left) or proportion (right) of detected damaged buildings by infrastructure categories. While an absolute number of detected damaged facilities for certain categories (e. g., cultural or hotels) appears to be small, respective percentages indicate the severe damage to this infrastructure in Izium City.

The infrastructure categories with the highest detected damage are industrial, warehouses, transport, and utilities. Orange circles show damaged structures.



3/5 buildings of insitutional facilities were damaged.

2/2 buildings of cultural facilities were damaged.

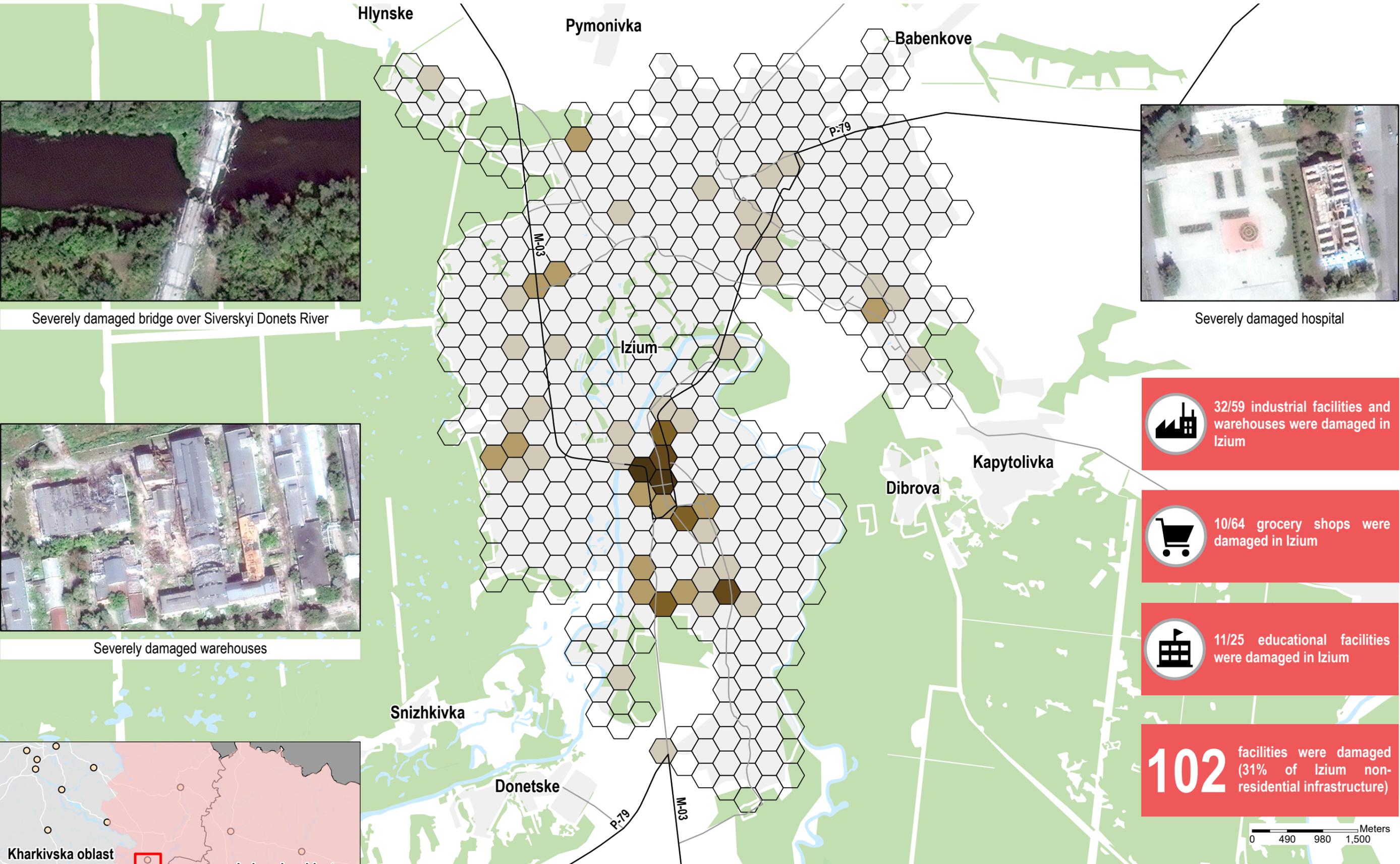
2/5 bridges over Siverskyi Donets River were damaged.

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Severely damaged bridge over Siverskyi Donets River



Severely damaged hospital



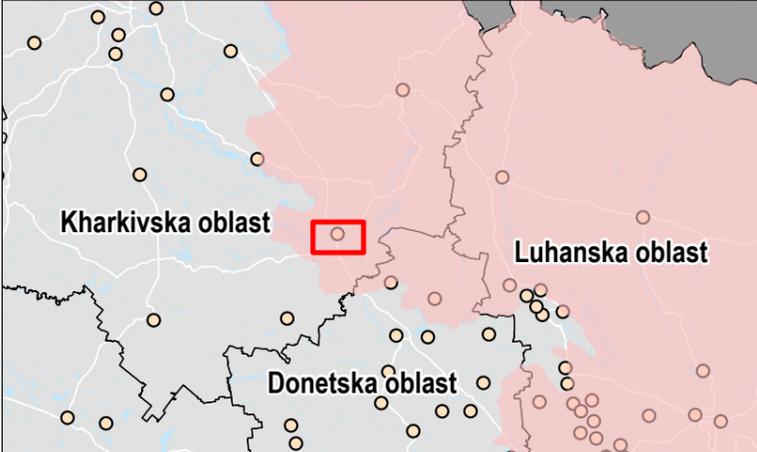
Severely damaged warehouses

 32/59 industrial facilities and warehouses were damaged in Iziium

 10/64 grocery shops were damaged in Iziium

 11/25 educational facilities were damaged in Iziium

102 facilities were damaged (31% of Iziium non-residential infrastructure)



| | | | |
|--|---|---|---|
|  Conflict area (22 June 2022) |  1 |  6-7 |  Primary roads |
|  tree vegetation |  2-3 |  8 |  Other streets and roads |
|  water bodies |  4-5 | | |

Data sources:
 administrative boundaries - OCHA
 land cover - OpenStreetMaps Contributors
 infrastructure damage analysis - IMPACT
 conflict area - LiveUA

Coordinate System: WGS 1984 UTM Zone 37N
 Contact: mapping@impact-initiatives.org

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

