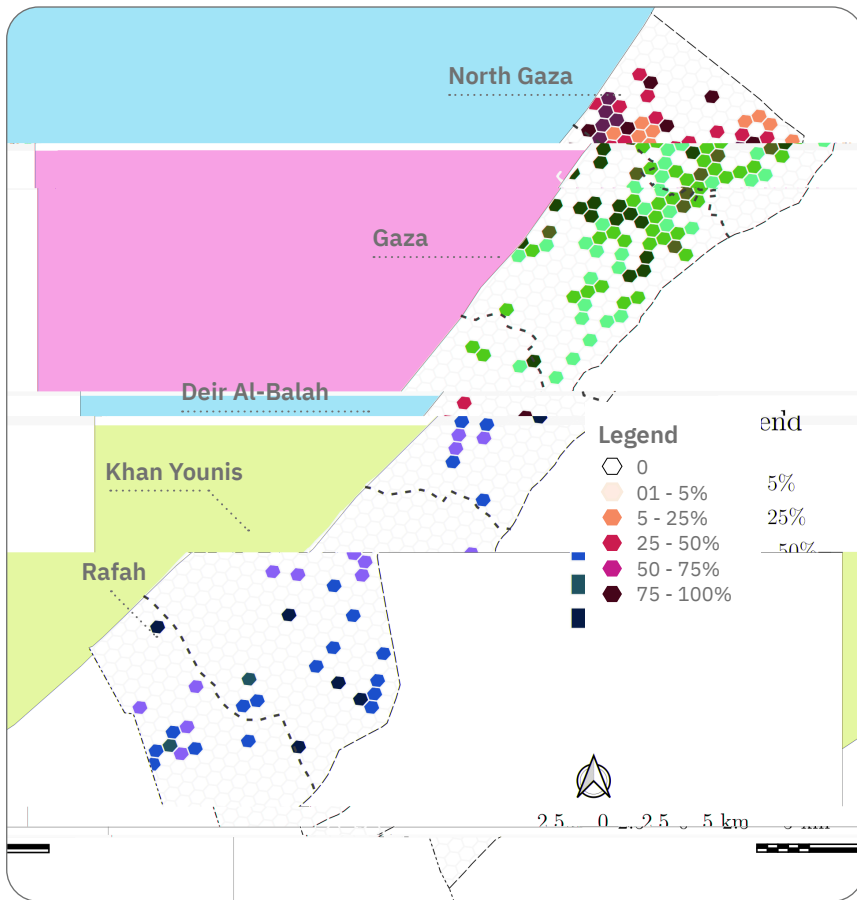




Damage to agricultural wells due to the conflict in the Gaza Strip as of 31 December 2023



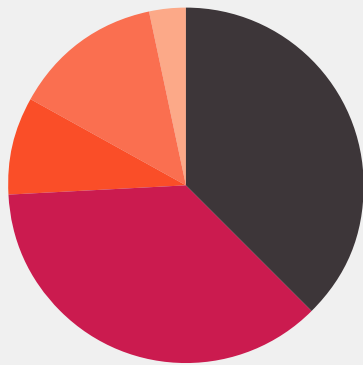
Damage to agricultural wells

The damage to agricultural wells was estimated using the available Sentinel 1 SAR images on October 12, 13, 24, 25, December 11, 12, 22 and 23.

This is a proxy measure of damage estimated by implementing the so-called coherence change detection (CCD) algorithm. Three image pairs were used — two pre-event sets and one post-event set.

The coherence layers were calculated for each pair to assess the changes. This damage proxy map (DPM) detects the changes in the built-up area.

The number of damaged agricultural wells was calculated based on their location within a 15-meter radius area around a damaged site. The grid depicts the severity of damage in localised areas; in each tile number of damaged wells was divided by the total number of wells.



Damaged wells by Governorate

percent

Governorate	Total Wells	Damaged Wells	Percentage
North Gaza	614	184	30%
Gaza	609	178	29.2%
Deir Al-Balah	464	44	9.5%
Khan Younis	410	66	16%
Rafah	164	16	9.8%
Total	2 261	488	21.6%



Key messages

1. The total number of damaged agricultural wells in the Gaza Strip was 488.
2. The governorate of North Gaza had the largest number of damaged wells (184 damaged).
3. The governorate of Gaza had the second largest damage to wells (178 damaged).

This assessment has been conducted based on available satellite imagery, ancillary data and remote sensing analysis for the period 7 October - 31 December 2023 without field validation. Agricultural well data from 2021 was used as baseline data due to limited availability for data collection in the area of interest and time constraints related to the nature of the report. This assessment was conducted by the Geospatial Unit at the Land and Water Division (NSL) of FAO and will be further complemented with additional field assessment and use of very high-resolution imagery. The boundaries and names shown, and the designations used on these map(s) do not express any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

