Damage to greenhouses due to the conflict in the Gaza Strip as of 15 February 2024

**Damage to greenhouses**

The damage to greenhouses was estimated using the available Sentinel 1 SAR images on January 04, 05, 16, 17, 28, 29, February 09, 10.

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 area of damaged greenhouses was calculated by overlaying the greenhouse distribution layer on the damage proxy map. The grid depicts the severity of damage in localised areas; in each tile the area of damaged greenhouses was divided by the total greenhouse area.

**Key messages**

1. 26.6% of all greenhouses have been damaged.

2. The governorate of Khan Younis had the largest area of damaged greenhouses in hectares (149 ha; 35.1% of all greenhouses).

3. The governorate of Gaza had the largest proportion of damaged greenhouses (20 ha; 54.9% of all greenhouses).

This assessment has been conducted based on available satellite imagery, ancillary data and remote sensing analysis for the period 7 October - 15 February 2024 without field validation.

Greenhouse 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.

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