Cropland assessment

FAO and UNOSAT have conducted a series of geospatial assessments of agricultural land and infrastructure to assess damage due to the conflict in the Gaza Strip. Cropland category maps will facilitate assessments of damage to key agricultural sectors and inform rehabilitation strategies.

WorldView2 very-high resolution multispectral (2m) and panchromatic (0.5m) satellite imagery and Sentinel-2 (10m) multispectral monthly imagery from February-May 2023 were used.

539 training data points were collected, identifying crops based on NDVI profiles, crop calendars, and WorldView-2 imagery. An accuracy assessment was conducted using 30 percent of the samples to validate the map. The cropland category map achieved an overall accuracy rate of 72 percent.

Key messages

1. The area of cropland in the Gaza Strip was determined to be 15 123 ha (42% of the total land area).
2. The largest cropland category is orchards and other trees** (8 854 ha), followed by vegetables (3 208 ha) and field crops (2 952 ha).
3. North Gaza has the largest area of field crops (964 ha) followed by Gaza (681 ha).

* To convert to the locally used unit of dunums, divide by 10 (1 ha is equal to 10 dunums).
** The land area estimate for the class “orchards and other trees” includes trees in agriculture, orchards and plantations, and is different from the class “tree horticulture” from the Agriculture Census (Palestinian Central Bureau of Statistics, 2021).

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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