Geospatial dataset of Gaza targeting polygons publicized by the IDF on December 1, 2023

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Purpose of dataset

To make available in a timely digital format the targeting zone polygons used by the Israeli Defence Forces (IDF) in Gaza beginning on December 1, 2023. These are broadly publicized and embedded in openly published web side, but not in a form that would allow maximum uptake by the affected public, humanitarian agencies and the research community. This dataset aims to rapidly allow a broader audience to utilize this information, whether for active use or as a longer-term record.

Background to dataset

Beginning on December 1, 2023, the Israeli Defence Forces (IDF) began publishing targeting zones maps within the Gaza Strip in various forms: in the daily briefings of the IDF Spokesman, in messaging apps and on social media, on the internet, and in leaflets. These showed numbered polygons, which were referred to in the IDF calls on a daily basis. The file and embedded descriptor of the HTML file on the IDF Block map website[1] are "Based on the ethics and values of our military institution, the IDF publishes a list of block numbers to guide Gaza residents in evacuating the targeted areas." The website text (translated from the original Arabic) states the intention of these "Blocks Numbers" as follows:

> Dear residents of Gaza!
> Please pay attention and check this map. Anyone who sees the block number in which he lives or is near it must track and follow the instructions of the IDF through various media outlets and obey them.
> Residents of Gaza!
> It is a safe way to preserve your safety, your lives, and the lives of your families.

The IDF web page contained an embedded map element utilizing the Leaflet open source Javascript library to display these zones overlaid onto standard OpenStreet tiles. In addition to the interactive web map, targeting announcements sometimes included a small static image in which the zones appeared as white outlines and labels, overlaid onto a low-resolution satellite image, on top of which was overlaid a bold orange polygon, announced as an area for evacuation, with three large arrows to the south, southeast, and southwest, indicating the rough directions for evacuation. A QR code linked to the interactive map at the aforementioned "Block Map" web site.

The usability of these maps is hampered by the constraints on the end users in Gaza, the graphic design, and the embedded or static nature of the map presentation. Thus, many of the Gaza residents that are the target audience of these maps would be likely to have limited electricity and internet access to utilise the interactive web map. They might also be unable to cognitively orient

[1] https://bit.ly/gaza_blockmap1 accessed on Dec. 1, 2022.

using the static map, which lacks orienting features besides the zone polygons, and also appears rotated by about 30 degrees from North-South in order to render Gaza's diagonal coastline in a space-maximising direction of due east to west. In addition, there are discrepancies between the targeting zones polygons announced numerically and a considerably more extensive and not fully conforming evacuation area outline. And, beyond the lay user, the IDF targeting polygons were not made downloadable in a standard geospatial format that could be used by the wider audience of secondary users, despite their basis in cadastral divisions long in public use (they are an extension into Gaza of the standard and commonly available Israeli cadastral blocks, some aspects of which date to the pre-1948 period of the British Mandate).

Intended use of this dataset

Despite the declared life-saving function of the targeting spatial data, it was released only as an embedded within a web page or a low-resolution static image, with no accompanying downloadable version available in one or more standard geospatial formats (GeoPackage, Shapefile) as is common with non-proprietary government data of public importance. This led to considerable frustration expressed by a range of potential users, with neither the time or expertise to georeference or extract data from the IDF notifications. For example, humanitarian agencies could benefit from being able to readily overlay the polygons on other features (schools, clinics, etc.), analyse the number of people or buildings in a given zone, or assess movement routes through a severely damaged urban road infrastructure, etc.

This dataset is a stop-gap measure in this situation, to make the IDF targeting zones available for download for humanitarian, research, and other public purposes. I extracted the GeoJSON polygon object strings from the Leaflet map embedded in the html file placed on the internet on Dec. 1, 2023 by the IDF, and converted these to two standard Geospatial formats.

Notes and limitations

- This data is provided "as is" for humanitarian, research, and public use. Please refer to the dataset DOI and version number in using this data, as the zoning system used may change over time, or be superseded by other or altered targeting schemes.
- There is considerable and violent debate about the larger context and manner in which the IDF targeting announcement system is used. At one end of the spectrum, for example, are those that say that Israel's prior announcement of targeting areas is an exceptionally ethical practice in a fierce war situation. At the other are those that say that this is a futile practice for a population that has limited ability to respond, or even a cynical performative manoeuvre intended not so much for the recipients as for international public opinion and, in particular, to American pressure on Israel to reduce humanitarian casualties. This data is not intended to intersect with those debates. The bottom line is that the data is out there already, but in a degraded and inaccessible form, and this dataset steps into that gap--whether to further improve and broaden the utility of Israel's warning system, underscore its flaws and futility, or, simply to track its use and consequences.
- The dataset can be easily downloaded. Researchers, organizations, and others interested in further discussion of the dataset or topic are invited to email me with the subject line "IDF targeting polygons."