

The New Digital Atlas of Israel: Transitioning from Print to an Interactive National Cartographic Knowledge Hub

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Abstract:

For decades, the Atlas of Israel has served as the definitive national record of the country's geography, history, and demographics. Since its first appearance in 1956, it has been published in five major editions, evolving from a massive national tome to a school atlas format. While successful, the last printed edition was released in 2008 (Hebrew) and 2011 (English), leaving the current data significantly outdated. The traditional print format has proven limited in accessibility, difficult to update regularly with shifting socio-economic and demographic trends, and incompatible with modern digital learning environments in the education system. The transition to a digital atlas integrates with the digital classroom and allows for continuity of studies during distance learning in times of emergency. Therefore, the project has been revitalized as a fully digital initiative (figure 1).

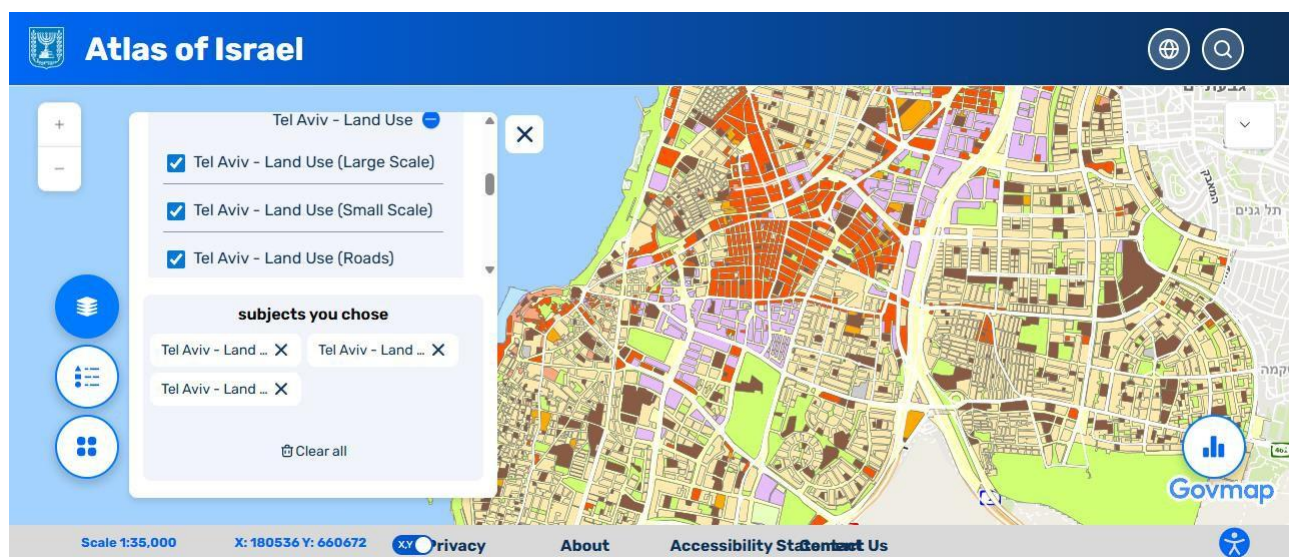


Figure 1. The Atlas of Israel – main interface

The new Digital Atlas of Israel is designed to be a government-led national cartographic knowledge center free from external commercial influences. Its core objective is to provide a reliable, academically-vetted geographical layer for educational, historical, and current affairs purposes. Key features of the digital platform include: Multi-lingual Accessibility: Full support for Hebrew, English, and Arabic, with specific adaptations for the visually impaired; Dynamic Updating: A shift from static maps to a system capable of continuous data expansion and integration; BroadTarget Audience: Designed for students (from primary school to university), researchers, decision-makers, the general public, and international users.

The project utilizes a modern, map-centric technical stack to ensure performance and scalability: Cloud Infrastructure: The platform is hosted on Amazon Web Services (AWS); Frontend & User Interface: Developed using Angular, focusing on an interactive, map-centric experience featuring information windows, base map toggles, and legend;

Content Management: A Drupal-based CMS serves as the Backoffice, allowing for the management of text, links, and user permissions; GIS & Data Integration: The atlas leverages Governmental map website (Govmap) layers and API integrations to deliver geographic information. Data processing involves FGDB and Lyrx/Sld formats for precise cartographic representation and symbology; Cartographic Detail: Users can access diverse base maps, including street views, orthophotos, historical maps, and topographic maps.

The project's success relies on a tripartite partnership: The Survey of Israel (MAPI): Responsible for project management, mapping infrastructure, technical integration data collection and cartographic design; The Ministry of Education: Provides part of the funding and oversees pedagogical adaptation to ensure the atlas meets national curriculum standards; The Hebrew University of Jerusalem: Provides academic authority, scientific consultation, and data editing.

The Digital Atlas of Israel breaks through the limitations of a printed atlas, by allowing the user flexibility in the ability to select layers for display and assemble thematic maps on demand. The platform allows for the study of a specific topic at different geographical levels of division. Unlike the printed atlas, which was limited in its number of pages, the digital atlas has no limitations of content and scope, and the only limitation is the ability to collect and process data. This digital shift will allow the preparation of new chapters for the Atlas of Israel, updating existing data as soon as they are available, and connecting to government systems as a source of official and up-to-date data.

References

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