

The Survey of Israel Heritage Website

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PREFACE

The Survey of Israel (SOI) Heritage web-site consists of articles, documents, interviews, maps and photos that all deal with the history of the SOI. The agency was founded in 1920, when the British Survey Department (SOP – Survey of Palestine) was established. Eighty three years later, shortly after entering office as Director General, Dr. Haim Srebro, decided to create a website, in order to preserve the unique history of the SOI.

1. COLLECTING INFORMATION

We started interviewing the SOI veterans, beginning with the “elders”, the workers from British mandate period, and subsequently we interviewed the "youngsters". Some of them started working at the SOI during the first years of the state of Israel. We also started collecting a great deal of documents, photos, certificates, annual reports, official publications, maps, and academic theses. We spent time searching data in libraries and archives, even in the archives of the underground movements. Dr. Dov Gavish’s book, **Land and Map, The Survey of Palestine, 1920-1948**, helped us in documenting the British mandate era in Palestine. Dr. Ron Adler & Dr. Dov Gavish’s book, **50 Years of Mapping Israel**, helped us in documenting the SOI since the establishment of the State of Israel. All these, complimented with the interviews were the basis for the web-site articles. We are now ready to open the web-site on the internet.

The data we have collected is vast and interesting. For example, among the thousands of photos, there are some very unique and rare ones. For example, a photo shows a plow-line made by a tractor, in order to draw the Armistice Demarcation line between Israel and Egypt in the Gaza Strip in the 1950’s (figure 1, was taken by one of the Israeli surveyors). A second one (figure 2) is a rare photo of students in the surveying school in Jenin, 1942. Among them - members of the El- Husseini and Nashashibi families, who were leading the Palestinian people at that time; and with them, Jewish students, some of them were members in underground units. They studied, ate and slept together, and even played soccer together on the same team.



Fig. 1: A plow-line made by a tractor, in order to draw the Armistice Demarcation line between Israel and Egypt in Gaza Strip in the late 1950's.



Fig. 2: The students' soccer team at the surveying school in Jenin, 1942.
In the center : El- Hussein. On the extreme right and left of the photograph: his Jewish friends at school.

2. THE SCOPE OF THE WEBSITE

The website includes a variety of topics. These topics deal with the historic developments, the professional development, and the human resources.

3. THE WEB-SITE SECTIONS

The website topics are divided into the following sections:

The SOI History: This section contains several subjects: establishment of the geodetic infrastructure, land survey and cadastral mapping, topographic and engineering mapping for new settlements and roads, leisure, military purposes, historic and political events.

The history section is divided into two periods: The British mandate period (1920-1948), and the State of Israel period, from 1948 to the present. In spite of this division there are subjects that we have to discuss them as a long process. For example, the cadastral survey and mapping. The Survey of Palestine was established for the purpose of cadastral survey and mapping, as an office that is involved in Land Registration, in order to promote economic development. In the 1930's the cadastral survey almost came to a complete halt. Instead, emphasis was placed on topographic maps. Later on, the cadastral survey came back into operation, until the last year of the British mandate. At that point, the cadastral mapping covered 20% of the area of Palestine. In the early years of the State of Israel, the requirements of the newly established state, dictated a delay in cadastral surveying and putting much greater efforts on engineering and topographic surveys. The cadastral surveys were re-initiated during the late 1950's.

The figures below show the cadastral development during the two periods (The British mandate period and the State of Israel period). The first figure is a specific publication from 1931 deals with the cadastral survey regulations in Palestine. It was published after the reform implemented at the Survey department after formalizing the Torrens system. Figure 3 shows the opening page of this publication, and figure 4 is a drawing portraying how to fix a triangulation point.

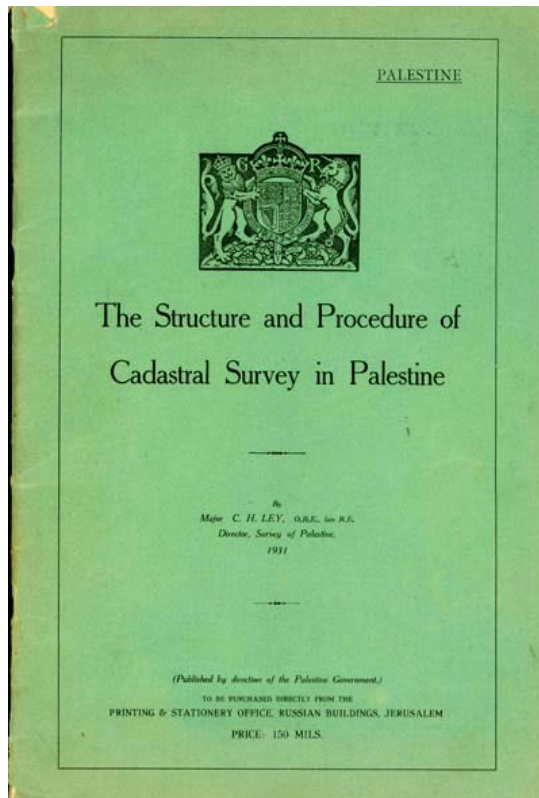


Fig. 3: The opening page of The Structure and Procedure of Cadastral Survey in Palestine, by C. H. LEY, Director, Survey of Palestine, 1931.

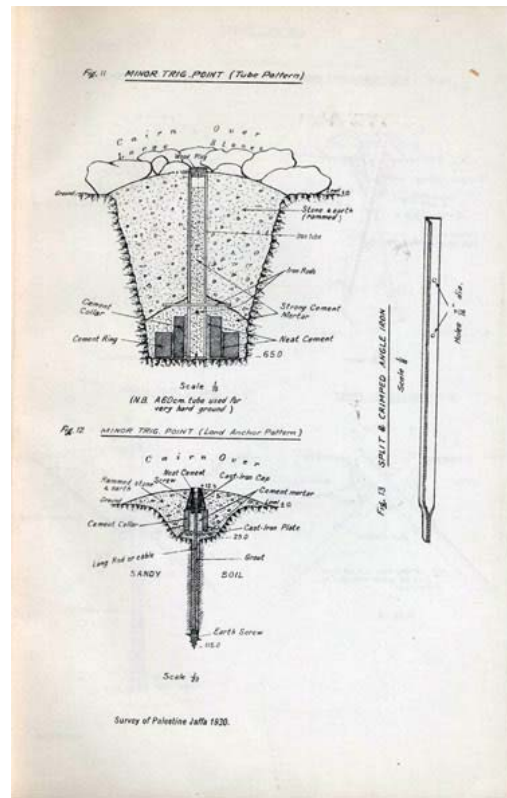


Fig. 4: A drawing portraying how to mark and fix a triangulation point, in The Structure and Procedure of Cadastral Survey in Palestine.

The development of the cadastral surveys: **1928 status** – the cadastral mapping covers parts of the coastal plain, and the Jordan valley (figure 5). **1946 status**, the latter part of the British mandate, the mapping covers 20% of the area, 5,240,044 dunams, including the coastal plane, Jordan Valley ,Hula Valley, and Galilee. (figure 6).

Since the establishment of the State of Israel, during the 50's the focus was on finalizing the cadastre in the Galilee, during the 60's and 70's the Negev was surveyed and mapped. The Golan was finalized during the 80's. **2009 status** – Almost 95% of Israel's land, 20,877,136 dunams, are mapped and surveyed. (figure 7).

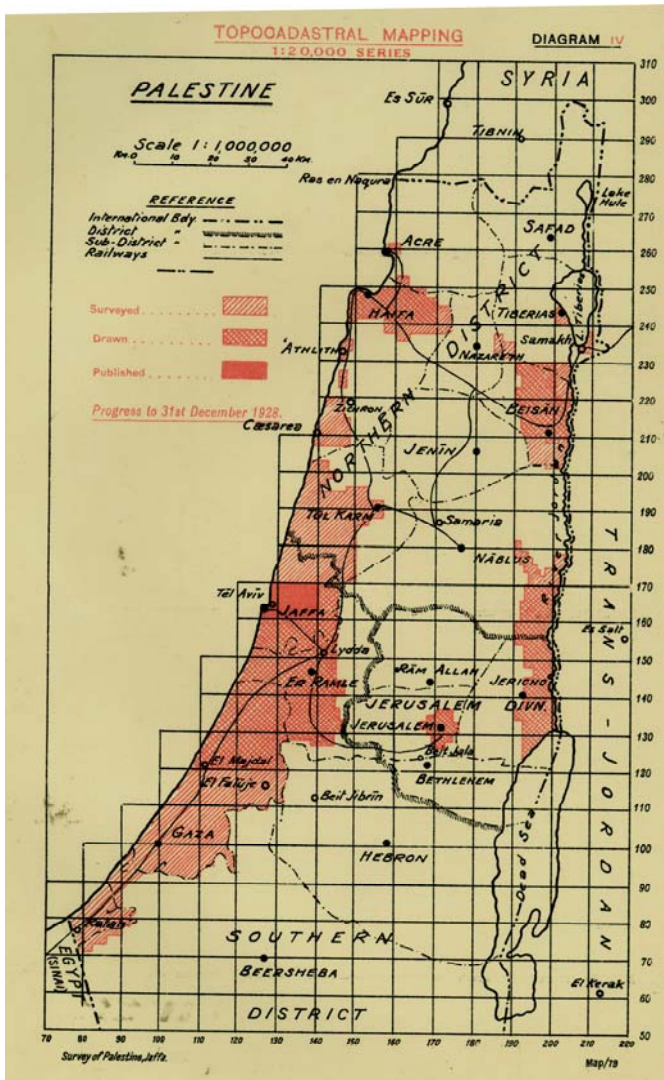


Fig. 5: The topocadastral mapping's status in Palestine, Annual Report of Director of Surveys, 1928.

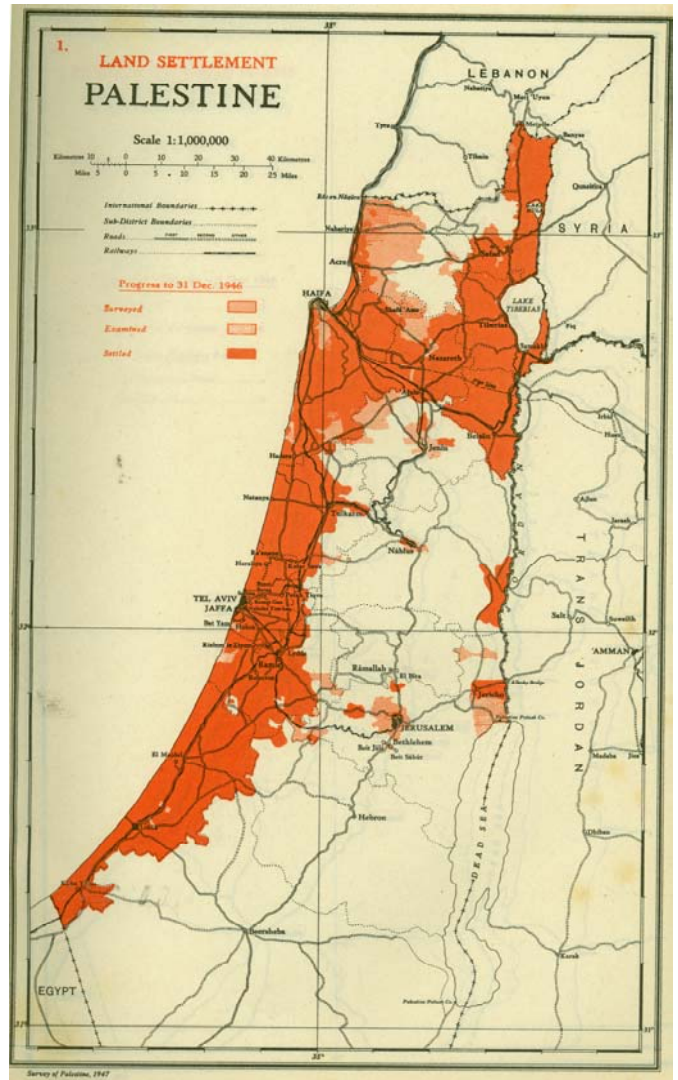


Fig. 6: The status of Land Settlement in Palestine, Report for the years 1940-1946, Department of Surveys, March 1948.

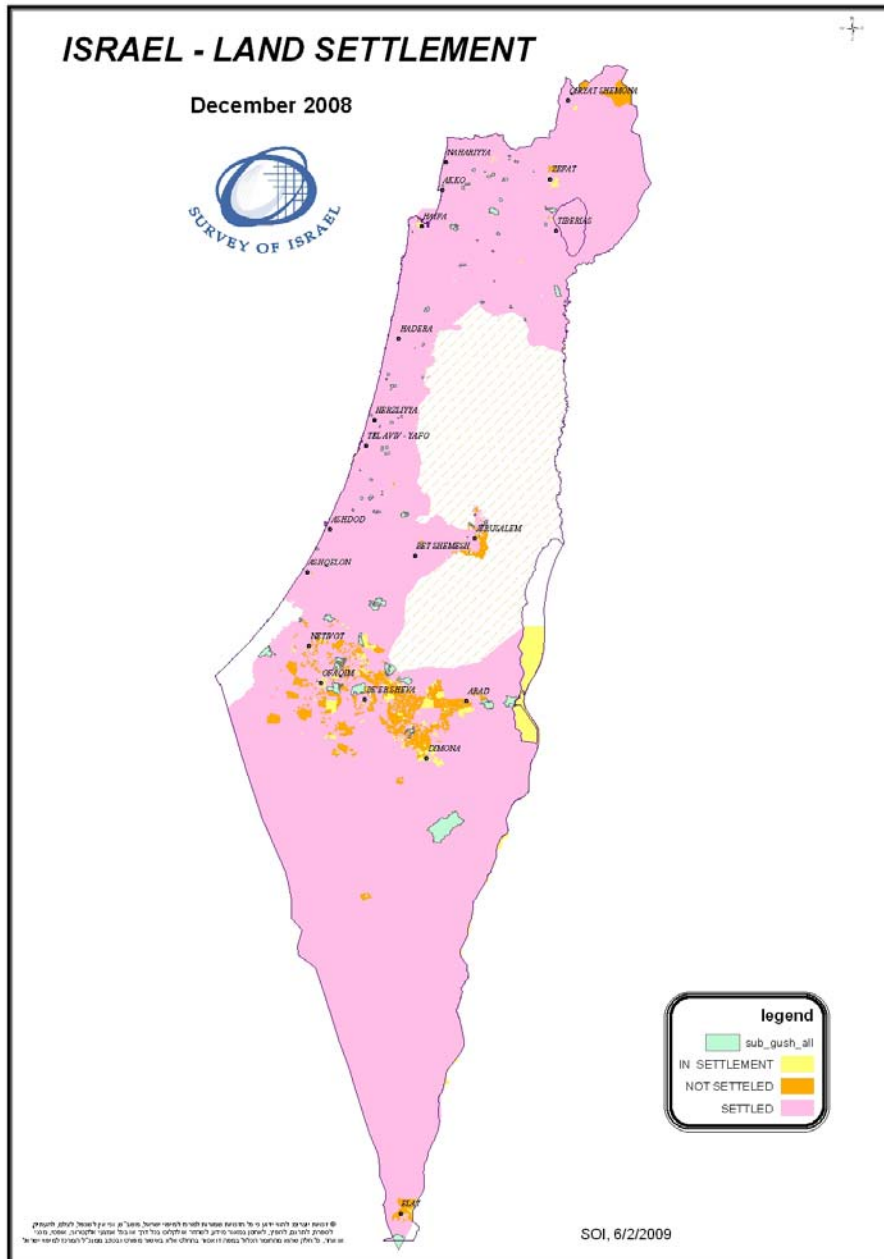


Fig. 7: Israel's Land Settlement, December 2008

During the first years of the State of Israel, the focus was on immigration absorption, and infrastructure development, including housing, roads, employment, etc. A map from August 1961 shows the newly established towns, and those planned (figure 8). A photo shows surveying operations at a new building site in Beer-Sheva during the 50's (figure 9).



Fig. 8: A map of development towns in Israel, printed in August 1961. 22 towns built or under construction (in red), 6 planned towns (in green. only 3 of them were eventually constructed).



Fig. 9: Surveyors at a new building site in Beer-Sheva during the 1950's.

We must say, that in the first years of the State of Israel, the SOI relied on the existing survey and mapping infrastructure left by the British. This, enabled the Israel Survey department to continue map series, maintenance of the triangulation network etc. It took years, until we started to convert to new projections, surveying methods, and new map series etc.

4. THE SOI DIRECTORS

This section includes references to all the directors, from the first one in 1920. During the British mandate there were 6 directors, the first of which was temporary, and another two were acting directors. Since the establishment of the state of Israel there have been another 6 directors, of which one was temporary, and one was acting director. The web-site shows each one of them, his management methods, his managerial and professional preferences, and his contribution to the SOP/SOI.

5. THE SURVEY WORK FORCE

During the mandate period the managers were British, and the workers were locals: Moslems, Jews, Armenians, Greeks, and others. The relationship among the locals was as shown in figure 2. Figure 10 shows managers and workers in the SOP yard in 1938.

Since the establishment of the State of Israel the workforce changed: released soldiers, new immigrants, and locals came, some of them learnt at The Surveyors' High School that was

opened in Holon (near Tel-Aviv). During the 90's there was a large wave of immigration from the former Soviet Union from which the SOI recruited many professionals. The stories published on the web-site are many and varied: tales about immigration, stories about studying in surveyors' school; Mr. Feldencreis's story, the inventor of the Feldencreis technique, who worked in SOP; Also, SOP and SOI Workers were Soccer players, and members of the national team; Friedle Stern, caricature artist, worked in SOP and afterwards in SOI.



Fig. 10: Management personnel and workers in the SOP yard in 1938. In the small photo: F.J. Salmon, Commissioner for Lands and Surveys, and two senior administrators. In the website, one can scroll to zoom in, and see each worker enlarged.

6. THE DEPARTMENTS

Each department is dealt with separately. The working methods, typical instruments, the workers, the products, and the atmosphere.

The Surveyors, for example, started with measuring tapes, theodolites and levels. Today we use GPS with computers instead of field notebooks.

7. MAPS AND MAPPING

This is one of the most fascinating subject, which includes typical maps from the 6th century up to the present. The Madaba map (figure 11), the pilgrim maps from the middle ages, the Jacotin map from the Napoleon invasion to Palestine (figure 12),



Fig. 11: The Madaba mosaic map, from the 6th century, was found on the floor of an ancient church in Madaba, Jordan. The map shows the country of Palestine. In the photo we can see the Jerusalem area.



Fig. 12: A section of one of the six sheets of Jacotin map that covers Palestine. The map was made after the Napoleon invasion to Palestine. The map shows the gulf of Acre, the last place Napoleon reached.

The Palestine Exploration Fund maps, military maps from WW1, Mandate maps and Israeli maps. Various subjects: Physical maps, touring maps, geological maps, land uses, settlements, Armistice Demarcation and Cease-Fire line maps, etc.

This part also includes Atlases such as those edited by Zeev Jabotinsky, Abraham-Jacob Brawer and Moshe Brawer, as well as Israel Atlas. Here is a sample from the Israel Atlas 2nd release (figure 13) and from the 2008 publication (figure 14).

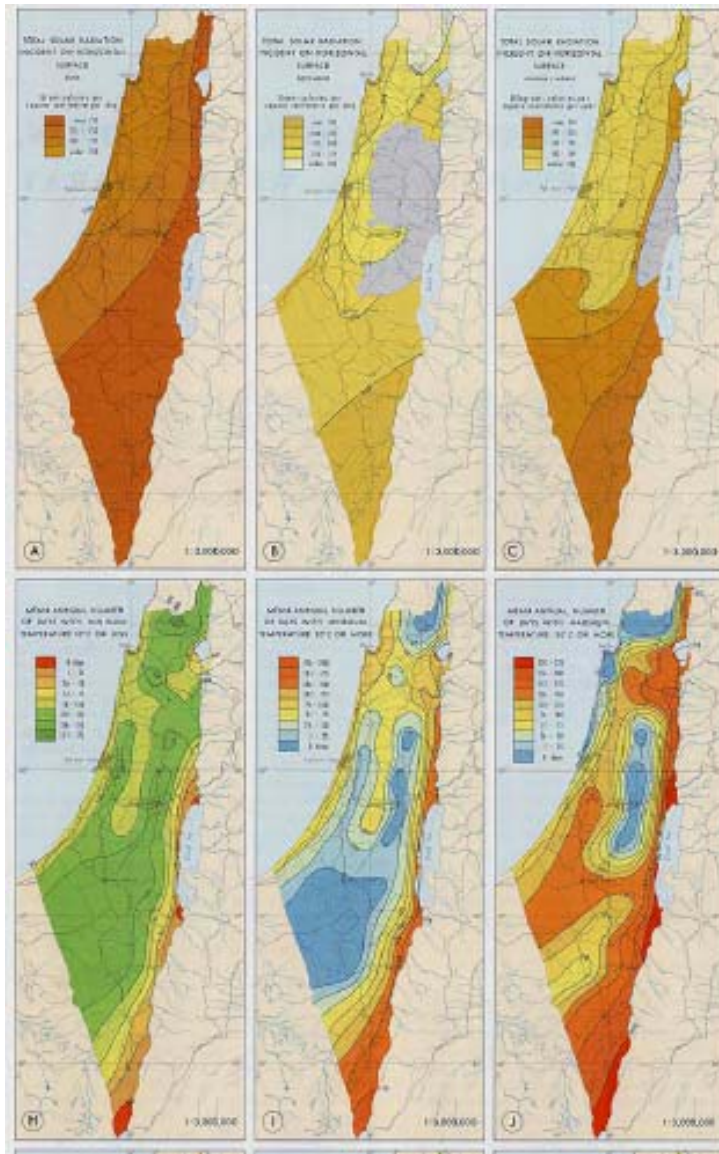


Fig. 13: Meteorologic maps of Israel.
 A sample from the Israel Atlas 2nd release, 1970.



Fig. 14: Comparison between aerial photographs and maps. A sample from the New Israel Atlas, 2008.

8. INSTRUMENTS

This part deals with the instruments and methods used for daily work. The technological advancement of the surveying equipment, the photogrammetry instruments, computers – all this is demonstrated in this section of the web-site with regard to the SOI. For example, calligraphy that was written in 1936 (figure 15) was replaced initially by rub-on letters, (figure 16) and has been replaced since then by font types on computers (figure 17).



Fig. 15: Calligraphy. Was written in 1936 as an examination for a new worker in SOP.



Fig 16: Sheets of rub-on letters.



Fig. 17: Working with computer fonts instead of calligraphy and Sheets of rub-on letters. 2008.

9. CULTURE AND ATMOSPHERE

During the British mandate period the relationship between management and workers was more formal and rigid. Among the workers themselves, regardless of nationality, the relations were much more friendly.

A special atmosphere was developed among the field surveyors who lived together much of the time (figure 18).



Fig. 18: SOI surveyors with Prime Minister, David Ben-Gurion at a surveying operation in the Negev (in the 1950's). A special atmosphere developed among the field surveyors who lived together, sometimes for the entire week.

The SOI journal, that was published over a period of 12 years, from 1976 to 1988, consisted of many articles, stories and jokes that described cultural events, parties, field trips etc. The journal was a very good source for understanding the general atmosphere in the SOI's departments.

10. BOUNDARIES, DEMARCATION AND SURVEY

The State of Israel is "surrounded with many boundaries", Some of them were imposed by wars, and others – by peace treaties. In 1906 the border agreement between the Ottoman empire and the British empire was signed. In 1922 "The Palestine Order in Council" was

published regarding the division between Palestine and the area of Trans Jordan, through the Arava Valley, Dead Sea and Jordan River (figure 19).

In 1923 the northern boundary between Britain and France was approved, after it was temporarily demarcated by the boundary surveyor envoy (figure 20). The SOP surveyors, together with the French surveyors, finally marked the permanent line.

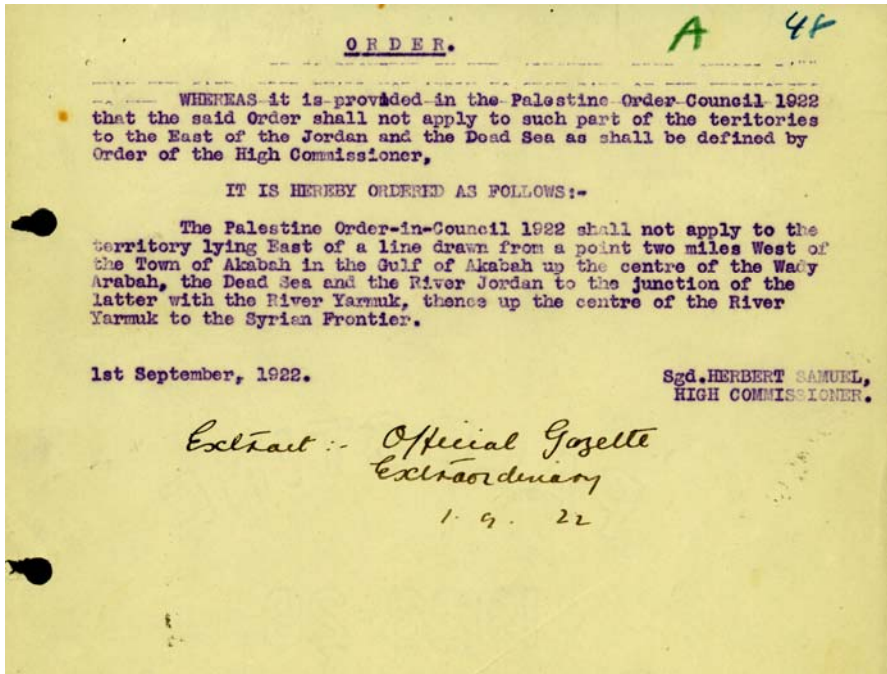


Fig. 19: An order of the High Commissioner to be published in the Official Gazette, about separating Trans-Jordan from Palestine. September 1922.

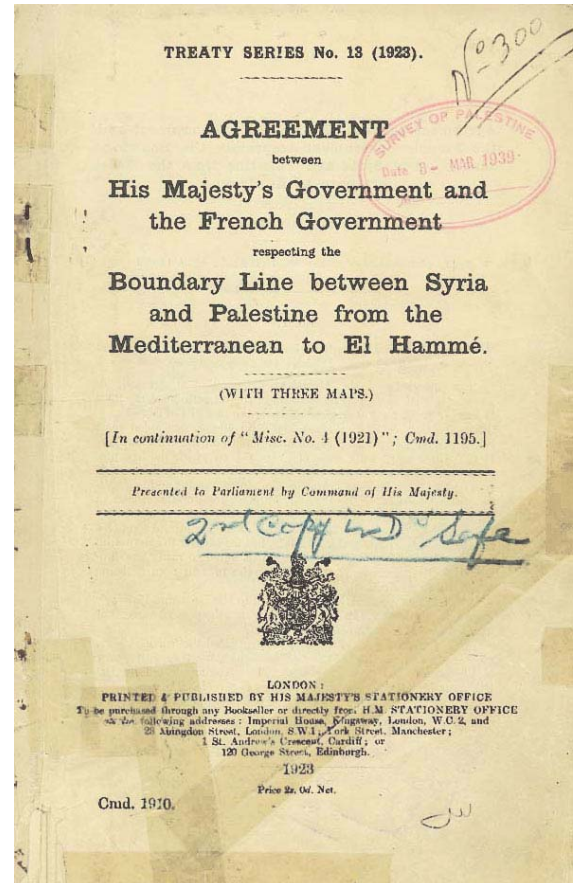


Fig. 20: The opening page of the agreement between Britain and France regarding the boundary line between Syria and Palestine, 1923.

Between 1949 to 1967 the Armistice Demarcation Lines between Israel and the neighboring countries were maintained by the SOI surveyors. Some of the operations were bilateral, some one-sided. figure 21 shows an example of bilateral survey with the Jordanians.



Fig. 21: An example of the bilateral surveying to correct the Armistice Demarcation line. Israelis and Jordanians with a plain table and a border point marker.

During the Egypt-Israel peace talks, the SOI workers took part in the border demarcation. Figure 22 shows the positioning of a border pillar along the Egypt-Israel border in 1982, after the peace treaty. On the left, the old pillar from 1906.



Fig. 22: A border pillar in the Egypt-Israel border after the 1982 peace treaty. On the left, the old border pillar from 1906 agreement

11. THE WEB-SITE STAFF

Mr. Zion Shitrug, Ex.-SOI Director General, Mr. Sergio Duyeb, Ex.-Director of the Cartography Dept. together with myself, are responsible for the content. Mr. Ofer Angert is the webmaster.

Many thanks go to Dr. Haim Srebro, who honored us with the task of implementing this fascinating project.

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