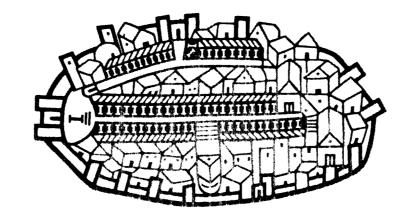
# ATLAS OF ISRAEL

## CARTOGRAPHY PHYSICAL AND HUMAN GEOGRAPHY

THIRD EDITION



**PUBLISHED BY** 

THE SURVEY OF ISRAEL, TEL-AVIV AND

MACMILLAN PUBLISHING COMPANY NEW YORK

COLLIER MACMILLAN PUBLISHERS LONDON

1985

Overleaf: Madaba Map - Stylized rendering of Jerusalem as it appears in the mosaic map of Israel, known by this name. Discovered in 1884 in Madaba, Jordan, it is the oldest detailed map of a country. Scholars date it to between 560 and 565 CE. For the site of Madaba see Sheet 3, square P18.

Copyright © 1985, Survey of Israel

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without permission in writing from the Publisher.

Macmillan Publishing Company A Division of Macmillan, Inc. 866 Third Avenue, New York, N.Y. 10022

Collier Macmillan Canada, Inc.

Atlas of Israel, Third Edition (English-Hebrew). Edited, drawn and printed by Survey of Israel. Translations, editing and typesetting of texts coordinated by Carta, The Israel Map & Publishing Co., Ltd. First Edition (Hebrew) 1956–1964

First Edition (Hebrew) 1956–196 Second Edition (English) 1970

Library of Congress Cataloging-in-Publication Data

Karta (Firm)
The atlas of Israel.

1. Israel—Maps. G2235.K3 1985 912'.5694 85-675163 ISBN 0-02-905950-X

Printed in Israel

821 038: ed. 3 fol. 75



#### **EDITORIAL BOARD**

#### **RON ADLER**

Director, Survey of Israel

#### DAVID H.K. AMIRAN

Professor-emeritus of Geography, The Hebrew University of Jerusalem; Director, Jerusalem Institute for Israel Studies

#### HENRI ELIAKIM

Former Head, Division of Cartographic Reproduction, Survey of Israel

#### MORDEHAI H. GILEAD

Former Director,
Israel Meteorological Service, Ministry of Transport

#### YITZHAK HINBERGER

Inspector of Geography,
Ministry of Education and Culture

#### NAFTALI KADMON

Chief Cartographer, Survey of Israel;
Professor of Cartography,
The Hebrew University of Jerusalem
Managing Editor

#### MICHAEL KANTOR

Senior Cartographer, Survey of Israel

#### ARIE SHACHAR

Professor of Geography,
Director, Institute of Urban and Regional Studies,
The Hebrew University of Jerusalem

#### REUVEN TSAMERET

Director, Geographical Division, Central Bureau of Statistics

#### **AUTHORS**

	Sheet		Sheet	
ADLER, RON	Director, Survey of Israel, Ministry of Construction and Housing6	LEIBNER, ISRAEL	Director, Social Statistics Division, Central Bureau of Statistics28	
AMIRAN, DAVID H.K.	Professor-emeritus of Geography, The Hebrew University of Jerusalem,	LEVI, MICHAEL W.	Former Head, Forecasting Section, Israel Meteorological Service14	
	and Director, Jerusalem Institute for Israel Studies	LEVIE, EMIL LOUIS	Agricultural Economist, Former Agricultural Advisor to UNFAO	
ARNON, OSNAT	Acoustician, The Environmental Protection Service39	MANÉ, URI	Former Deputy Director (Climate), Israel Meteorological Service	
ARYEH, ELIAHU	Oil and Geophysical Research Institute 10	NIR, DOV	Professor of Geography,	
AVNER, URI	In Charge of Social Statistics, Central Bureau of Statistics	NOAM, MICHAEL	The Hebrew University of Jerusalem11 Former Director, Agricultural Statistics	
BAER, NAFTALI ZVI	Senior Cartographer, Department of Geography, The Hebrew University of Jerusalem11	OPATOVSKY, LEAH	Section, Central Bureau of Statistics	
BARAM, ZOHAR	Municipality of Elat22	OPPENHEIM, ALEXANDER	Department of Geography,	
BARELL, VITA	Head, Health Services, Research Unit, Chaim Sheba Medical Centre, Tel-haShomer. 27	RAMON, HAYA	The Hebrew University of Jerusalem37 In Charge of Subject Planning,	
BARTOV, YOSEF	Director, Geological Survey of Israel, Ministry of Energy and Infrastructure9, 10	,	Census of Population and Housing, Central Bureau of Statistics27	
BENTOR, YAAKOV	Professor- emeritus of Geology, The Hebrew University of Jerusalem9, 10	REICHMAN, SHALOM	Professor of Geography, The Hebrew University of Jerusalem37, 38	
BEN-ZVI, ARIEH	Hydrologist, Israel Hydrological Service, Ministry of Agriculture15	RINDSBERGER, MICHAEL	Director of Training Division, Israel Meteorological Service	
BRAWER, MOSHE	Professor of Geography, Tel-Aviv University 25	ROSENAN, NAFTALI	Former Deputy Director,	
EIGER, DAVID	Sports Commentator28	COUNTEL 7 LIGHT O	Israel Meteorological Service	
EYAL, MOSHE	Geology Department, Ben-Gurion University of the Negev, Be'ér-Sheva'	SCHMELZ, USIEL O.	Professor of Contemporary Jewish Demography, The Hebrew University of Jerusalem, and Advisor to the	
FEITELSON, ERAN	Department of Geography, The Hebrew University of Jerusalem37, 38		Central Bureau of Statistics	
GAFNI, GABRIEL	Head, Department of the Environment, Nature Reserves Authority	SHACHAR, ARIE	Professor of Geography, and Director, Institute of Urban and Regional Studies, The Hebrew University of Jerusalem17, 18, 19, 20, 21, 22	
GANOR, ELIEZER	Research Institute for Environmental Medicine, Ministry of Health	SHAMIR, GERSHON	Director, Physical Planning Division, Ministry of Tourism	
GILEAD, MORDEHAI H.	Former Director, Israel Meteorological Service, Ministry of Transport	SHIMRON, ARYEH E.	Senior Researcher, Geological Survey of Israel9, 10	
GILEADI, YAIR	Geographic Planner, Ministry of Tourism33	SHINAR, AMNON	David Yellin Teachers Seminary, Jerusalem 22	
GONEN, AMIRAM	Professor of Geography, The Hebrew University of Jerusalem22	SOFFER, ARNON	Professor of Geography, Haifa University 21	
GRADUS, YEHUDA	Professor of Geography, Ben-Gurion University of the Negev, Be'ér-Sheva'22	SOFFER, TAMAR	Senior Cartographer, Department of Geography, The Hebrew University of Jerusalem17, 18, 19, 20, 21, 22	
HAYOT, YEHUDA	Department of Geography, Haifa University22, 38	STERN, ELIAHU	Senior Lecturer, Department of	
KADMON, NAFTALI	Chief Cartographer, Survey of Israel, and Professor of Cartography,	·	Geography, Ben-Gurion University of the Negev, Be'ér-Sheva'37	
VADMON MADIANNE	The Hebrew University of Jerusalem1, 2-5, 6, 7, 8, 39 Senior Cartographer,	STERN, SHIMON	Department of Geography, Bar-Ilan University, Ramat-Gan22	
KARMON, MARIANNE	Department of Geography, The Hebrew University of Jerusalem	TOKATLY, YEHUDA L.	Director, Israel Meteorological Service, Ministry of Transport	
KARMON, YEHUDA	Professor-emeritus of Geography, The Hebrew University of Jerusalem22	TSAMERET, REUVEN	Director, Geographical Division, Central Bureau of Statistics	
KATSNELSON, JACOB	Former Head, Climatographical Documentation, Israel Meteorological Service 12, 13	ZADKA, PNINA	Director, Health Section, Central Bureau of Statistics27	
KIMHI, ISRAEL	Head, Policy Planning Division, Municipality of Jerusalem	ZARHI, AMOS ZARHI, SHAUL	Engineer and Economist, Tel-Aviv	
KIPNIS, BARUCH A.	Professor of Geography, Haifa University 21, 22	Li min, on to		
KLEIN, CIPPORA	Hydrologist, Israel Hydrological Service, Ministry of Agriculture			

Cartography and photo-lithography:

Head, cartographic team - Michael Kantor

Cartographers - Edna Karny, Shoshana Karpati, Eva Lingo, Marie-Claude Slavin

Editorial assistant - Adina Gafni

Reprography by the Photographic Department of the Survey of Israel

Ministry of Agriculture ......15

### **CONTENTS**

Sheet No.	Contents	Editor	Sheet No.	Contents	Editor
	Preface		21	Hefa (Haifa) - Urban Geography	
	Geographical-Administrative Divisions				Marianne Karmon,
	Measures and Currency				Tamar Soffer
	Transliteration of Place Names		22	Medium and Small Towns	. David H.K. Amiran, Arie Shachar
1	Israel and the Middle East	. Naftali Kadmon	aftali Kadmon	Population	. Reuven Tsameret,
2 – 5	Israel 1:250,000 Naftali Kadmon		23	1 Optilation	Usiel O. Schmelz
6	Geodesy, Geophysics, Index Maps	. Ron Adler, Naftali Kadmon	24	Fertility, Internal Migration and Immigration	. Reuven Tsameret,
7	Specimen Maps of the				Usiel O. Schmelz
	Survey of Israel (A)	. Naftali Kadmon	25	World Jewry. Boundaries of Israel	
8	Specimen Maps of the	NT (4.1' TZ 1	,	,	Moshe Brawer
9	Survey of Israel (B)		26	Education	. Reuven Tsameret,
	•	. Tosel Ballov			Uri Avner
10	Geology of Sinai. Samples of Geological Maps. Seismicity	Eliahu Aryeh	27	Standard of Living. Welfare and Health	
			28	Elections and Courts. Culture and Sport	. Reuven Tsameret, David Eiger
11	Geomorphological Map	. Dov Nir	29	The Labour Force	. Shaul Zarhi
12	Rainfall, Humidity, Evaporation,	. Naftali Rosenan, Mordehai H. Gilead	30	Industry and Crafts	. Shaul Zarhi
	Climatic Regions		31	Capital Formation and Business Services.  Sectorial Structure	. Shaul Zarhi
13	Annual Rainfall, 1932/33–1975/76	. Naftali Rosenan, Mordechai H. Gilead	32	Foreign Trade	
			33	Tourism	
14	Temperature, Radiation,				· Colonon Shamm
	Typical Weather Situations	. Naftali Rosenan, Mordehai H. Gilead	34	The Farm Population. Agricultural Production and Manpower	. Emil Louis Levie, Michael Noam
15	Ground Water	. Cippora Klein,	25	G. R. A. J. Amer	
16	Settlements by Type and Size	Arieh Ben-Zvi . David H.K. Amiran	35	Cultivated Area	. Emil Louis Levie, Michael Noam
17	Yerushalayim (Jerusalem) –		36	Livestock, Mechanization and Irrigation,	
1,	Urban Geography (A)	. Arie Shachar, Marianne Karmon,		Agricultural Industry	. Emil Louis Levie, Michael Noam
		Tamar Soffer	37	Surface Transport	. Shalom Reichman
18	Yerushalayim (Jerusalem) –		38	Air and Sea Transportation	
	Urban Geography (B)	. Arie Shachar, Marianne Karmon,	39	Environmental Quality	. Eliezer Ganor, Naftali Kadmon
		Tamar Soffer	40	Update of Population and Economy	. Reuven Tsameret
19	Tel-Aviv Metropolitan Area –			-1	
	Urban Geography (A)	. Arie Shachar, Tamar Soffer			
20	Tel-Aviv Metropolitan Area –				
	Urban Geography (B)	Arie Shachar,			
		Marianne Karmon,			
		Tamar Soffer	Explanatory notes are appended after the map section.		