MIDDLE EAST ILITARY BALANCE



Ephraim Kam - Zeev Eytan Edited by Ephraim Kam

IDLE EAST

1994-1995

Ephraim Kam - Zeev Eytan Edited by Ephraim Kam Library of Congress Catalog Card Number: 86-50920

Library of Congress Cataloging-in-Publication Data

ISBN 965-356-035-2

Published for the Jaffee Center for Strategic Studies by The Jerusalem Post POB 81, Jerusalem 91000, Israel

© Copyright 1996 Tel Aviv University Jaffee Center for Strategic Studies

All rights reserved. No part of this book may be reproduced in any form or by any electronic or mechanical means without permission in writing from Tel Aviv University

JCSS Publications

JCSS Publications herein present the findings and assessments of the Center's research staff. Each paper represents the work of a single researcher or team. Such teams may also include research fellows who are not members of the Center's staff. Views expressed in the Center's publications are those of the authors and do not necessarily reflect the views of the Center, its trustees, officers, or other staff members, or of organizations and individuals that support its research. Hence, the publication of a paper by the JCSS indicates that the Center has deemed it worthy of public consideration, but does not imply endorsement of conclusions or recommendations contained therein.

Academic Advisory Committee

Prof. Shlomo Ben-Ami

Prof. Nili Cohen

Prof. Dan Givoly

Prof. Gabriel Gorodetsky

Prof. Asa Kasher

Prof. David Menashri

Prof. Yochanan Peres

Prof. Ariel Rubinstein

Prof. Michal Shamir

Prof. Leon Shelef

Prof. Moti Sokolov

Prof. Ephraim Yaar

Prof. Dan Zakay

Additional Contributors

Mark Heller

Dr. Heller received a Ph.D. in political science at Harvard University. He joined the JCSS in 1979, and served as deputy director of the Center from 1984-1986. His publications include A Palestinian State: The Implications for Israel (Harvard University Press, 1983); No Trumpets, No Drums: A Two-State Settlement of the Israeli-Palestinian Conflict (co-authored with Sari Nusseibeh, 1991); and The Dynamics of Soviet Policy in the Middle East (Westview, 1991).

Zeev Maoz

Prof. Maoz joined the JCSS in 1994, when he received appointment as Center director. He received a Ph.D. in political science from the University of Michigan in 1981, and served as professor and chairman of the Department of Political Science at the University of Haifa. Prof. Maoz specializes in the theory of international relations, strategic and international security affairs, international negotiations, and foreign policy decision-making. His most recent books are: National Choices and International Processes (Cambridge University Press, 1990); Paradoxes of War: On the Art of National Self-Entrapment (Unwin Hyman, 1990); and Domestic Sources of Global Change (University of Michigan Press, 1995).

Shmuel Gordon

Colonel (Res.) Dr. Shmuel Gordon received a Ph.D. in strategic studies from the Hebrew University of Jerusalem. He joined the Israeli Air Force in 1964, served as a fighter pilot, squadron commander, and commander of the Air Force's C³I Center. From 1988 to 1992, he served at the RAND Corporation as a senior analyst in military doctrine and advanced systems. He now works as a research analyst and advisor to Israeli government ministries. He wrote "Conflict in the Air: Issues in Air Strategy of Germany and Britain, 1914-1945", Ma'arakhot, (1985, Hebrew), as well as many articles on Israel's defense and the problems of modern warfare.

Amos Gilboa

Brigadier General (Res.) Amos Gilboa was head of the Research an Estimate Division in IDF Military Intelligence, IDF attache is Washington, and chief of the Israeli delegation to talks with Lebano in 1984-85. From 1986 to 1989 he was the Prime Minister's Adviso on Israeli Arab Affairs. He writes on security issues for the daily Ma'ariv.

Yiftah Shapir

Mr. Shapir holds a B.Sc. degree in physics and chemistry from the Hebrew University, and an MBA degree (specializing in information technology and operations research) from the Tel Aviv University. Mr Shapir joined the JCSS in 1993. He was an associate of the Center's Project on Security and Arms Control, where he monitors proliferation of weapons of mass destruction in the Middle East. Recently he tool charge of *The Middle East Military Balance*, and is responsible for the quantitative part of the JCSS's annual publication. Before joining the Center, Mr. Shapir served in the Israeli Air Force in various posts involving instruction and analysis.

Contents

		Page
Preface		1
Part I	Strategic Developments	3
Chapter 1	The Peace Process	5
_	Mark Heller	
Chapter 2	The Arab Arena: Key Issues	37
-	Ephraim Kam	
Chapter 3	The Evolution of the Middle East Military	66
-	Balance, 1980-1994	
	Zeev Maoz	
Chapter 4	The Air Balance in the Middle East	93
_	Shmuel Gordon	
Chapter 5	Main Armies of the Middle East	130
_	Amos Gilboa	
Chapter 6	Ballistic Missiles in the Middle East	151
	Yiftah Shapir	
Figures		
Figure 1	Per Capita GDP of Israel's Reference Group	70
	(in US \$)	
Figure 2	Defense Burden in Israel's Reference Group	71
Figure 3	Military Expenditure Ratios: Various Coalitions	73
	vs. Israel	
Figure 4	Military Personnel in Israel's Reference Group	75
	(in thousands)	
Figure 5	Human Burden in Israel's Reference Group -	77
	Ratio of Armed Forces to Population	
Figure 6	Number of Combat Aircraft in Israel's Reference	79
	Group	
Figure 7	Number of High Quality Combat Aircraft	81
	in Israel's Reference Group	
Figure 8	Aircraft Ratios of Various Coalitions vs. Israel	82
Figure 9	Number of Tanks in Israel's Reference Group	84
Figure 10	Number of High Quality Tanks in Israel's	86
	Reference Group	
Figure 11	Number of SSMs in Israel's Reference Group	88

			Page
Par	t II	Regional Military Forces, by Zeev Eytan	171
Intro	atroductory Note		
1.	Alge	175	
2.	Bahr	ain	185
3.	Egyp	ot ·	192
4.	Iran		209
5 .	Iraq		225
6.	Israe	1	241
7 .	Jorda	an	258
8.	Kuw	ait	266
9.	Leba	non	275
10.	Liby	a	283
11.	More	оссо	295
12.	Oma	n	305
13.	Pales	stinian Military and Para-Military Units	314
	in the	e Diaspora	
13A	. Pales	stinian Authority	324
14.	Qata	г	327
15.	Saud	li Arabia	333
16.	Suda	n	347
17 .	Syria	ı	355
18.	Tuni	sia	367
19.	Unite	ed Arab Emirates	375
20.	Yem	en	387
Part	t III	Data and Documentation	397
		Comparative Tables, by Zeev Eytan	399
Tab	le l	Major Armies of the Middle East	401
Tab	le 2	Major Air Forces of the Middle East	402
Tab	le 3	Major Navies of the Middle East	403
Table 4		The Israel-Syria Military Balance	404
Tab	le 5	Eastern Front-Israel Military Balance	406
Tab	le 6	Arab-Israel Military Balance (Israel vs. Arab	408
		Coalition, including Egypt and Iraq)	
Tabl	le 7	Arab-Israel Military Balance 1984-1995	410
Tabl	le 8	The Iran-Iraq Military Balance	412
Tabl	le 9	The USA in the Middle East: Financial Aid	414
		(Military), Arms Sales, Advisors, Trainees and	
		Facilities	

		Page
Table 10	Russia in the Middle East: Arms Sales, Advisors and Trainees	416
Table 11	France in the Middle East: Arms Sales, Advisors and Trainees	417
Table 12	Britain in the Middle East: Arms Sales, Advisors, Trainees and Cooperation in Arms Production	418
Table 13	China in the Middle East: Arms Sales, Advisors, Trainees and Cooperation in Arms Production	419
Table 14	North Korea in the Middle East: Arms Sales, Advisors, Trainees and Technology Transfer	420
Table 15	Surface-to-Surface Missiles and Rockets in Service of Middle Eastern Armies (by Number of Launchers)	421
C 1 6	W 5 4 1 7 F 4	423
•	Weapons Systems, by Zeev Eytan	425 425
Army		438
Air Force Navy		457
Chronology		473
Chronology	of Key Strategic Events 1994-1995	475
List of Abb	reviations	492
Maps		495
Map No. 1	South Lebanon	
Map No. 2	Gaza Strip	
Map No. 3	The West Bank: Areas A, B, and C	
Map No. 4	Iran and Iraq: Development and Production Sites	
	for Weapons of Mass Destruction	
Additional	Contributors	

Additional Contributor

Preface

The Middle East Military Balance 1994-1995 covers the period from the middle of 1994 through the end of 1995.

We at the Jaffee Center for Strategic Studies mourn the untimely death of our colleague, Colonel (Res.) Dr. Zeev Eytan. Ever since the first edition of *The Middle East Military Balance*, Dr. Eytan has been a major contributor to it. It was he who would prepare the detailed update of information covering the defense forces and infrastructure of states in the region. He was also involved in many other activities at the JCSS. Zeev's passing, in December 1995, was, perhaps symbolically, only two days after he submitted his sections of this year's *Balance*. We all miss his experience, knowledge and friendship.

As with the previous edition of *Balance*, we open this edition as well with a review of the Arab-Israeli peace process. It is only natural to do so. Since 1993, the peace process has probably been the most important development in the region, with major implications for the parties directly involved in it, and to a lesser extent on the other Arab states. Accordingly, the opening chapter of *Balance* this year begins with a review by Mark Heller of progress made within the framework of the interim Israeli-Palestinian agreement, the implications of the Israeli-Jordanian peace treaty, and developments in the Israeli-Syrian talks. Tragically, this chapter ends with the assassination of Israel's Prime Minister, Yitzhak Rabin. Ephraim Kam then analyzes the main strategic ramifications of recent developments in the Arab arena.

The other chapters in Part I deal with more basic issues. Zeev Maoz examines the evolution of the military balance in the Middle East between 1980 and 1994, and Shmuel Gordon goes on to analyze the current balance of air power in the region. Amos Gilboa surveys the trends in the main armies of the region over recent years. Finally, Yiftah Shapir reviews the introduction of ballistic missiles into the Middle East

In parts II and III, Zeev Eytan presents a detailed information update of the defense forces and infrastructure of states in the Middle East, and of the Palestinian organizations.

The authors are indebted to all members of the senior research staff of the JCSS for their critical review of the drafts of the various chapters. We at JCSS Publications also wish to express our gratitude to Martin Kett, Yossi Avner, Anat Henefeld and Alexandra Mattalon for their efforts in bringing this book to publication.

E. K. May 1996

PART I STRATEGIC DEVELOPMENTS

1. The Peace Process* Mark A. Heller

The most noteworthy feature of the peace process during 1994-1995 was its sheer resilience. Despite missed target-dates, deep suspicion, disappointments, frustrations, and sharp fluctuations in domestic support on all sides, the process itself was not abandoned by any of the participants. Of course, the pace of development along the various tracks was highly uneven. The least problematic and least ambiguous progression took place on the Israeli-Jordanian track. where the 1993 Common Agenda was transformed within a year into a Treaty of Peace, itself a prelude to the ongoing negotiation and implementation of about twenty agreements to normalize relations between the two countries. By contrast, Syrian-Israeli negotiations were marked by some diplomatic motion but no discernible movement. Between these extremes of contractual peace and virtual stagnation lav all the other issues on the Arab-Israeli agenda, including the state of multilateral relations, Israel's emerging bilateral ties with other Arab countries and, most critically of all, the troubled but steady implementation of the Israeli-Palestinian Declaration of Principles (DOP).

The Israeli-Jordanian Treaty of Peace

A convergence of basic interests has always underpinned relations between Israel and the Hashemite Kingdom of Jordan. Israel has traditionally viewed the survival of the Hashemite regime in an independent Jordan as an essential component of its strategic depth, while Jordan's location and vulnerabilities led the regime to see in well-managed ties with Israel an important component of its own national security. These factors prompted both sides to maintain a process of ongoing dialogue and consultation over the years.

This survey covers the period between two major implementation agreements of the Israeli-Palestinian Declaration of Principles: the Gaza - Jericho Agreement of May 1994 and the Interim Agreement of September 1995. Significant developments which took place after the signing of the latter agreement but, before the publication of this volume, including the assassination of Prime Minister Yitzhak Rabin and the elections for the Palestinian Council, will be analysed in the 1995/1996 edition of *The Middle East Military Balance*.

Furthermore, the political culture of Jordan ensured that this link was sustained by an atmosphere of civility generally absent from Israel's relations with other Arab parties; even in periods of tension and active conflict, Jordan was generally perceived in Israel as a reluctant adversary rather than a real enemy.

Nevertheless, Jordan and Israel were unable to convert this modus vivendi into a definitive peace until the constraints on Jordanian freedom of maneuver were minimized and the incentives to "go public" were raised. One of these conditions was partially fulfilled by the decline in Syrian influence over Jordanian policy. Although the Ba'ath regime in Damascus still ascribed to itself the leading role in Arab politics and discouraged independent initiatives by any other Arab actor, the fact that Syria had participated in the Madrid Conference and publicly committed itself to the objective of a peace agreement with Israel undermined whatever principled objections Syria might have to an accommodation between Jordan and Israel. More importantly, the collapse of the Soviet Union and the decline of Syria's relative power in the regional subsystem limited the potency of a potential Syrian threat to Jordan. Hence, by the early 1990s, Syria was no longer a decisive factor in Jordanian calculations.

The Palestinian factor, however, continued to be critical, largely because of domestic political and demographic considerations, but dramatic changes on the Israeli-Palestinian track in 1994-95 eliminated this obstacle to a public rapprochement between Jordan and Israel.

The extent to which Jordan's policy vis-à-vis Israel was hostage to the Palestinian issue was symbolized by the Israeli-Jordanian Common Agenda, which was formulated in most essentials by November 1992, but could not be officially approved until September 14, 1993, one day after the Israeli-PLO Declaration of Principles was signed in Washington. But even after that hurdle of publicity had been crossed, Jordan's ability to put meat on the bones of these agreements, i.e., to negotiate and agree on the content of a comprehensive Treaty of Peace, was still linked to further developments on the Palestinian track, which were slow in coming. Furthermore, Jordan had expected that peace with Israel would resolve some of its problems with the United States, which had been caused by its support for Iraq during the Second Gulf War, and this outcome had not yet been assured.

As a result, negotiations continued, but there was no immediate breakthrough. Despite high-level meetings, including a

secret summit between King Hussein and Prime Minister Rabin, and a meeting in early November 1993 between Hussein and Foreign Minister Peres, at which virtually all the major issues on the bilateral agenda were settled in principle, Jordan held off consummating the process because Israeli-PLO negotiations were stalled; the killing of Muslim worshippers in the Cave of the Patriarchs in Hebron in February 1994 froze those talks completely. Moreover, the United States was still inspecting maritime traffic to Aqaba as part of the economic embargo on Iraq. In early February 1994, King Hussein told his Parliament that signing a peace treaty at that point would be tantamount to surrender, and in late March he made Jordan's agreement to resume negotiations conditional on the easing of American inspection procedures.

The context for Jordanian-Israeli peace again became supportive only at the end of the month, when the PLO put the Cave of the Patriarchs killings behind it and resumed negotiations with Israel about implementation of the first stage – Gaza-Jericho – of the DOP. That decision provided both the pretext and the inducement for Jordan to move quickly, lest the momentum of Israeli-Palestinian negotiations eliminate the possibility of protecting some of Jordan's remaining interests in the West Bank, and perhaps even lead to an Israeli-Palestinian partnership from which Jordan would be excluded. The United States partly resolved Hussein's other problem by agreeing at the end of April to enforce the embargo on Iraq through land searches rather than through on-board inspections of Aqaba-bound shipping.

From then on, events moved at a rapid, even dizzying, pace. The day after Israel completed its redeployment from Gaza in May 1994, Hussein and Rabin met secretly in London, and negotiators made further progress in early June on major outstanding bilateral issues – border demarcation, water allocation, economic relations, and the preservation of some role for Jordan with respect to the financial affairs of the West Bank and the Muslim shrines in Jerusalem. By July, developments had progressed sufficiently for public negotiations to take place, for the first time, in the region itself. There, and in intensive discussions in Washington, the major issues were ironed out in time for a Hussein-Rabin summit at the end of the month. Although American intermediaries were not involved in this process, the interests of both parties required American support, financial and otherwise. Consequently, the signing ceremony for the "Washington Declaration," which ended the state of belligerency between Israel and

Jordan, was hosted by President Clinton, and after Hussein and Rabin appeared before a joint session of the Congress, the United States formally agreed to cancel a portion of Jordan's \$1 billion debt. Assumptions in Israel about continuing Jordanian sensitivity to Syrian objections proved unfounded, and the momentum generated by these events continued through the summer, as Jordanian and Israeli negotiators worked out the details of the remaining outstanding issues. These efforts culminated in a full-fledged treaty, signed in a festive ceremony in the Arava Valley at the end of October.

The peace treaty with Jordan did not substantially alter Israel's strategic position. Despite the formal state of war that had existed between the two countries, Jordan had long since ceased to pose a conventional military threat, either alone or as part of a credible Arab coalition. While the treaty formally obligated Jordan not to join a military alliance hostile to Israel, or to permit the forces of hostile third parties to enter, encamp or pass through its territory, this commitment basically reaffirmed Jordan's practice since 1971, based on its understanding of what Israel deemed a casus belli. Nor had Jordan provided any kind of asylum or area of active operations for terrorist organizations.

By the same token, the broader political benefits of the peace agreement were also limited. Peace with Jordan was undoubtedly a diplomatic milestone, but it did not resurrect the old "Jordanian option," in the sense of providing a valid alternative to the PLO with whom Israel could settle the future of the West Bank. Nor was it enough to legitimate, for other Arab states, formal ties of their own with Israel. The most important consequence was a sense of psychological gratification for Israelis: in the Hashemite Kingdom, Israel seemed, at last, to have found an Arab partner interested, not only in a contractual settlement, but also in a warm peace.

The treaty signing was followed by the active negotiation and completion of a variety of agreements on economic ties and other forms of cooperation, including even limited military relations. Enthusiasm in Jordan for normalization was not universal, especially among Palestinians, who were prominent in the Islamist movements and professional associations. The former consistently opposed normalization and most of the latter maintained the longstanding boycott of Israel, going so far as to expel members who violated the ban on contacts. Criticism was frequently expressed in the press and occasionally in public demonstrations. At times, the Jordanian establishment itself voiced some reservations, although these had more