

**World Science Forum  
Rio De Janeiro  
24-27.11.2013**

**SCIENCE, DIPLOMACY,  
and the  
ISRAELI-PALESTINIAN  
WATER CONFLICT**

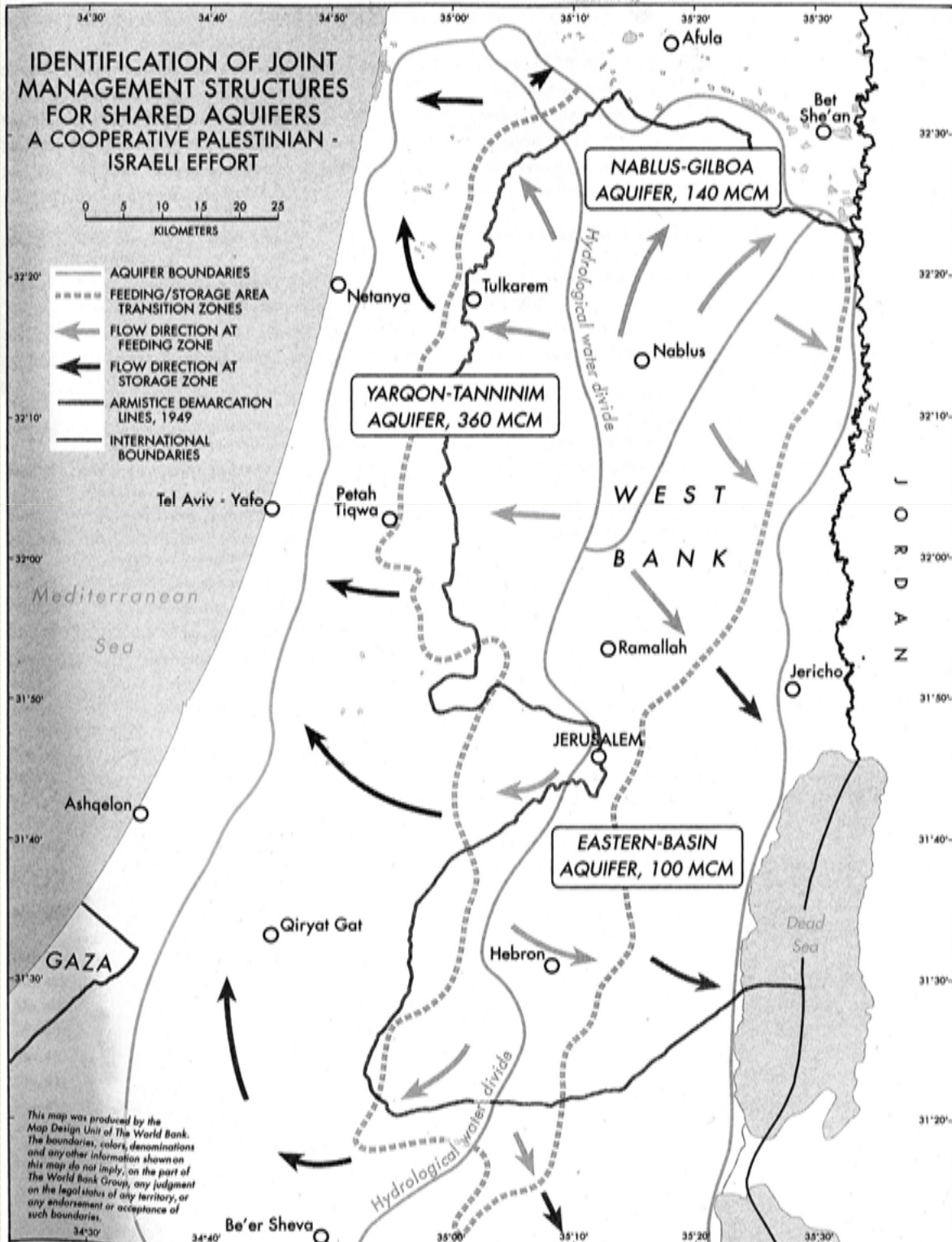
**Dan Bitan  
The Israeli-Palestinian Science  
Organization (IPSO)**

# Israel-Palestine Water Resources

## The Jordan Basin System The Israeli National Water Carrier (1964) The Coastal and Mountain Aquifers



# Israel-Palestine The Mountain Aquifers Boundaries, Feeding, Flow directions



WORLD BANK TECHNICAL PAPER NO. 415

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# Identification of Joint Management Structures for Shared Aquifers

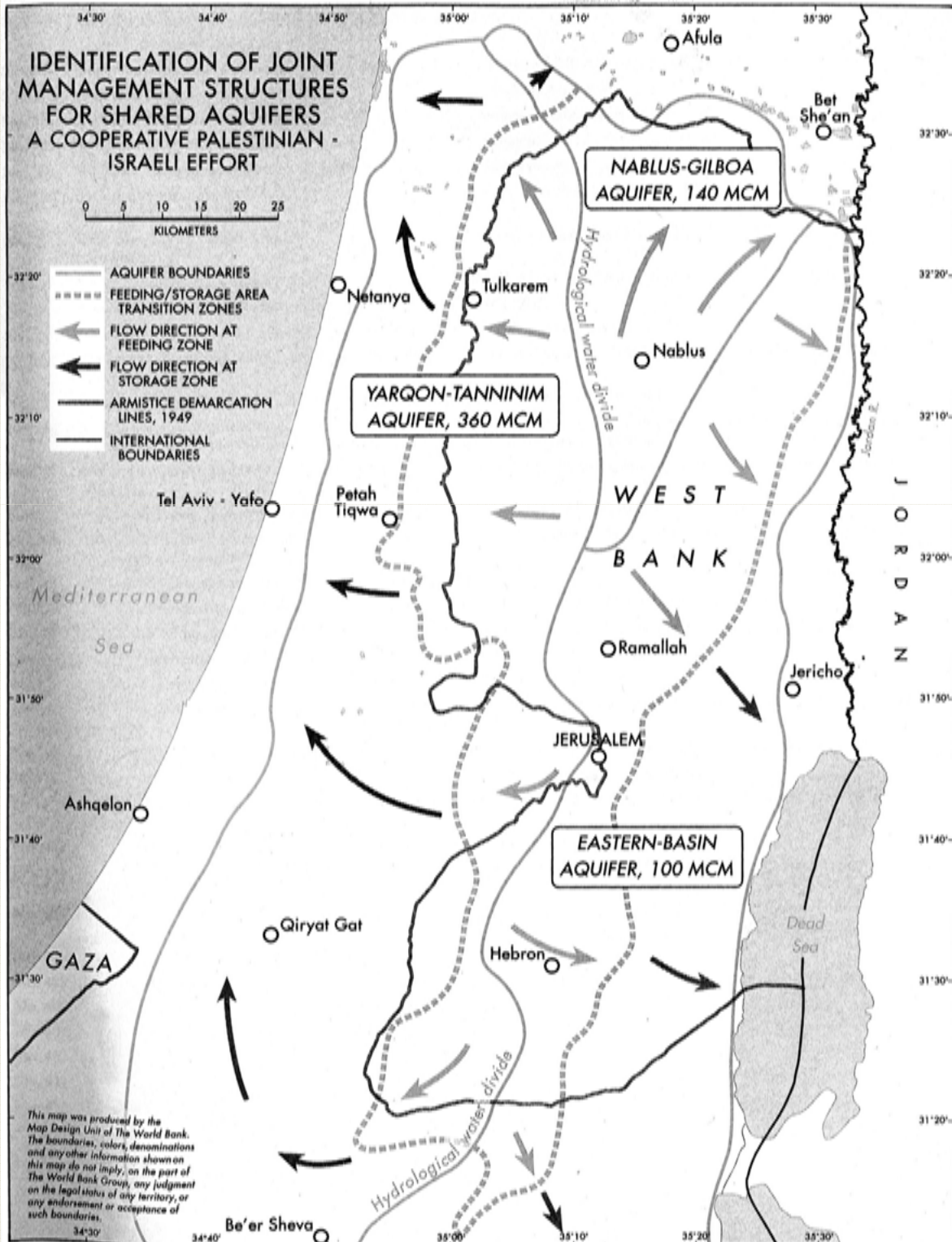
*A Cooperative Palestinian-Israeli Effort*

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*an Feitelson  
Marwan Haddad*

*The World Bank  
Washington, D.C.*

# Israel-Palestine The Mountain Aquifers Boundaries, Feeding, Flow directions



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## The Jordan Basin System The Israeli National Water Carrier (1964) The Coastal and Mountain Aquifers



# Israel-Palestine

## The Four Aquifers

Figure 3.1 Transboundary surface water and groundwater resources of Palestine and Israel: Jordan River System and four aquifers.

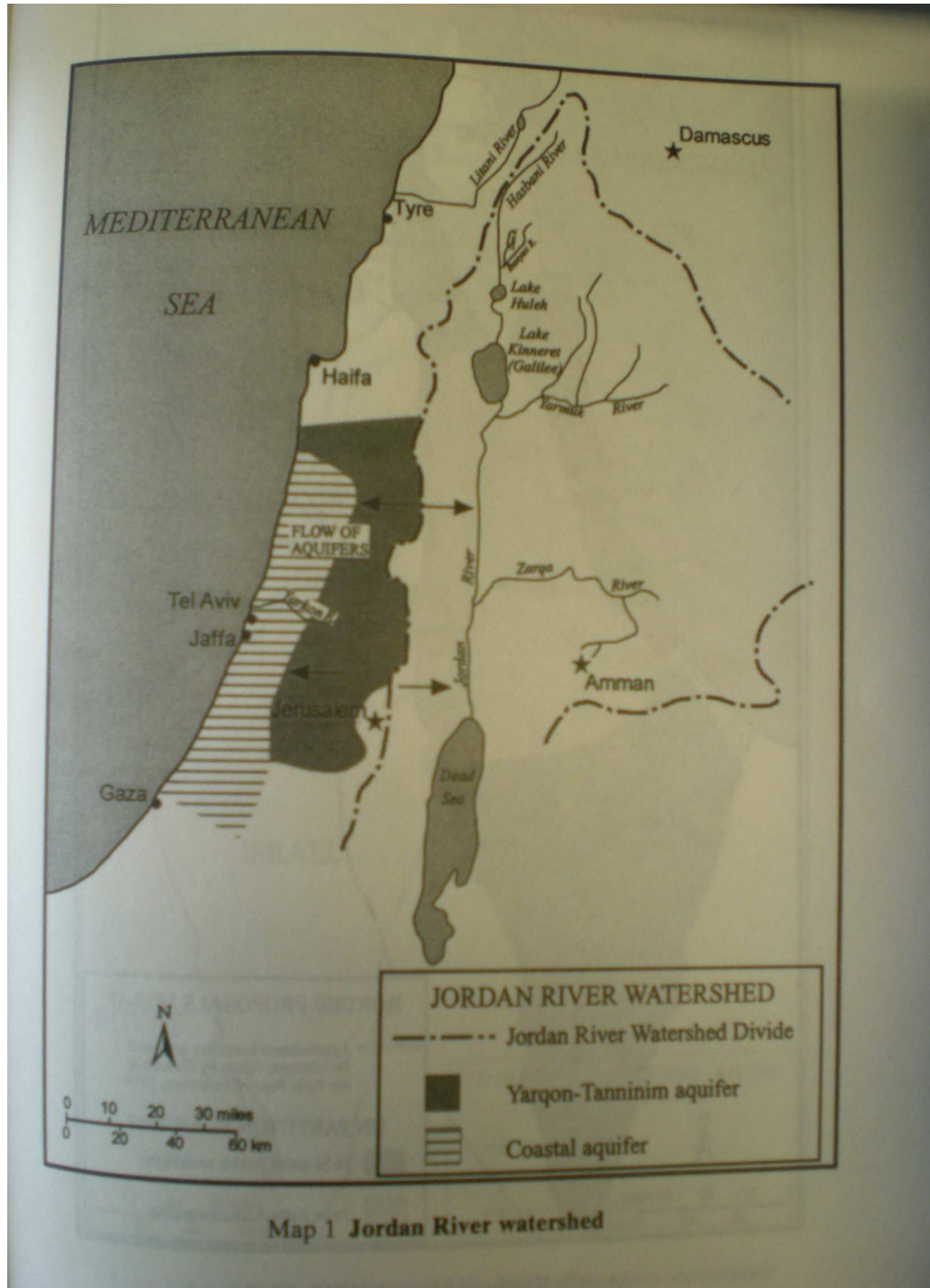


Adapted from the Palestinian Academic Society for the Study of International Affairs Center for Economic and Social Rights; United States Geological Survey – Executive Action Team.

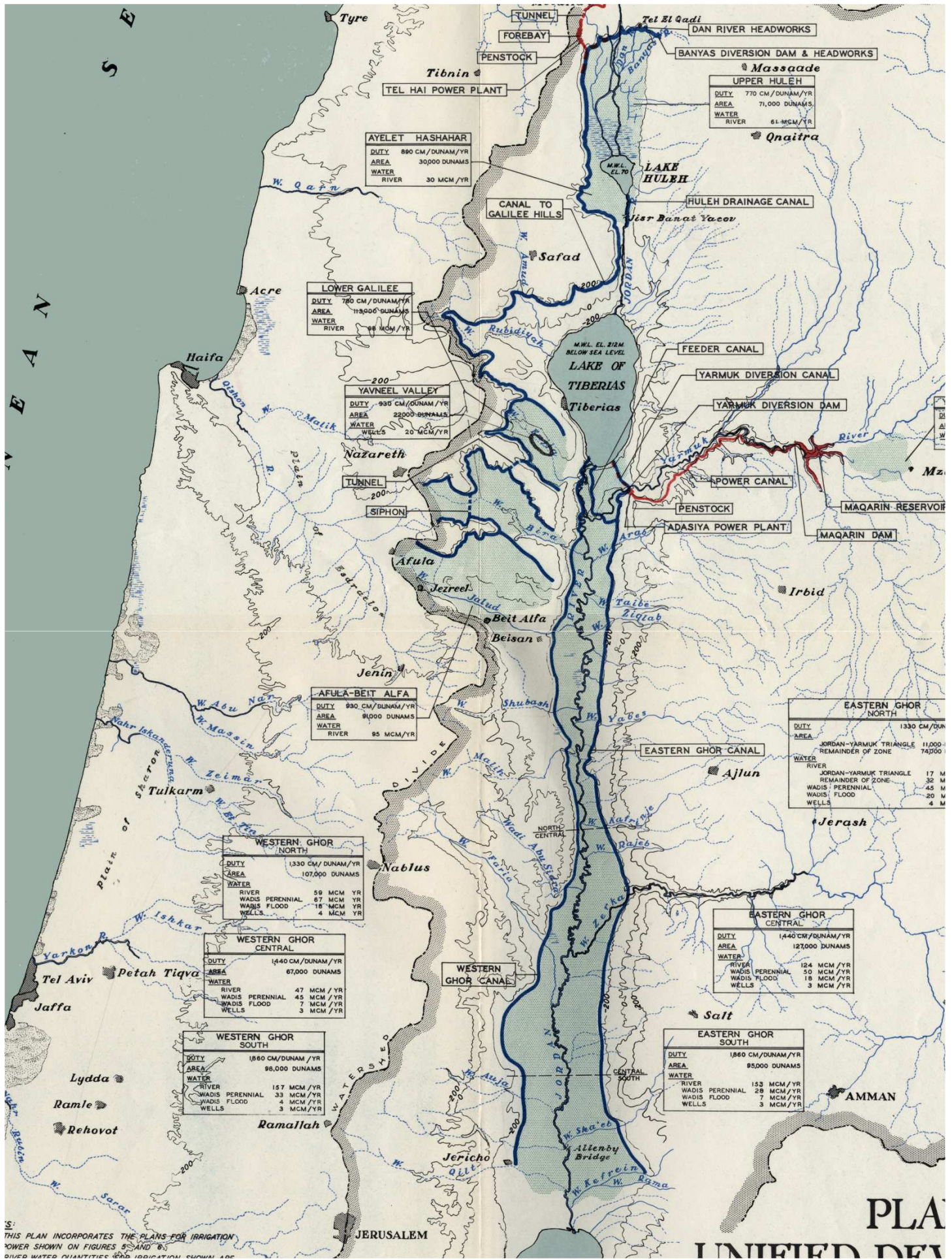
### Transboundary Groundwater Resources

There is a much greater quantity of Palestine-Israel transboundary groundwater than surface water. Groundwater either comes naturally to the surface in the form

# Israel-Palestine: Flow of Mountain Aquifers







<b>AYELET HASHAHAR</b>	
DUTY	890 CM/DUNAM/YR
AREA	30,000 DUNAMS
WATER	RIVER 30 MCM/YR

<b>UPPER HULEH</b>	
DUTY	770 CM/DUNAM/YR
AREA	71,000 DUNAMS
WATER	RIVER 61 MCM/YR

<b>LOWER GALILEE</b>	
DUTY	760 CM/DUNAM/YR
AREA	113,000 DUNAMS
WATER	RIVER 11 MCM/YR

<b>YAVNEEL VALLEY</b>	
DUTY	930 CM/DUNAM/YR
AREA	22,000 DUNAMS
WATER	WELLS 20 MCM/YR

<b>AFULA-BEIT ALFA</b>	
DUTY	930 CM/DUNAM/YR
AREA	91,000 DUNAMS
WATER	RIVER 95 MCM/YR

<b>WESTERN GHOR NORTH</b>	
DUTY	1,330 CM/DUNAM/YR
AREA	107,000 DUNAMS
WATER	RIVER 59 MCM/YR
	WADIS PERENNIAL 67 MCM/YR
	WADIS FLOOD 18 MCM/YR
	WELLS 4 MCM/YR

<b>WESTERN GHOR CENTRAL</b>	
DUTY	1,440 CM/DUNAM/YR
AREA	67,000 DUNAMS
WATER	RIVER 47 MCM/YR
	WADIS PERENNIAL 45 MCM/YR
	WADIS FLOOD 7 MCM/YR
	WELLS 3 MCM/YR

<b>WESTERN GHOR SOUTH</b>	
DUTY	1,860 CM/DUNAM/YR
AREA	98,000 DUNAMS
WATER	RIVER 157 MCM/YR
	WADIS PERENNIAL 33 MCM/YR
	WADIS FLOOD 4 MCM/YR
	WELLS 3 MCM/YR

<b>EASTERN GHOR SOUTH</b>	
DUTY	1,860 CM/DUNAM/YR
AREA	95,000 DUNAMS
WATER	RIVER 153 MCM/YR
	WADIS PERENNIAL 28 MCM/YR
	WADIS FLOOD 7 MCM/YR
	WELLS 3 MCM/YR

<b>EASTERN GHOR NORTH</b>	
DUTY	1,330 CM/DUNAM/YR
AREA	JORDAN-YARMUK TRIANGLE 11,000
	REMAINDER OF ZONE 74,000
WATER	RIVER JORDAN-YARMUK TRIANGLE 17 M
	REMAINDER OF ZONE 32 M
	WADIS PERENNIAL 45 M
	WADIS FLOOD 20 M
	WELLS 4 M

<b>EASTERN GHOR CENTRAL</b>	
DUTY	1,440 CM/DUNAM/YR
AREA	127,000 DUNAMS
WATER	RIVER 124 MCM/YR
	WADIS PERENNIAL 50 MCM/YR
	WADIS FLOOD 18 MCM/YR
	WELLS 3 MCM/YR

THIS PLAN INCORPORATES THE PLANS FOR IRRIGATION POWER SHOWN ON FIGURES 5 AND 6. DIVERTED WATER QUANTITIES AND IRRIGATION CAPACITY ARE

