

06-17-1994 17:29:17

Water Allocation System (WAS v1.0)
Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario

"Optimal" Scenario

Scenario CURRENT+: Current Links and Recycling with Jordan River Links

M71

Water Allocation System (WAS v1.0)
 Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
 "Optimal" Scenario
 Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-19-1994 13:00:50

OPTIMAL GAMS RESULTS FOR WAS.GMS
 PRICES

ISRAEL

DISTRICT	FPRICE	RPRICE	PURB	PIND	PAGR
Hacola	0.235	0.235	0.54	0.54	0.24
Kinneret	0.235	0.235	0.54	0.54	0.24
WestGalil	0.290	0.290	0.59	0.59	0.29
Haifa	0.306	0.306	0.61	0.61	0.31
Afula	0.315	0.315	0.61	0.62	0.31
Hadera	0.330	0.330	0.63	0.63	0.33
Netanya	0.325	0.325	0.63	0.63	0.33
PTiqwa	0.372	0.372	0.67	0.67	0.37
TelAviv	0.383	0.102	0.68	0.68	0.13
Ramla	0.363	0.363	0.66	0.66	0.36
Rehovot	0.380	0.380	0.68	0.68	0.38
Lachish	0.780	0.170	1.08	1.08	0.25
Negev	0.837	0.838	1.14	1.14	0.84

JORDAN

DISTRICT	FPRICE	RPRICE	PURB	PIND	PAGR
JordanV	0.289	0.289	0.59	0.59	0.29
NHighland	0.282	0.282	0.46	0.46	0.28
Amman	0.641	0.465	0.70	0.70	0.50
DeadSea	0.165	0.165	0.46	0.46	0.17
Azraq	0.041	0.041	0.34	0.34	0.04
WadiAraba	0.800	0.800	1.10	1.10	0.80
MaanDisi	0.467	0.467	0.77	0.77	0.47
Hammad	0.132	0.132	0.43	0.43	0.13

PALESTINE

DISTRICT	FPRICE	RPRICE	PURB	PIND	PAGR
Jenin	0.341	0.341	0.64	0.64	0.34
Tulkarem	0.342	0.342	0.64	0.64	0.34
Nablus	0.381	0.381	0.68	0.68	0.38
Ramallah	0.392	0.392	0.69	0.69	0.39
Bethlehem	0.732	0.732	1.03	1.03	0.73
Hebron	0.831	0.831	1.13	1.13	0.83
GazaN	0.800	0.800	1.10	1.10	0.80
GazaS	0.800	0.800	1.10	1.10	0.80
Jericho	0.280	0.280	0.58	0.58	0.28

GOLAN

DISTRICT	FPRICE	RPRICE	PURB	PIND	PAGR
Golan	0.211	0.211	0.51	0.51	0.21

JERUSALEM

DISTRICT	FPRICE	RPRICE	PURB	PIND	PAGR
Jerusalem	0.415	0.100	0.72	0.72	0.13

Net Price of water in dispute in the Sea of Galilee is 0.235
 Average Net Price of water in dispute in the mountain aquifer is 0.193

Water Allocation System (WAS v1.0)
 Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
 "Optimal" Scenario
 Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-17-1994 17:29:16

OPTIMAL GAMS RESULTS FOR WAS.GMS
 QUANTITIES

ISRAEL

DISTRICT	PRODN	NET.EXP	URBDEM	INDDDEM	AGRDEM
Hacola	80.00	-22.72	12.76	1.61	88.35
Kinneret	560.00	484.52	12.76	0.84	61.88
WestGalil	102.00	-2.26	58.10	2.44	43.72
Haifa	125.51	-64.89	47.51	3.65	139.24
Afula	40.00	-61.61	76.51	14.67	10.43
Hadera	7.00	-98.99	32.64	7.95	65.40
Netanya	222.00	110.14	39.15	1.72	71.00
PTiqwa	40.00	-63.27	61.17	1.20	40.90
TelAviv	0.00	-185.03	178.66	5.48	8.82
Ramla	124.89	72.78	20.20	2.88	29.03
Rehovot	115.00	18.31	48.76	4.29	43.63
Lachish	59.00	4.39	35.48	2.09	130.64
Negev	44.85	-106.96	49.43	21.99	80.39
TOTAL	1520.25	84.42	673.14	70.82	813.40

JORDAN

DISTRICT	PRODN	NET.EXP	URBDEM	INDDDEM	AGRDEM
JordanV	136.00	38.70	13.11	0.00	84.19
NHighland	201.62	-7.70	46.57	0.03	193.48
Amman	149.50	-74.00	187.91	1.27	159.18
DeadSea	47.52	15.00	21.23	2.98	8.31
Azraq	30.13	28.00	2.13	0.00	0.00
WadiAraba	131.21	0.00	10.16	0.03	121.02
MaanDisi	124.00	0.00	2.85	1.07	120.08
Hammad	0.31	0.00	0.31	0.00	0.00
TOTAL	820.29	0.00	284.26	5.38	686.26

PALESTINE

DISTRICT	PRODN	NET.EXP	URBDEM	INDDDEM	AGRDEM
Jenin	65.41	-53.82	46.24	0.73	72.26
Tulkarem	37.33	-28.04	47.50	2.37	15.50
Nablus	39.97	-32.10	53.50	2.68	15.89
Ramallah	31.37	-29.80	53.02	1.78	6.38
Bethlehem	53.67	17.85	29.58	1.87	4.37
Hebron	62.20	-7.35	54.36	4.43	10.77
GazaN	193.02	92.08	82.91	2.69	15.35
GazaS	96.65	0.00	76.66	2.69	17.30
Jericho	42.21	0.00	6.22	0.38	35.61
TOTAL	621.82	-41.19	449.98	19.61	193.42

GOLAN

DISTRICT	PRODN	NET.EXP	URBDEM	INDDDEM	AGRDEM
Golan	40.00	3.67	4.48	0.20	31.66

JERUSALEM

DISTRICT	PRODN	NET.EXP	URBDEM	INDDDEM	AGRDEM
Jerusalem	50.00	-46.90	93.51	0.35	30.42

Water Allocation System (WAS v1.0)
 Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
 "Optimal" Scenario
 Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-17-1994 17:29:15

OPTIMAL GAMS RESULTS FOR WAS.GMS
 RECYCLED QUANTITIES

ISRAEL

DISTRICT	FrmURB	FrmIND	FrmAGR	ToAGR	NET.EXP
Hacola	0.00	0.00	0.00	0.00	0.00
Kinneret	0.00	0.00	0.00	0.00	0.00
WestGalil	0.00	0.00	0.00	0.00	0.00
Haifa	0.00	0.00	0.00	0.00	0.00
Afula	0.00	0.00	0.00	0.00	0.00
Hadera	0.00	0.00	0.00	0.00	0.00
Netanya	0.00	0.00	0.00	0.00	0.00
PTiqwa	0.00	0.00	0.00	0.00	0.00
TelAviv	117.91	3.62	0.00	7.93	113.60
Ramla	0.00	0.00	0.00	0.00	0.00
Rehovot	0.00	0.00	0.00	0.00	0.00
Lachish	0.00	0.00	0.00	113.60	-113.60
Negev	0.00	0.00	0.00	0.00	0.00
TOTAL	117.91	3.62	0.00	121.53	0.00

JORDAN

DISTRICT	FrmURB	FrmIND	FrmAGR	ToAGR	NET.EXP
JordanV	0.00	0.00	0.00	0.00	0.00
NHighland	30.73	0.02	0.00	30.75	0.00
Amman	124.02	0.84	0.00	124.86	0.00
DeadSea	0.00	0.00	0.00	0.00	0.00
Azraq	0.00	0.00	0.00	0.00	0.00
WadiAraba	0.00	0.00	0.00	0.00	0.00
MaanDisi	0.00	0.00	0.00	0.00	0.00
Hammad	0.00	0.00	0.00	0.00	0.00
TOTAL	154.75	0.86	0.00	155.61	0.00

PALESTINE

DISTRICT	FrmURB	FrmIND	FrmAGR	ToAGR	NET.EXP
Jenin	0.00	0.00	0.00	0.00	0.00
Tulkarem	0.00	0.00	0.00	0.00	0.00
Nablus	0.00	0.00	0.00	0.00	0.00
Ramallah	0.00	0.00	0.00	0.00	0.00
Bethlehem	0.00	0.00	0.00	0.00	0.00
Hebron	0.00	0.00	0.00	0.00	0.00
GazaN	0.00	0.00	0.00	0.00	0.00
GazaS	0.00	0.00	0.00	0.00	0.00
Jericho	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.00

GOLAN

DISTRICT	FrmURB	FrmIND	FrmAGR	ToAGR	NET.EXP
Golan	0.00	0.00	0.00	0.00	0.00

JERUSALEM

DISTRICT	FrmURB	FrmIND	FrmAGR	ToAGR	NET.EXP
Jerusalem	27.38	0.00	0.00	27.38	0.00

Water Allocation System (WAS v1.0)
 Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
 "Optimal" Scenario
 Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-23-1994 11:02:38

OPTIMAL GAMS RESULTS FOR WAS.GMS
 SOCIAL WELFARE RESULTS

ISRAEL

DISTRICT	PROFITS	GOVT.COSTS	BUYR.SURP.	SOC.WEL
Hacola	2.816	0.000	112.217	115.033
Kinneret	131.711	0.000	82.128	213.839
WestGalil	14.948	0.000	113.490	128.438
Haifa	0.000	0.000	218.779	218.779
Afula	5.864	0.000	109.127	114.991
Hadera	1.150	0.000	122.940	124.090
Netanya	37.232	0.000	127.923	165.156
PTiqwa	6.840	0.000	114.628	121.468
TelAviv	0.000	0.000	194.056	194.056
Ramla	20.282	0.000	60.378	80.660
Rehovot	20.551	0.000	109.818	130.368
Lachish	30.231	0.000	155.961	186.192
Negev	19.503	0.000	191.473	210.976
TOTAL	291.129	0.000	1712.916	2004.045

JORDAN

DISTRICT	PROFITS	GOVT.COSTS	BUYR.SURP.	SOC.WEL
JordanV	21.352	0.000	111.930	133.282
NHighland	6.000	0.000	272.662	278.662
Amman	65.725	0.000	396.923	462.648
DeadSea	0.000	0.000	33.625	33.625
Azraq	1.107	0.000	2.166	3.273
WadiAraba	13.132	0.000	185.640	198.772
MaanDisi	43.147	0.000	163.693	206.839
Hammad	0.000	0.000	0.321	0.321
TOTAL	150.463	0.000	1166.960	1317.423

PALESTINE

DISTRICT	PROFITS	GOVT.COSTS	BUYR.SURP.	SOC.WEL
Jenin	2.283	0.000	136.416	138.700
Tulkarem	4.531	0.000	70.175	74.706
Nablus	5.644	0.000	77.469	83.113
Ramallah	4.307	0.000	63.769	68.076
Bethlehem	21.304	0.000	36.865	58.168
Hebron	31.698	0.000	72.130	103.829
GazaN	23.400	0.000	103.693	127.093
GazaS	16.900	0.000	100.664	117.564
Jericho	7.753	0.000	48.132	55.885
TOTAL	117.820	0.000	709.313	827.133

GOLAN

DISTRICT	PROFITS	GOVT.COSTS	BUYR.SURP.	SOC.WEL
Golan	0.448	0.000	38.439	38.887

JERUSALEM

DISTRICT	PROFITS	GOVT.COSTS	BUYR.SURP.	SOC.WEL
Jerusalem	0.750	0.000	118.037	118.787

Water Allocation System (WAS v1.0)
 Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
 "Optimal" Scenario
 Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-17-1994 17:29:15

OPTIMAL GAMS RESULTS FOR WAS.GMS
 TRANSPORT OF FRESH WATER

=====

LINKAGES USED AND QUANTITIES TRANSPORTED

FROM	TO	QTY. TRANSPORTED
Golan	NC-Golan	3.67
Kinneret	NC-SeaOfGal	484.52
Netanya	NC-Hadera	110.14
Ramla	NC-Ramla	72.78
Rehovot	NC-Rehovot	18.31
Lachish	NC-Lachish	4.39
JordanV	Amman	45.00
NHighlands	JordanV	6.30
DeadSea	Amman	15.00
Azraq	NHighlands	14.00
Azraq	Amman	14.00
Bethlehem	NC-Bethlehem	17.85
GazaN	NC-GazaN	92.08
NC-Hacola	Hacola	22.72
NC-Golan	NC-Hacola	22.72
NC-SeaOfGal	NC-Golan	19.05
NC-SeaOfGal	NC-WestGalil	465.47
NC-WestGalil	WestGalil	2.26
NC-WestGalil	NC-Haifa	463.21
NC-Haifa	Haifa	64.89
NC-Haifa	NC-Afula	398.32
NC-Afula	Afula	61.61
NC-Afula	NC-Netanya	336.71
NC-Hadera	NC-Tulkarem	294.04
NC-Netanya	Hadera	98.99
NC-Netanya	NC-Jenin	237.72
NC-PTiqwa	PTiqwa	63.27
NC-PTiqwa	NC-TelAviv	170.63
NC-TelAviv	TelAviv	185.03
NC-Ramla	NC-TelAviv	14.39
NC-Ramla	NC-Ramallah	58.39
NC-Rehovot	NC-Jerusalem	46.90
NC-Jerusalem	Jerusalem	46.90
NC-Lachish	NC-Hebron	22.24
NC-Negev	Negev	106.96
NC-Jenin	Jenin	53.82
NC-Jenin	NC-Hadera	183.91
NC-Tulkarem	Tulkarem	28.04
NC-Tulkarem	NC-Nablus	266.00
NC-Nablus	Nablus	32.10
NC-Nablus	NC-PTiqwa	233.90
NC-Ramallah	Ramallah	29.80
NC-Ramallah	NC-Rehovot	28.59
NC-Bethlehem	NC-Lachish	17.85
NC-Hebron	Hebron	7.35
NC-Hebron	NC-Negev	14.88
NC-GazaN	NC-Negev	92.08

Water Allocation System (WAS v1.0)
Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
"Optimal" Scenario
Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-17-1994 17:29:14

OPTIMAL GAMS RESULTS FOR WAS.GMS
TRANSPORT OF RECYCLED WATER

=====

LINKAGES USED AND QUANTITIES TRANSPORTED

FROM	TO	QTY. TRANSPORTED
TelAviv	Lachish	113.60

Water Allocation System (WAS v1.0)
Developed by: The Harvard Middle East Water Project

Year: 2010 - Middle Palestinian Growth Scenario
"Optimal" Scenario
Scenario CURRENT+: Current Links and Recycling with Jordan River Links

06-17-1994 17:29:14

OPTIMAL GAMS RESULTS FOR WAS.GMS
DISPUTED QUANTITIES: MOUNTAIN AQUIFER

DISTRICT	SOURCE	QTY. PUMPED	MAX. QTY
Afula	S1	32.00	32.00
Afula	S2	8.00	8.00
Afula	S3	0.00	40.00
Hadera	S1	7.00	7.00
Hadera	S2	0.00	11.00
Netanya	S2	132.00	132.00
Netanya	S3	0.00	37.00
Ramla	S1	124.89	150.00
Lachish	S3	0.00	57.00
Negev	S3	12.85	25.00
Jenin	S4	51.17	98.33
Tulkarem	S3	6.68	6.68
Tulkarem	S4	6.36	134.95
Nablus	S4	20.56	20.56
Ramallah	S4	0.00	128.57
Bethlehem	S3	28.79	28.79
Hebron	S2	9.62	9.62
Hebron	S3	46.68	46.68