Table 6. Jordan's water resources development projects executed during 1980-1985

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
I.	Conventional									
1.	Water supply from Azraq to Amman									
	To provide Amman with additional water resources by: Drilling wells in Azraq area Constructing water reservoirs and required pumps Installing 110 km length of 24" pipeline	N.A.	Ended in 1982	Governmental	Governmental 1	31.415	CE	Azraq area, Azraq-Amman pipeline	Providing adequate water supply to 560,000 people of Amman	
2.	Southern Ghors Water Resources Project/Phase II									
	Agricultural development of the Southern Ghor by: Diversion Weir construction on Wadi Al-Mujib Irrigation of 4,000 ha through 3,500 m long canal	N.A.	Expected completion in 1985	Governmental	Governmental	17.3 26	CP	Southern Jordan Valley	Increasing agricultural land and national income	
3.	Desert Dams									
	Recharge of ground water by: Constructing two earthfill dams in the north-east desert Maintenance of old dams	N.A.	Expected completion in 1985	Governmental	Governmental	1.5	CP	North-east desert	Providing scattered villages with adequate water and better health conditions Serving bedouins and encouraging them to settle	
4.	Sultana and Qatrana Dams Maintenance									
	Improving storage capacity by maintenance of the two dams	N.A.	Expected completion in 1985	Governmental	Governmental	0.605	O&M, P	Sultana Station	Recharge of ground water (Nomadic bedouins are using the water for their drinking water and their cattle	
5.	Ground-water Development Project in Jordan Valley									
	Drilling exploration and production 11 deep-water wells (300-1,200 m depth) in Jordan Valley to provide adequate water supply and surplus water for irrigation	N.A.	Ended in 1983	Governmental	Governmental USAID	7.4 2.44	CE	Jordan Valley	Providing adequate water supply and better health conditions to different villages in Jordan Valley. Surplus water is pumped to East Irrigation Canal to irrigate additional agricultural land	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
6.	Wadi Araba Irrigation Project Increasing agricultural land by installing irrigation network to irrigate 180,000 dunums	N.A.	Expected completion in 1985	Governmental	Governmental USAID	6.0 15.0	CP	Wadi Araba	Increasing agricultural land, improving irrigation practices and increasing national income	
7.	Ground-water Drainage Drainage system construction for salty land in Jordan Valley and Wadi Araba	N.A.	Expected completion in 1985	Governmental	Governmental USAID	4.375 4.375	CP	Jordan Valley and Wadi Araba	Improving soil and agricultural conditions	
8.	Water Transfer Scheme from the East Ghor Canal to Amman Increasing the availability of adequate water supply to Amman by conveying 45 mm^3 of water from Deir Alla to Amman by pumping the canal water through a 1,200 m head	N.A.	Phase I will be finished in 1985	Governmental	Governmental USAID AFESD Saudi Fund for Development	52.2 24.5 25.0 31.3	CE	Jordan East Canal from Deir Alla to Amman	Providing permanent source of adequate water supply to Amman/Zerqa and Ruseifa from the East Ghor Canal	
9.	Euphrates Pipeline Project 160 mm^3 of water conveyance from the Euphrates to Al-Zaatary area in north Jordan to increase the availability of water supply for Amman	N.A.	N.A.	Governmental	Governmental	100 (D&C)	DE	Euphrates (Al-Hadi-tha dam) to Al-Zaatary Jordan	Providing Amman with additional water supply	
10.	Wadi Al-Arab Irrigation System - Shauna Conveying water from the dam to irrigate 1,250 ha in North Shauna using drip and sprinkler irrigation systems	N.A.	N.A.	Governmental	Governmental Japan	18.0	CP	North Shauna	Increasing agricultural land and national income Improving irrigation practices	
11.	Rasing the Height of King Talal Dam Increase magnitude of cultivated land by raising the height of the dam to increase reservoir storage from 56 to 76 mm^3 Installation of a four megawatt hydroelectric power station	N.A.	To be completed in 1985	Governmental	Governmental USAID Kuwait	1.97 18.28 39.10	CP	Zerqa River, 35 km north-west of Amman	Increasing cultivated land in Jordan Valley by adding 8,200 ha	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
12.	Sultani Water Well Supply to Karak									
	Providing improvement to water supply in Karak by pumping ground water of 15,000 m^3/day with 16" diameter pipeline withdrawn from Sultani well field	N.A.	Project will be completed in 1985	Governmental	Governmental	3.25	CK	Karak District	Improving water supply situation for 50,000 people of Karak districts	
13.	Improvement of Water Supply Network in District of Irbid									
	Improving water supply Maintenance of water pipe network and pumps Construction of reservoirs	No. 6	Ended in 1985	Governmental	Governmental USAID	4.525 1.725	C O&M-P	Irbid District	Providing 3/4 million inhabitants of Irbid with permanent potable water	Water source is from four flowing wells drilled in Wadi Al-Arab
14.	Development of Water Resources									
	Ground-water studies by drilling of exploratory wells all over the country to test availability of ground water	N.A.	N.A.	Governmental	Governmental USAID	1.5 11.0	CP	Through-out the country	Providing more available ground-water resources	
15.	Wadi Al-Arab Dam Project									
	Ground-water studies by drilling of exploratory wells Irrigation of additional land in Jordan Valley by storage of water flows (17 mm^3) through Wadi Al-Arab	N.A.	1981/1985	Governmental	Governmental Japan	27.5 27.5	CP	Down-stream of Wadi Al-Arab north of the Jordan Valley	Irrigating additional agricultural land (about 12,500 dunums in the Jordan Valley) Increasing national income Developing recreational area around the dam	
16.	Raising the Height of Wadi Al-Arab Dam									
	To increase the capacity of the dam from 20 mm^3 to 39.6 mm^3	N.A.	N.A.	Governmental	Governmental	N.A.	CP	Down-stream of Wadi Al-Arab North of the Jordan Valley	Irrigating additional agricultural land (about 12,500 dunum) in Jordan Valley Increasing national income Developing recreational area around the dam	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
17.	Irrigation Scheme in Central Jordan Valley Installing pipes to provide 6,000 ha with drip irrigation	N.A.	N.A.	Governmental	AFESD	18.0	CP	Central Jordan Valley and Wadi Rajib	Providing better irrigation system to save water consumption and energy and to increase agricultural production	
18.	North Desert Villages water supply Project Providing adequate potable water supply	No. 5	Project will be ended in 1985	Governmental	Governmental USAID Loans	0.65 0.6	C, O&MP	North Desert	Improving living conditions of 16,000 inhabitants dwelling in 16 scattered villages by providing adequate potable water supply and bettering health conditions	
19.	Ajlun Villages Water Supply Project Providing 20 villages of Ajlun area with adequate potable water supply	No. 4	Project will be ended in 1985	Governmental	Governmental USAID	1.42 0.25	CP	Ajlun villages	Better health and living conditions for 30,000 people in 20 villages of Ajlun District and Kora	
20.	Zaatary Water Supply Development Project To provide permanent water supply to Irbid district by drilling water wells in Zaatary area	No. 2	Project will be ended in 1985	Governmental	Governmental	4.725	CP	Zaatary area to east of Mafraq	Providing additional new ground-water resources to Irbid district	
21.	Jarash Villages Water Supply Providing 15 villages in Jarash area with adequate water supply	No. 3	Project is ended	Governmental	Governmental	0.825 0.400	CE	Jarash District	Better living and health conditions for 30,000 people in 15 villages in Jarash area by providing adequate water supply	
22.	17 Villages Water Supply in Karak District Providing 17 villages in Karak area with adequate water supply	N.A.	Project will be completed in 1985	Governmental	Governmental USAID and Loans	3.5 0.5	CP	Karak District	Providing better health and living conditions for 10,000 people in 17 villages	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
23.	Improvement of Water Supply Network in Karak District									
	Expanding and improving the water supply network in Karak District	N.A.	N.A.	Governmental	Governmental USAID and Loans	1.86 0.250	O&M, C, P	Karak District	Providing 94,000 people with adequate water supply	
24.	Disi Water Supply Project-Aqaba									
	Installation of water pipes of different diameter to Aqaba with reservoir, construction and pumps installation	N.A.	Ended before 1985	Governmental	Governmental Loans	2.01 3.64	CE	Disi, North of Aqaba	Providing adequate water supply to Aqaba	
25.	Water Supply to Villages in Ma'an District									
	Pumping stations installation Pipeline networks to villages will be connected	N.A.	Expected to be completed in 1985	Governmental	Governmental	1.85	C, O&M, P	Ma'an District	Providing 75,000 people with adequate water supply	
26.	Water Supply and House Connections for Limited Salaries Employees in Aqaba									
	Install water supply network and house connection to limited salaries employees in Aqaba	N.A.	Expected to be completed in 1985	Governmental	Governmental	1.53	C, O&M, P	Aqaba	Better health and living conditions for limited salaries employees in Aqaba	
27.	Improving Water Supply Network in District of Ma'an									
	Developing and expanding of water network Water reservoir construction Installing pumping stations	N.A.	Expected to be completed in 1985	Governmental	Governmental USAID and Loans	1.25 0.125	O&M, P	Ma'an District	Improving living conditions of 39,000 people in Ma'an District	
28.	Improving Water Network and Drilling New Wells Within Belqa and Amman districts									
	Construction of water network and drilling water wells for Wadi Al-Sir, Ardha, Tela Al-Ali, Khelda, Salt and Sweeleh	N.A.	Expected to be completed in 1985	Governmental	Governmental USAID and Loans	6.75 7.625	CP	Belqa and Amman district	Providing adequate water supply for 6 towns around Amman (about 900,000 people)	
29.	Water Network in Amman Region									
	Construction of water network and main reservoirs in Amman, Drilling wells	N.A.	Expected to be completed in 1985	Governmental	Governmental	15 16.25	CP	Amman region	Providing Amman (1,180,000 people) with permanent (24 hr/day) potable water	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
II.	Non-conventional									
1.	Greater Amman Water Supply and Sewerage Project The project will improve the water supply and sewerage services in the Greater Amman Area and includes: Extension and rehabilitation of 100 km of water mains Construction of two sewage treatment plants	IBRD Loan No. 2483-JO	30 per cent of the project will be finished in 1985	Governmental	Governmental WB	26.4 30.0	CP	Greater Amman, Buqa'a Valley and Wadi Al-Sir	The project will serve 300,000 people (150,000 are classified as poor). The project will improve health conditions, protect ground water from pollution and provide treated effluents for irrigation, thus contributing to agricultural development	
2.	Amman Sewerage Collection System Increase Ain Ghazal treatment plant efficiency to treat 68,000 m^3/day Construct a new collection system	N.A.	81 per cent of the project will be finished in 1985	Governmental	Governmental Loans	18 27	CP	Amman	Better general health conditions in Amman by increasing sewerage services to 300,000 people	
3.	Aqaba Sewerage Project Better health conditions by construction of new sewer system and treatment plant Renewing the old sewerage system Installing new pumping station	N.A.	N.A.	Governmental	Governmental Loans	4.125 6.1875	C, O&M, P	Aqaba	Providing 30,000 inhabitants of Aqaba with adequate sewerage system and improving health conditions in the city	
4.	Zerqa and Ruseifa Water Supply and Sewerage Project Establishing a modern water system in Zerqa/Ruseifa Main components of the project: 133 km water-main 12,000 water metres 364 km of primary and secondary sewers 30,000 house laterals Sewage treatment plant 14 km of storm water	IBRD Loan No. 2213-JO	53 per cent of project will be completed in 1985	Governmental	Governmental USAID KFW WB IDB West Germany	21.0 15.0 14.4 17.0 7.8 14.0	CP	Zerqa and Ruseifa towns	Providing 300,000 people with potable water and adequate sewerage system to improve health conditions Water reuse in agriculture	

Table 6 (Cont'd)

No.	Project name and objectives	Project No.	Start and end dates	Executing agency	Funding agency	Funds in millions of dollars	Project conditions	Location	Socio-economic impact	Remarks
5.	Irbid Water, Sewerage and Treatment Plant									
	Providing Irbid with adequate water supply and installation of water distribution and sewerage system and treatment plant (12,000 m^3/day	No. 1	70 per cent of the project will be finished in 1985	Governmental	Governmental USAID WB	8.75 18.75	CP	Irbid	Better health conditions in Irbid (113,000 people) by providing adequate water supply and sewerage network Water reuse in agriculture	
6.	Eight Cities Water Supply and Sewerage Project									
	Providing improvements to the water supply and distribution systems and eliminating problems associated with inadequate cesspools in eight cities The project includes: Installation of about 110 km water distribution water main, 8,000 m^3 of water reuse 177 km of sewers Five sewage treatment plants Procurement of about 10,000 metres Operating equipment and consultant services	No. 7 (Gov't) IBRD Loan No. 2425-JO	40 per cent of the project will be completed in 1985	Governmental	Governmental WB European Investment Bank	28.2 30.0 7.5	CP	Ajlun Anjora Ain Janna Ramtha Mafraq Ajlun-Kufranja Hedana Ma'an	Better health conditions for 136,000 people by sparing better water distribution and sewerage system	
7.	Ma'daba, Karak, Tafila and Ma'an Water and Sewerage Project									
	Construction of water and sewer systems, terminals, storm water and water networks	N.A.	45 per cent of the project will be finished in 1985	Governmental	Governmental USAID and Loans	7.5 17.5	CP	Ma'daba Karak Tafila and Ma'an	Providing better health conditions and adequate water supply for 64,000 inhabitants in Karak, Ma'an, Tafila and Ma'daba Water reuse in agriculture	

Sources: Replies to the questionnaire sent to ESCWA member States, 1985;
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