

ANNEX B1
MINISTRY OF WATER AND IRRIGATION
WATER SECTOR ACTION PLAN 2002-2006



Ministry of Water and Irrigation ACTION PLAN

	Issue Description / Action	Implementation Period				
		2002	2003	2004	2005	2006
1	INSTITUTIONAL AND LEGAL ISSUES					
1.1	Institutional Reform					
	MWI					
	Establishment of Regulatory Body					
	Phase I: Study on assesment of options for structural reform in the water and sanitation sector. The objective of the study is to identify an appropriate structure for the water sector in Jordan which will encompass greater private sector participation in service provision, a reorientation of the role of the government, and the development of an appropriate structural framework.					
	Phase II: Preparation of a time bound implementation plan and the development of draft legislation for the sector which will facilitate the implementation of the new institutional structure, identifying Regulation, responsibilities.					
	Phase I					
	Inception Report					
	Review of Sector Performance and Restructuring					
	Option Report					
	Water Sector Regulatory Framework Report					
	Phase I Final Report					
	Decision of the Regulatory Body					
	Phase II / Optional					
	Draft Sector Restructuring Legislation Report					
	Final Sector Restructuring Legislation Report					
	Restructuring of the Organizational Chart					
	Establishment of a new unit for planning and follow-up PSP projects					
	(modifications of laws & by-laws) According to the outcome of the Study					
	WAJ					

Legal Definitions of Responsibilities (WAJ)						
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Issue	Description / Action	Implementation Period				
		2002	2003	2004	2005	2006
	(modifications of laws & by-laws) According to the outcome of the Study					
	Restructuring of the Organizational Chart (according to the outcome of the Study)					
	Design and implementation of an accrual-based automated financial accounting system for WAJ					
	Autonomous commercialized entities at governorate level for retail services for specified Governorates					
	JVA					
	Legal Defenitions of Responsibilities (JVA) (modifications of laws & by-laws) According to the outcome of the Study					
	Structural reform of JVA to reflect the new mandate and to identify the future role of JVA (functions, responsibilities ...)					
	Implementation of a new Financial Accounting System					
1.2	Legal Issues					
	MWI					
	Modifying Ministry Establishment's By-Law					
	WAJ					
	Amendment to WAJ law to enhance PSP / and allow for the establishment of the public owned companies run on commercial basis.					
	A new bylaw for groundwater monitoring to reduce and control over drafting and illegal wells and provide for substantive penalties for illegal use					
	Amendment to WAJ law to enhance enforcement measures with regard to removing any violations and contraventions of the laws.					
	Ammendments to bylaw pertaining to wastewater regulations in order to allow for the smooth implementation of wastewater networks through private lands and plots					



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	2002	2003	2004	2005	2006
Amendment to wastewater by-law. Wastewater connection fees are now to be determined and set by WAJ based upon criteria approved by the Council of Ministers in order to enhance financial viability and cash flows					
Establishment of a new tariff for groundwater abstraction for agricultural use.					
Enforcement measures with regards to illegal drilling have been strengthened by the recent legal amendments					
JVA					
Implementation of modified JVA law and preparation of instructions & regulations to explain the items of the modified law. The modifications allow for private sector participation and the management of projects on commercial basis (excluding water resources and irrigation). Sanctions against illegal water use are being enforced.					
Amendment to JVA law to allow for the operations under commercial basis for all projects in the Jordan Valley					
Restructuring of the laws pertaining to the sale of land in the Valley to allow for the sale of property in order to allow agriculture farm units to be consolidated up to 250 dunums in order to assure enhanced economic viability					
Preparation of management contract document for O & M and supporting activities.					
Implementation of the management contract for O&M					
Conducting a strategic planning program for JVA. This program includes editing a vision, mission, goals, objectives, strategy and action plans for the next 5 years					
Implementation of the action plan resulting from the strategic planning program					



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	Issue	Implementation Period				
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	Description / Action					
	Farmers participation in retail water management. A pilot project funded by GTZ Improvement of Irrigation Water Management (IWM) is being implemented .					
2	AGRICULTURAL WATER USE					
2.1	Irrigated Areas					
	MWI					
	No expansion of irrigated areas / reduction of groundwater abstractions for irrigation purposes					
	Groundwater allocations for all purposes in the uplands shall be based on groundwater sustainability principles. The GOJ has made recent policy decisions to stop the abuse of critical water resources and promote better management of those resources. A recent GOJ policy calls for massive reduction in ground water abstractions to prevent the loss of some highland aquifers.					
	MWI & WAJ					
	Reduction of Groundwater Abstractions					
	Implementation of new ground water monitoring by-law					
	Equipping private wells with water meters					
	JVA					
	No Expansion of Irrigated Areas					
	Decision is being taken to limit the irrigated area in the Jordan Valley by 427,000 Dunums which represent the current situation & immediate plans in the Jordan Valley					
	Ban Summer Crops in order to preserve scarce water resources (in drought years)					
	Amount of water saved 15 MCM/yr					

A reduction of irrigated water for Summer time through a water rationing program Amount of water saved 15 MCM/yr						
 Ministry of Water and Irrigation ACTION PLAN						
	Issue	Implementation Period				
	Description / Action	2002	2003	2004	2005	2006
	Rent lands from farmers in order to prevent them from planting any crops Amount of water saved 15 MCM/yr					
2.2	Use of Marginal Water (brackish, treated waste water) in agriculture					
	MWI Increase the use of marginal water in agriculture / continue coordination with concerned parties					
	WAJ & JVA A Study financed by KfW on wastewater reuse					
	Substitute fresh water with marginal water, wherever possible					
	Wastewater Reuse Plan *					
	Existing TPs Expected Eff. Till 2005 m3/yr					
	As-Samra 67,459,840					
	Irbid Central 2,386,075					
	Aqaba 3,870,083					
	Salt 2,010,944					
	Jerash 1,015,401					
	Mafrq 698,457					
	Karak 614,350					
	Tafila 453,569					
	Ramtha 1,342,611					
	Ma'an 550,030					
	Madaba 1,636,171					
	Kufranja 1,304,952					
	Wadi Al-Sir 278,450					
	Fuheis 594,620					
	Wadi Arab 4,079,662					
	Planned TP					
	Wadi Hassan 497,895					
	Wadi Mousa 669,399					
	Al-Jeeza 1,752,426					
	Deir Alla 1,784,415					
	Aqaba South Coast 154,527					
	South Amman 5,685,928					

North Jordan Valley	2,311,175				
South Shuna	1,134,533				

* this plan till year 2005, to be followed by another plan for the year 2010, 2015, and 2020

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Description / Action		2002	2003	2004	2005	2006
Wadi Shallala	3,287,234					
Dead Sea Coast	560,312					
Total	112,212,607 MCM					
Wastewater reuse strategy						
Direct irrigation reuse for Upland/Mid land for Irrigation 30 MCM/yr up to the year 2005						
Reuse for industrial purposes 15 MCM/yr up to the year 2005						
Direct & Indirect Reuse in Jordan Valley (without Aqaba) 59.2 MCM/yr up to the year 2005						
Reuse in Aqaba	4					
MCM/yr up to the year 2005						
Total	108.2 MCM/Yr					
The Planned Projects:						
Wadi Shallala TP/ Irbid II						
Detailed Design and Tender Documents						
Award of the contract						
Construction						
Rehabilitation and Extension of Karak TP						
Feasibility Study						
Detailed Design and Tender Documents						
Award of the contract						
Construction						
Rehabilitation and Extension of Kufrankeh TP						
Feasibility Study						
Detailed Design and Tender Documents						
Award of the contract						
Construction						
Rehabilitation and Extension of Ma'an TP						
Feasibility Study						
Detailed Design and Tender Documents						
Award of the contract						

Increase in groundwater tariffs for water transported by tankers up to 250 fils/cu.m for municipal and industrial consumption and 100 fils/ cu.m for non-potable water



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Increase in the price of water sold by private tankers up to 1.75 JOD/cu.m for water sold outside the capital and 2 JOD/cu.m for water sold within Greater Amman area					
Increase in the price of water sold by WAJ tankers up to 1.5 JOD/cu.m					
Treated wastewater existing at the As-Samra plant will be sold to the new plant for electricity at 100 fils/cu.m, it is expected to purchase up to 7 McM/yr					
Raw water tariff for industrial usage by Arab Potash Co. has been set at 530 fils/cu.m. The groundwater tariff for water abstracted have also been increased from zero to 250 fils/cu.m, and 100 fils/cu.m for saline water.					
Implementation of the new regulation related to the industrial and commercial wastewater affluent to the public network, any excess of the certain parameters will be paid for according to a formula.					
Implementation of latest Cabinet's decision to enforce water tariff for extraction charges from the public and Governmental wells					
3.2 Investments in the Rehabilitation of the Water Supply Systems					
Greater Amman Capital Investment Program					
Feasibility Study					
Detailed Design and Tender Documents					
Award of the contract					
Construction					
Water Loss Reduction in Irbid and Jerash					
Feasibility Study					
Detailed Design and Tender Documents					
Award of the contract					
Construction					
Water Loss Reduction Program in Karak					
Feasibility Study					

Appraisal Report and Loan Agreement
Detailed Design and Tender Documents
Construction



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	2002	2003	2004	2005	2006
Rehabilitation of Zarqa Water Network Detailed Design and Tender Documents Award of the contract Construction					
3.3 Increase Efficiency					
Increase PSP Involvement					
Personnel Optimization					
No. of employees to be reduced by 1% annually.					
Training Measures(GTZ, USAID, and local Institutions financed by WAJ)					
Public Awareness Program					
Increase of water tariff by 8% in year 2005 and another increase by 8% in the year 2006					
Target O&M Cost Recovery (%)	125	147	139	135	148
Target O&M +Debt Cost Recovery (%)	101	113	104	103	112
JVA					
Water Tariffs Differentiation of irrigation water tariffs based on water quality, high water consuming crop.					
Investments in the Rehabilitation of the Irrigation Water Supply Systems					
Rehabilitation of Southern Ghors Irrigation Project: Stage 1 Construction					
Rehabilitation of Southern Ghors Irrigation Project: Stage 2 Construction					

	Using modern irrigation techniques in the Jordan Valley to raise efficiency								
	MC for irrigation System (USAID)								
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	Issue	Implementation Period							
		2002	2003	2004	2005	2006			
	Description / Action								
	Irrigation Advisory Services								
	Public Awareness Program								
	Target O&M Cost Recovery (%)	46.6	46.5	155.1	143.9	137.8			
4	PRIVATE SECTOR PARTICIPATION Further development of private sector involvement for water supply and wastewater disposal								
	Several steps have already been taken to improve water and sanitation services by introducing PSP. Multi & bilateral agreements have attracted advisors & investors into Jordan in ever-increasing numbers. Projects below are PSP projects:								
	Amman Management Contract								
	Transaction Advisor								
	Publishing tendering document								
	Award of the contract								
	Start of the operator's contract								
	Public-Owned Company runs on commercial basis								
	Northern Governorate MC								
	Transaction Advisor								
	Publishing tendering document								
	Award of the contract								
	Start of the operator's contract								
	Public-owned Company at Aqaba								
	Preparation								
	Implementation								
	Wadi Mousa Water and Wastewater MC								
	Transaction Advisor and Awarding								

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Issue	Implementation Period				
	2002	2003	2004	2005	2006
Zara - Ma'en Desalination plant and Conveyor DBO Project					
Award of the contract	■				
Start of the contractor's contract		■			
Operation		■	■	■	■
Disi Amman Water Conveyor					
Detailed Design and Tender Documents	■				
Publishing tendering document	■	■			
Award of the contract		■			
Start of the operator's contract			■	■	■
Middle Governorates PSP					
Preliminary Study		■			
Preparation of PSP Involvement			■	■	
Decision					■
5 INFORMATION SYSTEMS					
MWI					
Progress on the compatibility of data and information systems					
Use of the common object data catalogue in water authorities		■	■	■	■
Implementation of a centralized information system to have complete data related to water and wastewater resources.	■	■	■		
Data Information System - WAJ					
Implementation of a new Customer Information System, this system will interface with other systems in use	■	■	■		

Implementation of a new Archiving System in order to archive technical and administrative data related to well permits, drilling data, and deposits.						
Implementing centralized GIS to have complete data related to water & wastewater projects.						

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	Data Information Systems - JVA GIS project to be expanded for Southern Ghors and use of remote sensing.					
	Automation of administrative procedures and process mapping, archiving of documents					
	Wide area network (WAN) to link JVA headquarters with other sites in Amman and Jordan Valley					
6	ADAPTATION OF INTERNATIONAL CONVENTIONS Translation on Biodiversity and Convention to Desertification into national legislation & regulation					
6.1	Biodiversity Jordan National Biodiversity strategy and action plan was completed by the end of 2001, which contains 50 projects awaiting finance.					
6.2	Desertification GOJ has set a strategy and action plan for desertification. The objectives of the project are to establish a mechanism for all the sector in Jordan, to motivate planning and operation for the projects which will be implemented for this purpose and to reduce the negative impact of this phenomenon.					

P. S. Item No. 6 is General Corporation for the Environment Protection's Responsibility

Successful Implementation of this Action Plan is subject to the continuous Support from the Donors