

Annex- 4 Action Plan and duration of implementation

Subject	Action Plan	Duration
!. Institutional and legislative aspects in irrigation		
1.1 Role of MAI and its branches in irrigation water management	<ul style="list-style-type: none"> -Adopt and implement Agriculture –21 Agenda <ul style="list-style-type: none"> - Discuss the “A21A” at the national and the local levels in the agriculture sector involving government staff , cooperative members, individual farmers and the private sector. - Launch reform in the agriculture sector on the basis of “A21A” and the implementation program - Adopt irrigation policy statements and the implementation program - Prepare a policy statement for Watershed management. - Actively participate in the revision of water law and by-laws and prepare plan of action for implementation of water law in the agriculture sector 	Medium Madium Medium Medium Medium
1.2. Role of NWRA in assessment and management of water resources	<ul style="list-style-type: none"> - Speed up the revision of water law and by-laws for clear definition and distribution of tasks and responsibilities. - Establish branches of NWRA at water basin levels and provide means for monitoring and assessment of underground water in these water basins. - Strengthen NWRA capacities to enable it perform its duties in a professional manner. - Launch awareness campaigns and Discuss water law among beneficiaries at national and local levels. - Create coordinating mechanisms between MAI and NWRA to ensure coordination. 	Medium Medium Medium Medium Medium
1.3 Role of NGOs in irrigation management	<ul style="list-style-type: none"> - Monitor progress in WUAs in the pilot areas and draw lessons as a prerequisite for expansion of this intervention. - Involve farmers from within the area and from outside in the assessment of progress and identification of limiting factors of change. 	Medium Medium
1.4. Traditional water rights in irrigation management	<ul style="list-style-type: none"> - Support the institutional capacities of irrigation department to perform its role and dur=ties efficiently - Implement water law and its by-laws and the irrigation policies - Lift subsidies for mining of underground water - Revise traditional water rights in flood irrigation to ensure equity in floodwater distribution in different parts of wadis. - Revive the tariff systems in flood irrigation and ensure that these revenues are used by beneficiaries for management and maintenance of irrigation structures. 	Medium Medium/Long Medium/Long Long Term
1.5. Role of MAI and NWRA in irrigation water management	<ul style="list-style-type: none"> - Strengthen the institutional capacities of MAI and NWRA after implementing the reform program. - Implement water law and its by-laws after revising and launch implementation of the irrigation policies - Lift subsidies for underground water mining. 	

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2. Management and uses of irrigation water		
2.1. The rationale of dams	<ul style="list-style-type: none"> - Revise experiences of construction of small and medium dams. - Establish a national plan for dam construction and their irrigation networks on the basis of objective and scientific studies and surveys of all watersheds. - Maintain participatory principles as a strategic option in dam construction with direct involvement of beneficiaries and direct involvement of Local Councils. 	<p>Medium</p> <p>Medium/Long</p> <p>Medium/Long</p>
2.2. Qat	<ul style="list-style-type: none"> - Lift subsidy on water underground water mining. - Implement water law, its By –laws and the policy statements - Launch intensive campaigns on the economic and health dangers of qat chewing and qat impact on the environment. - Study and introduce alternative crops and technologies that can compete with qat. 	<p>Medium/long</p> <p>Medium/Long</p> <p>Medium</p> <p>Medium/Long</p>
2.3. Ground water mining	<ul style="list-style-type: none"> - Support the institutional capacities of MAI and Irrigation Department at the national and local levels after restructuring and implementing the reform program. - Lift subsidies on underground mining - Implement water law, the by-laws and irrigation policy statements - Support the dissemination of modern irrigation techniques for rational water use in irrigation. - Launch campaigns to create awareness and consensus on the danger of underground depletion on the well being of future generations. 	<p>Medium</p> <p>Medium/long</p> <p>Medium/Long</p> <p>Medium/Long</p> <p>Medium</p>
2.4. The virtue of water and food security	<ul style="list-style-type: none"> - Lift subsidies on underground mining - Suggest alternative cropping patterns for water saving - Research efforts should be on drought resistant and early maturing varieties. - The economic return per unit water should be the criteria for selection in genetic enhancement program - Diversify income of rural families. - Introduce alternative technologies with high returns under rainfed conditions to increase the value of cropping. 	<p>Medium/Long</p> <p>Medium</p> <p>Medium</p> <p>Medium</p> <p>Mediumrr</p>
2.5. Watershed management and terrace rehabilitation	<ul style="list-style-type: none"> - Support the institutional capacities of MAI and the Department of forestry and range department after implementing the reform program. - Design development interventions on the basis of integration of approaches and participation of local communities in selected pilot areas. - Increase return from terraces through introduction of technologies suitable for terraces and with use of modern irrigation techniques and water harvesting from annual rainfall. - Increase return per unit area through genetic enhancement and sound crop and resource management practices. - Integrate gender in all aspects of watershed management and terrace rehabilitation 	<p>Medium</p> <p>Medium</p> <p>Medium/Long</p> <p>Medium/Long</p> <p>Medium/Long</p>

Subject	Action Plan	Duration
3.2. Extension in irrigation	- Review the Extension Strategy with respect to developments in extension services and the role of non government extension service providers.	Medium
	- Assess the role of different service providers and quantify their needs for provision of extension services in a professional manner.	Medium
	- Create a strong and transparent national institution capable of responding to the changing circumstances in the market. This institution should coordinate the efforts of extension services at the national and local levels.	Medium
	- Strengthen extension capacities through training in irrigation practices and in modern irrigation techniques. The training should also cover issues like improved management of irrigation at the field level and irrigation scheduling under different production systems.	Medium
	- Lift incentives on mining of underground water to encourage the demand for rationalization of underground water by farmers..	Medium/Long