

## Abstract of Final Report

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**1. Please itemize your own personal goals in the units and the results of the trainings per unit concisely.  
(Wrap up all the Crystal Water descriptions)**

Unit of Training	Your own objectives	The Result of the Training
(1) Water Storage and Supply Facilities / Facility Management	1-fixing the side slopes of irr. Channels. 2-controlling on the surface water in cases of flooding. 3-new kinds of control gates. 4-examination of thermal cracks of RC BOX CULVERT.	1-using concrete plates joining with each other as one unit to fix the side slopes of channels. 2-fill and concrete dams are used to store the water and for safety. 3- radial gates are good controlling on water levels and discharges. 4-destructive and non-destructive tests are made on concrete.
(2) Farm/Forest Management and Food Policy	-Approach on the use of P.C in improving management.	-acquired some knowledge about the use of P.C in farm management.
(3) Ground Water	1-analysis of (confined-leaky-unconfined) Aquifers. 2-overview of underground dam.	1-knowing good idea about (confined-leaky-unconfined) aquifers. 2-details and site observation on under ground dam.
(4) Soil/Water Quality Assessment	-To learn soil water quality analysis and it's technique in use.	-gained knowledge of possibility to utilize sand dune area for cultivation as soil improvement by reclamation process.
(5) Field Water and Soil Management	1-to learn improvement of field water management. 2-to know the methods to estimate Evapotranspiration.	1-possible ideas for water management for salinity control. 2- measurements and estimation of Evapotranspiration using Penman method.
(6) Practice on the Design of Water Supply/ Distribution Systems	1-approach on different kinds of regulator valves. 2-to know water hammer. 3-to know new gates 4-o know new pumps.	1-knowing the different kinds of automatic regulator valves. 2-prevention of water hammer. 3-automatic radial check gates and it's advantages especially watchman gates. Self-priming pump and its advantages.
(7) Crops/Plants suitable for Arid Regions	-To know the effect of salt on crops in arid and semi arid region..	-Understanding the effect of salt stress on plants through practical experiments.
(8) Preservation of Greens/ Assessment of Vegetation	-To know how to evaluate the vegetation of land use and land cover By using Remote Sensing.	-Understanding how the use of the remote sensing to evaluate the The vegetation of land use and land cover.

**2. Please itemize the training contents that you acknowledged as effective and give clear summaries of the supportive reasons.**

( More than three subjects , Mark all that apply. )

Unit of Training	Training Contents	Reasons
Field water and soil management.	-Measurement and estimation of Evapotranspiration using panman Method.	-We have to calculate the crops water requirements to adjust the Required water discharges based on the result of potential Evapotranspiration.
Preservation of greens/assessment of vegetation.	-Knowing how to evaluate the vegetation of land use and land cover By using remote sensing.	-we need to estimate and measure the cultivating areas with different kinds of crops to calculate the crop requirements and remote sensing is a very good and easy way to evaluate the vegetation.
Water storage and supply facilities/facility management.	1- Dams construction with different types. 2- 2- diagnosing the concrete,	1-storing the water resulting from the heavy rains in the costal areas, which may be lost, are important by using fill and concrete dams. 2- examination of thermal cracks and diagnosing deterioration of concrete by using destructive method are required..
Practice on the design of Water supply/distribution systems	1- knowing new kinds of automatic gates. 2- water hammer.	1-controlling on the water levels and discharges are our major problems and automatic radial gates enable us to adjust water levels or constant discharges 2-prevention of water hammer by using surge tank for long pressure pipes is a new technique and very good solution for saving the pumps because we have over than 1600 pump station.

**3. Please itemize briefly and to the point on the contents of the project(s) and/or action plan(s) that you are planning to carry out or to set up.**  
**Please title each project planned and/or action plan to present a concise picture of the contents as well as practical problem(s) to be settled.**

( More than three subjects , Mark all that apply. )

Title(s)	The outline of the project (s) or action plan(s)	Practical Problems to be settled for the stated plan
Preservation of greens/Assessment of vegetation	-Estimating crop water requirements by using remote sensing..	-Suffering from many tables and many calculations and finally crop water requirements are not accurate because of insufficient data.
Field water and soil management.	-the sharing between the water users and the government.	-the government staff are suffering too much from the irrigation problems and sharing will relieve many duties of work from governmental staff and also the farmers will use the water in the best way and keep the water clean.
Practice the Design of Water Supply/ Distribution Systems.	-Spreading automatic radial gates which enable the farmers to irrigate continuously.	-we are suffering from irrigating Rotationally which needs to full the whole canal which causes big losses of water.