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Report #:07

GRADUATE SEMINAR SERIES

Empowering the Irrigation Reforming Institutions in Sindh

**Seminar Conducted by:
Mr. Nazeer A. Essani
General Manager (Transition)
Sindh Irrigation Drainage Authority**

January , 2015

Partnering Universities





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1. Graduate Seminar Series – a Brief Introduction:

Graduate seminar series is one of the regular features of this center and are organized on weekly basis and preferably on Fridays. These seminars are aimed at keeping the students and faculty of the center well informed with the latest research findings, facts and trends in water and related sectors. Experts from the field are invited to deliver lectures & presentations and give talks on the most emerging water related issues and the best practices adopted worldwide in addressing those issues.

So far, the center has organized following seminars;

S.No.	Topic	Speaker(s)/Presenter(s)	Date
1	Spate Irrigation: Potential and Challenges in Sindh	Mr. Karim Nawaz Baloch, Water Expert from Balochistan Dr. Kamran Ansari, USPCAS-W Dr. Altaf Ali Siyal, USPCAS-W	4/9/2015
2	Health, Safety and Environment	Engr. Nizamuddin Domki, HSE Trainer	18/09/2015
3	Impact of Climate Change on Water Resources of Sindh Province	Senator Nisar A. Memon Dr. Ghulam Rasul, Pakistan Meteorological Department	5/11/2015
4	Water quality around us: Overview of situation in Hyderabad and Tharparkar	Prof. Dr. Muhammad Iqbal Bhanger, University of Karachi	12/11/2015
5	Water: Resources, Issues and Management	Prof. Dr. Iqbal Ahmed Panhwar, Bahria University Karachi	11/12/2015
6	How to review research paper & write a research proposal	Dr. Sajjad Ahmad, University of Nevada, Los Vegas USA	22/01/2016

2. Empowering the Irrigation Reforming Institutions in Sindh

On Friday January 29, 2016, Mr. Nazeer Ahmed Essani – General Manager (Transition), Sindh Irrigation Drainage Authority (SIDA) Hyderabad, delivered his lecture and presentation on **“Empowering the Irrigation Reforming Institutions in Sindh”**.

The seminar was started with recitation of Holy Quran by Mr. Moazzam Ali Rind – MS (HID) Student of this center while Mr. Farhan Wahid Soomro – MS student of Environment Engineering moderated the proceedings of the seminar.

Dr. Rafique A. Chandio – Director Administration welcomed the participants and guests in the seminar.



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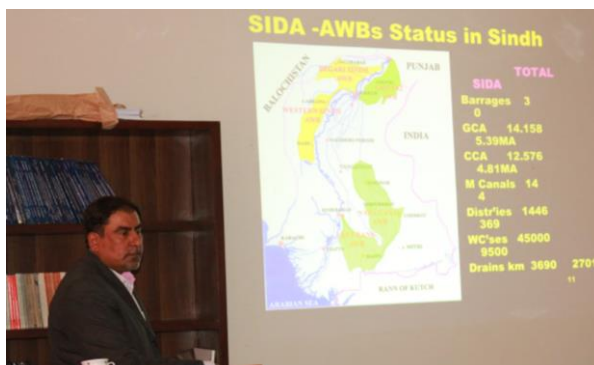


Mr. Nazeer Ahmed Essani – speaker of the seminar while delivering his lecture on the topic, gave historical perspective and importance of Indus River in early community irrigation system. In order to fair distribution of water among all the stakeholders especially the tail-end and small farmers, he said that it was principally agreed on the transformation of Irrigation Department into autonomous Bodies like SIDA, Area Water Boards (AWBs) and Farmer Organizations (FOs).

He said these institutions maintain barrages, canals, distributaries and minors. It also ensure the fair and transparent delivery of water to farmers according to their legal share. While delivering his lecture, Mr. Essani presented illustrated presentation on multimedia, in which graphical representation showed the water use and conveyance efficiencies, irrigation water equity and reliability, base line surveys, comparison of crop yields and Abiana recovery mechanism.

Mr. Essani was of the view that the fair distribution of water can be materialized by institutional reforms in water sector of Pakistan while SIDA is doing its best by bringing such reforms at grass root level in the designated districts of Sindh Province. He mentioned that country's irrigation system is one of the best systems developed in British Colonial era, but it was poorly managed in our governance structure. He further said that water reservoirs are needed to save the water otherwise the country will face the extreme water scarcity. In this connection, small dams can be constructed on hilly areas to store rainfall water and the same can be regulated for irrigation purpose in an organized spate irrigation system.

Project Director USPCAS-W Prof. Dr. Bakhshal Khan Lashari while presenting vote of thanks to the participants and guests appreciated the efforts of Mr. Nazeer Essani Memon for delivering this lecture. Almost all students of USPCAS-W participated in the seminar which was followed by question and answer session.





3. Presentation

Empowering the Irrigation Reforming Institutions in Sindh

Nazeer Essani- MEMON

History of Community Irrigation

- ▶ Indus River is flowing since millions of years. It is mentioned in Vedas (Rigveda) - oldest book of Hindu Civilization.
- ▶ The Indus civilization is the richest and one of the oldest in the world. At that time community was engaged in irrigation.
- ▶ Until the early 1800s, irrigation was participatory at the village or community level. In Sindh many irrigation schemes were launched in the Kalhora Regime through active participation of communities.
- ▶ In early 1900s, large scale irrigation & drainage schemes were executed by the Public/Govt. agencies and users became passive recipient of the service provided instead of responsible, active partner

Reforms program

- ▶ Transformation of Irrigation Department into autonomous Bodies- SIDA, Area Water Boards (AWBs) and Farmer Organisations (FOs)
- ▶ Involvement of farmers at all levels (esp. tail end + small farmers - they are represented in Farmers' Organisations and in Boards of AWBs and SIDA)
- ▶ Peoples participation, service delivery, fair water distribution

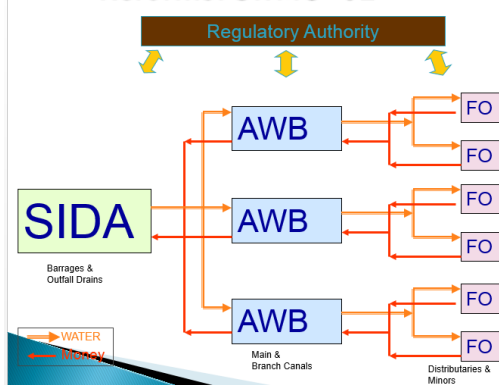
Goals and Expected Results

- ▶ More equitable and reliable water distribution
- ▶ Better + more cost effective maintenance
- ▶ Reduction of financial burden on Government of Sindh
- ▶ Farmers and users involvement in decision making
- ▶ Devolution of power from Govt. to farmers
- ▶ Public-private partnership in Irrigation and drainage management
- ▶ Sindh-Pakistan to be known as Internationally successful experiences, like: India, China, Egypt, Iran, Turkey, Mexico and Europe

The new Institutions

- ▶ **SIDA** maintains barrages, delivers water to AWBs, maintains main/outfall drains + bunds along river, prime agent of change
- ▶ **AWBs** maintain main canals, deliver water to FOs, pay SIDA For services
- ▶ **FOs** maintain distributaries/minors, deliver water to farmers, collect revenue, pay AWBs For services
- ▶ **Regulatory Authority** (Govt. body; Govt. policies) supervises SIDA, AWBs, FOs and arbitrate conflicts (currently SIDA is acting as RA as per section 100 of SWMO-2002).

Reforms: SWMO-02





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SIDA -AWBs Status in Sindh



	TOTAL	SIDA
Barrages	3	0
GCA	14.158	5.39MA
CCA	12.576	4.81MA
M Canals	14	4
Districts	1446	369
WC'ses	42000	9500
Drains km	3690	2701

(the fig are approximate)

SIDA Board and AWB Membership

Board	Representation	SIDA Act 1997	SWMO- 2002
SIDA	Farmer Representative	01	05 (1 tail, 1 small)
	Independent/Academician	0	05
	Govt. Representative	07	05
AWB	Farmer Representative	02	05 (1 tail, 1 small)
	Independent/Academician	03	06
	Govt. Representative	04	0

FOs Formation and Management Transfer

s	Area Water Boards	Total FOs to be Registered (Tentative)	FOs Registered/ Formed	Management Transferred
1	Nara Canal AWB	184	161	159
2	Ghotki Feeder Canal AWB	94	89	62
3	Left Bank Canal AWB	105	93	93
	Others (Rohri, Khairpur, etc)	-	15	0
	Total	383	358	314

Workshops/seminars/FOs conventions/IDMT agreement ceremonies are being held as regular feature of SIDA activities. Millions peoples have been mobilized.



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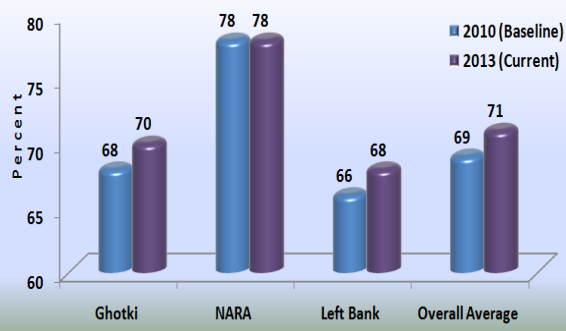
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OVERALL IMPACT OF INSTITUTIONAL REFORMS IN IRRIGATION SECTOR

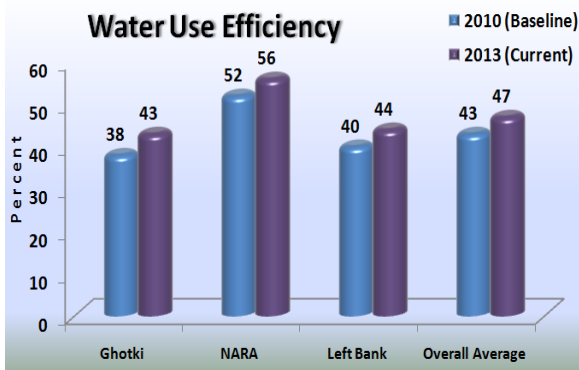
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Water Conveyance Efficiency



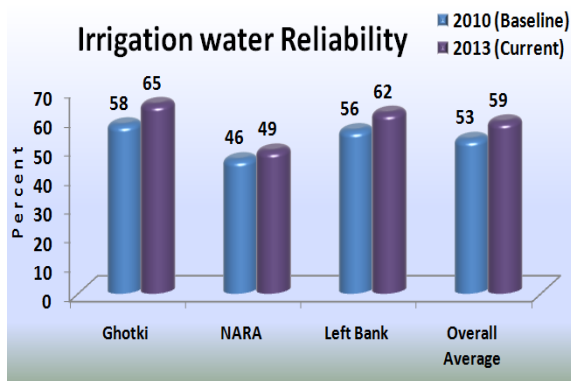
Source: Baseline Survey and periodic reports

Water Use Efficiency



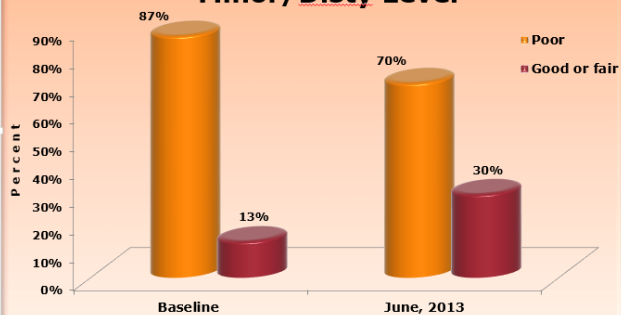
Source: Baseline Survey and periodic reports

Irrigation water Reliability



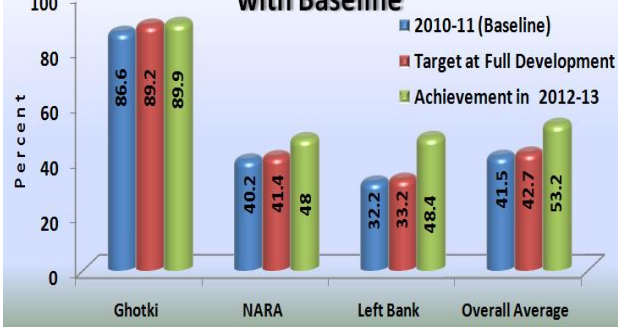
Source: Baseline Survey and periodic reports

Irrigation Water Equity at Minor/Disty Level



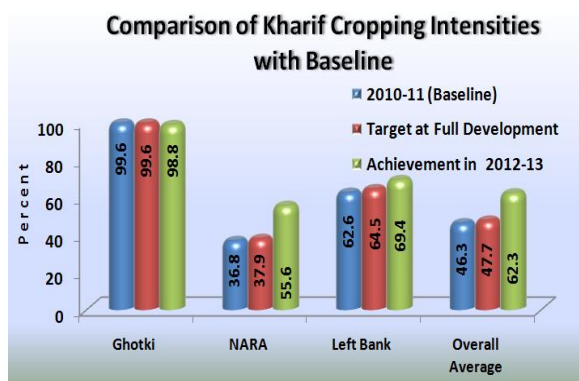
Source: Baseline Survey and periodic reports

Comparison of Rabi Cropping Intensities with Baseline

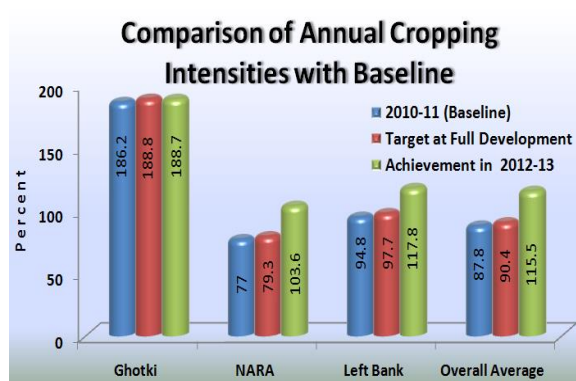


Source: M&E Bi annual crop Season Reports





Source: M&E Bi annual crop Season Reports



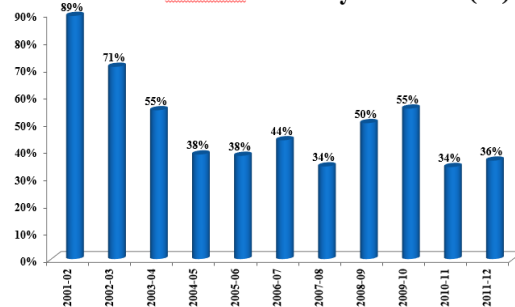
Source: M&E Bi annual crop Season Reports

Comparison of Crop Yields with Baseline

Crops	Crop Yield Maunds (40 kgs) per acre			
	2010 (Baseline)	Target at Full Development	Achievement in	
			2010-11	2012-13
Rice	53.5	55.1	30.4	41.9
Cotton	32.6	33.6	10.6	25.6
Sugarcane	787.9	811.5	495.2	555.9
Wheat	31.7	32.7	33.9	30.5
Rape & Mustard	12.2	12.6	13.7	15.1
Sunflower	12.9	13.3	11.0	12.1

Source: M&EC Bi-annual crop season Reports

Overall Abiana Recovery over-time (%)



Total Abiana Assessed and Collected During last 11 years (2001-02 to 2011-12)

AWB	Million Rupees		Recovery Ratio (%)
	Abiana Assessed	Abiana Collected	
Nara AWB	610	298	49
Left Bank AWB	229	79	35
Ghotki AWB	197	126	64
Total	1036	503	49

FOs Performance Assessment

► On quarterly basis, performance of FOs is assessed through surveys of 24 sample FOs.

► Five indicators are used to assess their performance and sustainability.

1. Organizational Development (20)
2. Irrigation Service Delivery (30)
3. Management of Physical condition of Channels (20)
4. Dispute Resolution (10)
5. Water Charges (abiana) Assessment and Collection (20)



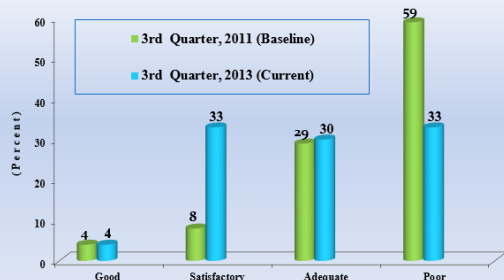


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FO Performance Compared with Baseline



Source: M&E FO Performance Studies

Strategic Issues of empowerment

- ▶ Transitional timeframe as per SWMO not met – Government was supposed to complete appointment of the AWBs and transfer of Barrages in Sindh by 30th June 2005
- Administrative Transfer of Irrigation Department Staff to SIDA and AWBs
- ▶ Delegation of powers, administrative control of irrigation staff to SIDA and AWBs
- Full activation of SIDA Board- no meeting of SIDA Board for last 18 months
- Elections of SIDA Board and AWBs
- Approval of SIDA Rules of Business- Law department to vett
- Difficulty in enhancing water price for Agriculture and commercial users
- ▶ At source deduction of water dues from provincial, municipal bodies and federal agencies
- Recovery from farmers- chronic defaulters

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