

ISLAMIC REPUBLIC OF PAKISTAN  
PROVINCE OF SINDH

July 9, 2015

International Development Association  
1818 H Street NW  
Washington, DC 20433  
United States of America

**Re: Credit Number 5604-PK  
(Sindh Irrigated Agriculture Productivity Enhancement Project)  
Performance Monitoring Indicators**

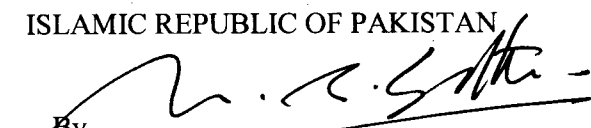
Dear Sir/Mesdames:

We refer to Section II A of Schedule 2 of the Financing Agreement (Sindh Irrigated Agriculture Productivity Enhancement Project) between the Islamic Republic of Pakistan the ("Recipient") and the International Development Association ("Association") and Section II A.1 of Schedule to the Project Agreement between the International Development Association and Province of Sindh (Project Implementing Entity) of even date herewith for the above-mentioned project.

We hereby agree that the Performance Monitoring Indicators to monitor and evaluate the carrying out of the Project and the achievement of the objectives thereof are those set forth in the Attachment to this letter.

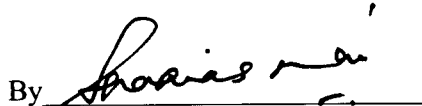
Very truly yours,

ISLAMIC REPUBLIC OF PAKISTAN

By   
Authorized Representative

**MUHAMMAD SALEEM SETHI**  
Secretary  
Economic Affairs Division  
Government of Pakistan  
Islamabad

PROVINCE OF SINDH

By   
Authorized Representative

Public Disclosure Authorized

Public Disclosure Authorized

## Results Framework and Monitoring

### PAKISTAN: SINDH IRRIGATED AGRICULTURE PRODUCTIVITY ENHANCEMENT PROGRAM PHASE-I PROJECT

<b>Project Development Objective (PDO):</b> The project development objective is to improve irrigation water management at tertiary and field level in Sindh.													
PDO Level Results Indicators	IS	UoM	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments/ Definitions
				PY1/d 2016	PY2 2017	PY3 2018	PY4 2019	PY5 2020	PY6 2021				
1. Water courses with an increase in water course conveyance efficiency of at least 1.5%.		Number	0	0	2,000	3,000	3,900	4,600	5,500	Bi-annually	M&E consultant	Based on a sample of representative water courses - by size and location (10% of total).	
2. Direct project beneficiaries (number), of which female % /a	<input checked="" type="checkbox"/>	Number/ Percentage	0/0	285,000/ 25%	619,000/ 25%	980,000/ 25%	1,323,000/ 25%	1,685,000/ 25%	2,000,000/ 25%	Annually	M&E consultant	Core indicator 1. /a	
3. Water users provided with new/improved irrigation and drainage services, of which female %	<input checked="" type="checkbox"/>	Number/ Percentage	0	30,000/ 25%	65,000/ 25%	103,000/ 25%	139,000/ 25%	177,000/ 25%	210,000/ 25%	Annually	M&E consultant	Core indicator 2. Will be gender disaggregated.	
4. Increase in cropping intensity (CI) in water course areas. /b		Percentage	0 (baseline CI=115%)	0	0	20	20	20	20	Annually	M&E consultant	Measured in year 2 after improvement. Sample size: 10% of WC, 6 farmers/WC (2 each head/middle/ tail of canal, on each side)	
5. Increase in cropping intensity through HEIS. /c		Percentage	0 (baseline CI=115%)	0	0	0	50	50	50	Annually	M&E consultant	Measured in year 2 after establishment. Sample size: Average of all HEIS: 10% of project WC with HEIS, 3 farmers per WC; 10% of non-project WC with HEIS, 3 farmers per WC; 10% of tubewell HEIS farmers. Excluding small HEIS kits. Baseline is same as WC baseline.	

<sup>a</sup> Number of farm households benefiting by sub-component: A1: 198,000; A2: 121,000 B1: 2,600; B2: 10,000; C1: 60,000; C2: 37,500. Not added as some households benefit from more than one sub-component. Calculation of total direct project beneficiaries is based on 235,000 households and an average household size of 8.5.

<sup>b</sup> Target values apply to WC improved in previous years. /c Target values apply to HEIS established in previous years. CI targets for row crops only (orchards CI remains 100%).

<sup>d</sup> PY means Project Year which starts January each year.

Intermediate Results Indicators	%	UoM	Base-line	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments/ Definitions
				PY1 2016	PY2 2017	PY3 2018	PY4 2019	PY5 2020	PY6 2021				
<b>Component A: Community Water Infrastructure Improvement</b>													
Intermediate Result A1: Improved water courses are fully functional.													
1. Improved WC that are fully functional (including a functioning water course association).		Number	0	2000	3,000	3,900	4,600	5,500	Annually	M&E Report	M&E consultant	See definition /a.	
2. Operational water user associations created and/or strengthened	<input checked="" type="checkbox"/>	Number	0	1,700	2,700	3,700	4,600	5,500	Annually	M&E Report	M&E consultant	Core indicator 4.	
3. Farmers benefiting from improved water courses, of which female headed households (%)		Number/ Percentage	0	61,200/ 25%	97,200/ 25%	133,200/ 25%	165,600/ 25%	198,000/ 25%	Annually	M&E Report	M&E consultant	Part of core indicator 2: water users provided with irrigation and drainage services (not gender disaggregated).	
4. Total command area of improved WC.		Hectares	0	170,000	270,000	370,000	460,000	550,000	Annually	M&E Report	M&E consultant	Reflects core indicator 3 : area provided with irrigation and drainage services – improved.	
5. Area provided with irrigation and drainage services (i) New (ii) Improved	<input checked="" type="checkbox"/>	Hectares	0	(i) 4,380 (ii) 174,380	(i) 7,050 (ii) 277,050	(i) 9,720 (ii) 389,720	(i) 12,290 (ii) 472,290	(i) 14,000 (ii) 564,000	Annually	M&E Report	M&E consultant	Core indicator 3: Includes water course improvements and establishment of on-farm HEIS (indicator 9).	
Intermediate Result A2: Flood shelters established by the project and providing access to vulnerable people in the targeted communities.													
6. Flood shelters established.		Number	0	132	282	432	432	432	Annually	M&E Report	M&E consultant	Based on avg. 280 people/shelter and 8.5 people per HH (Ag. Census 2010). In addition, 129,000 head of livestock will be accommodated by the shelters	
7. People (households) having access to the shelters, of which female headed households (%).		Number/ Percentage	0	37,00 (4,353)/ 25%	79,000 (9,294)/ 25%	121,000 (14,235)/ 25%	121,000 (14,235)/ 25%	121,000 (14,235)/ 25%	Annually	M&E Report	M&E consultant		

<sup>a</sup> Definition: Water course is fully functional if a WCA is fully functional and adequate resources are allocated for O&M of the WC.

A WCA is considered fully functional if the association is formed, registered, opened a bank account and carries out rehabilitation works.

It will be measured (a) 6 months after the completion of the improvements, which will provide a sense of the speed for the water course to be functional, and (b) at the end of the project, which will assess its sustainability over time.

Intermediate Results Indicators	Co	UoM	Base-line	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments/ Definitions
				PY1 2016	PY2 2017	PY3 2018	PY4\ 2019	PY5 2020	PY6 2021				
<b>Component B: Promotion and Installation of High Efficiency Irrigation Systems (HEIS)</b>													
Intermediate Result B1: Small and medium-sized HEIS established.													
8. Farmers provided with HEIS, of which female headed households (25%)		Number/ Percentage	0	0/ 25%	770/ 25%	1,255/ 25%	1,740/ 25%	2,215/ 25%	2,600/ 25%	Annually	M&E Report	M&E consultant	Part of core indicator 2: water users provided with irrigation and drainage services (not gender disaggregated).
9. Area established under HEIS		Hectares	0	0	4,380	7,050	9,720	12,290	14,000	Annually	M&E Report	M&E consultant	Definition: "HEIS equipment is appropriately maintained and adequate resources are allocated for O&M".
Intermediate Result B2: HEIS established in kitchen gardens.													
10. Households provided with HEIS in kitchen gardens. (Total/female headed)		Number	0/0	1,000/500	3,000/ 1,500	5,000/ 2,500	7,000/ 3,500	9,000/ 4,500	10,000/ 5,000	Annually	M&E Report	M&E consultant	
<b>Component C: Improved Agriculture Practices</b>													
Intermediate Result C1: Service providers meet project farmers' demand for land leveling and deep ripping.													
11. Area covered by laser levelling.		Hectares	0	14,569	43,706	80,128	116,550	145,687	160,256	Annually	M&E Report	M&E consultant	
12. Area covered by deep ripping.		Hectares	0	9,712	29,137	53,419	77,700	97,125	106,837	Annually	M&E Report	M&E consultant	
Intermediate Result C2: Improved agriculture production technology applied by project farmers.													
13. Farmers trained on improved agronomic practices and technologies, of which female (20%)		Number/ Percentage	0	5,000/ 20%	12,500/ 20%	20,000/ 20%	27,500/ 20%	32,500/ 20%	37,500/ 20%	Annually	M&E Report	M&E consultant	
14. Area under improved agronomic practices.		Hectares	0	7,000	17,500	28,000	38,500	45,500	52,500	Annually	M&E Report	M&E consultant	Assumption: avg. 1.4 ha per farmer (50% of avg. farm size).
<b>Component D: Project Management, Monitoring and Evaluation</b>													
Intermediate Result D: Project efficiently and effectively managed to achieve planned results.													
15. Essential staff for project management fully operational and retained during project live, incl. 100 field teams.		yes/no	No							Annually	Staff Report	M&E consultant	Yes All positions filled and staff fully operational.