AiD-EGC (JV)

Monthly Progress & Monitoring Report

OCTOBER 2024

KHYBER PAKHTHUNKHWA IRRIGATED-AGRICULTURE IMPROVEMENT PROJECT (KP-IAIP)

Submitted by

Associates in Development (Pvt) Ltd.
(Lead Partner)

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Monitoring & Evaluation Consultants (M&EC)

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Project Overview

The Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project (KPIAIP) is a government initiative focused on enhancing the efficiency and sustainability of irrigated agriculture in the Khyber Pakhtunkhwa (KPK) province. Led by the Director General of On-Farm Water Management (DG-OFWM), the project aims to improve agricultural practices among small-scale farmers, including those in the newly merged districts. The primary goal of the KPIAIP is to tackle key challenges that hinder optimal agricultural management, such as inefficient irrigation methods, poor resource management and unproductive crop yield strategies.

To ensure effective implementation and monitoring, consultants from AiD-EGC JV have been engaged. The Monitoring and Evaluation Consultants (M&EC) play a crucial role in supervising the project's progress and assessing the impact of its activities. This report provides an update on the progress and monitoring of KPIAIP, offering a detailed overview of the activities conducted by the M&EC during October 2024. Monthly reports are critical deliverables that serve as key tools in assessing the progress of the project.

Achievements of the M&EC up to the Reporting Month

The M&EC team has successfully carried out a diverse range of agreed project activities across the KPK, achieving notable milestones through effective collaboration with the PIU and the district level departmental teams. By leveraging the expertise and dedication of all stakeholders, the team has been able to drive significant progress. As of the end of last month, the team made considerable advancements in several areas, including:

- Established the project office, deployed staff and provided focused training for executing project activities.
- Submitted the draft and final inception report on time, integrating valuable feedback from the PIU.
- Finalized digitized data-gathering formats after input from relevant stakeholders. Launched the MIS for impact assessment of KPIAIP completed sampled schemes on the Kobo Toolbox Server in April 2023.
- Cleaned data for 4,828 completed schemes of the KPIAIP from the 1st and 2nd years (2020-2021 & 2021-2022) for field operations and impact data collection. The team visited and analyzed 580 sampled sites and submitted the Mid Term Report to the PIU.
- Conducted data cleaning and sampling for 3,558 completed schemes from the 3rd year (2022-23) to assess the impact of KPIAIP. Effectively monitored 990 sampled sub-components for impact assessment.
- Successfully done data cleaning and sampling for 4,972 completed schemes from the 4th year (2023-24). Overall, the M&EC team sampled more than 13,350 completed sub-components of KPIAIP and conducted 1,790 visits across KPK for impact assessment against key indicators as of end September 2024.
- Submitted 18 Monthly and 8 Quarterly Progress and Monitoring Reports as key deliverables to the client.
- Operationalized the MIS Dashboard under the guidance of the PIU experts. This digitized platform will facilitate the integration and reconciliation of the project data. Stakeholders are being actively engaged to provide input and enhance its user-friendliness.
- Key experts attended all mandatory meetings and achieved anticipated deliverables outlined for the M&EC.

Progress Monitoring and Reporting

During the current month, the M&EC team focused on field activities, updating of the MIS data and related official tasks, closely coordinating with PIU specialists. After the KPIAIP schemes data was uploaded to the MIS by the end of the 2023-24 year, it became necessary to integrate it with the financial and schemes data already available with the Finance and IT departments at the PIU. This integration will enable real-time monitoring, financial and physical data reconciliation, streamlined decision-making, and coordinated planning. Preliminary work on this important task started during the month. The progress review and planning meeting took place at the project office at the end of the month. Field staff reported on their progress for the month, while the IT team provided digitized data updates. The key experts guided staff on accurately reporting impact and environmental compliance data. For details please refer to minutes of the meeting attached to this report as **Annex I**.

By the end of the 2023-24 year, the M&EC successfully uploaded KPIAIP schemes data to the MIS as available in the STF (Social, Technical and Financial) format. Recognizing the need for integration, it became essential to reconcile this data with the financial data already available with the Finance and IT departments at the PIU. Preliminary work on this vital task began during the month. This inclusive data upload will mark a significant step forward in ensuring the KPIAIP's efficiency and transparency. It was agreed to integrate and compile all the KPIAIP data into a single, coherent MIS-Dashboard, involving active participation from all relevant sections. The unified data aims to achieve several key objectives for the project, like

- **Real-Time Monitoring:** Enable real-time monitoring of all schemes, ensuring that management and stakeholders have up-to-date information at their fingertips.
- **Financial and Physical Reconciliation:** Facilitate the reconciliation of both financial and physical records, ensuring accuracy and accountability in all project aspects.
- **Streamlined Decision-Making:** With all data compiled in one place, decision-making processes will become more efficient and informed, allowing for quicker and more effective management responses.
- **Coordinated Planning and Implementation:** Enhance coordinated planning efforts, allowing management to align their strategies and actions more effectively, resulting in more cohesive and strategic project execution.

Overall, this integrated data system will represent a significant advancement in the project's ability to manage and monitor its activities, ultimately contributing to the successful achievement of its objectives.

By the end of the month, KPIAIP had made notable progress since its inception. Over 14,800 sub-components schemes were successfully completed across the province comprising of Watercourse segments (A1, A2, A3, and A4), Water Storage Tanks (B2), High Efficiency Irrigation Systems (HEIS), and Precision Laser Leveling (PLL) services. These accomplishments highlight the program's dedication to boosting agricultural productivity and improving water management, setting a strong base for future improvements in the irrigation infrastructure. Table below provides a summary of the KPIAIP achievements as of the last month.

DIRECTORATE GENERALON FARM WATER MANAGEMENT KHYBER PAKHTUNKHWA
PROJECT IMPLEMENTATION UNIT
KHYBER PAKHTUNKHWA IRRIGATED AGRICULTURE IMPROVEMENT PROJECT
(WORLD BANK ASSISTED)

Physical Status (as of 31 August 2024)

S. No.	Activities/Interventions		Schemes Completed upto 30.06.2024	Current Financial Year (2024-25)						Total intervention Completed (since Inception)	Verification Status
				AWP Target	WUAs Registered	Survey / Design Finalized	Civil Works Interventions				
							Initiated	In progress	Completed		
1	Improvement of Community Irrigation	A1.1 Canal Command watercourses upto 50% (Nos)	453	365	516	491	79	56	23	476	462
		A1.2 Canal W/Cs Partially Improved 15% -> 50% (Nos)	1171	650	1216	945	201	138	63	1234	1233
		A1.3 Canal W/Cs Partially Improved 25% -> 50% (Nos)	145	108	202	182	73	55	18	163	163
		A2.1 Non-Canal (Civil canals) Large W/Cs =>3 cfs 50% (Nos)	200	314	243	158	41	23	18	218	197
		A2.2 Non-Canal (Civil canals) Large W/Cs =>3 cfs 15%->50% (Nos)	52	32	79	66	12	9	3	55	52
		A2.3 Non-Canal (Civil canals) Large W/Cs =>3 cfs 25%->50% (Nos)	8	2	32	21	0	0	0	8	8
		A3 Non-Canal Area W/C (PCPS) 50% (Nos)	1967	1065	2000	1457	517	374	144	2111	2051
		A4 Non Canal Area Pipe Schemes (Nos)	5945	3683	3825	3344	1079	779	301	6246	5959
		Sub total-A	9941	6250	8113	6664	2002	1434	570	10511	10125
2	Promoting Inovative Tecnologies	B1: Installation of HEIS Systems (acres)	358.2	2500	_	768.64	0	0		358.2	0
		B2: Water Storage Tanks and Ponds (Nos)	3423	1900	2509	2249	462	374	88	3511	3352
		B3. Strengthening Precision Laser Leveling Service in Private Sector (Nos)	166	90	_	_	10	2	8	174	166
3	Training /Capacity Building	C-2 Refresher courses for OFWM Technical Staff (Professional/Sub Professionas (N0s)	1341	-	-	-	-	-	-	1341	-
		C-6 Training of Farmers/WUA members (Nos)	1600	-	-	-	-	-	-	1600	-
		C-9 Establishment of demonstration Sites	7	-	-	-	11	11	0	7	-

By the end of this month, the team successfully gathered and analyzed impact and outcome data from 1,960 sampled sub-component schemes. Monitoring visits were conducted according to the work plan for the KPIAIP completed schemes, with field staff showing exemplary performance. They managed to complete 170 sub-component visits across nine districts within their respective regions.

Despite security concerns reported in the southern parts of the KPK, the team achieved the monthly targets by rearranging the visits to safer areas. This approach ensured that the monitoring activities proceeded without significant disruption. The table below summarizes the planned versus completed visits for October 2024.

Target Vs. Achievement of the M&EC Field Monitoring Visits for October 2024			
Region	**District**	**No. of Schemes Planned**	**Achieved during the Month**
Central	Charsadda	16	16
	Peshawar	25	25
Northern	Malakand	27	27
	Swat	18	18
Southern	D I Khan	35	35
	Karak	21	25
	Lakki Marwat	28	24
Total		**170**	**170**

In alignment with the agreed work plan for verifying and monitoring sampled physical schemes, the M&EC is successfully meeting its field visit and impact assessment targets. The field operations have been instrumental in gathering valuable insights into the performance and impact of the completed schemes. Each visit has provided an opportunity to assess the effectiveness of the implemented measures and systematically analyze primary data. The cumulative progress detailed in the table below reflects the steady advancement of impact monitoring efforts, underscoring the project's commitment to transparency and accountability.

Cumulative Achievement of the M&EC Field Monitoring Visits			
Region	Monitoring and Impact Data Collected of Sub-Components		
	As of end September 2024	During October 2024	Cumulative end October 2024
Central	530	41	571
Northern	352	45	397
Southern	908	84	992
Total	**1790**	**170**	**1960**

As the impact and monitoring data is being received consistently, the key experts are working to align it with the intended objectives of KPIAIP on real time. In order to obtain further project's effectiveness, additional case studies are being planned to be carried out in the coming months. These studies will provide deeper insights and compliment the ongoing evaluation process. The use of clean, digital data will play a pivotal role in accurately measuring the project's outcomes and long-term impact, ensuring that progress is tracked efficiently and is data-driven. This will not only help in achieving the project's goals but also provide a robust framework for continuous improvement and accountability.

Summary and Insights on Impact Assessment, Compliance and Community Feedback

A thorough evaluation was conducted on the data collected from sampled completed schemes to assess the impact of KPIAIP. This review mainly focused on completed schemes under component A (community watercourse improvement schemes) and sub-component B2 (water storage tanks). The table below provides a summary of the component-wise schemes visited by the M&EC during the month and the **Annex II** can be seen for detailed overview of the inspected schemes. The findings, aligned with the KPIAIP's performance indicators, show that key areas are progressing well. Several indicators are showing positive trends, moving towards meeting the project's long-term goals. These trends suggest that the project will achieve its targets by its conclusion, reinforcing the success and sustainability of its interventions in water resource management.

Sub-component wise Achievement of the M&EC Field Monitoring Visits during the Month								
Location		Sub-Components					Total	
Region	District	A1	A2	A3	A4	B2	District	Region
Central	Charsadda	1	0	3	8	4	16	**41**
	Peshawar	2	1	7	2	13	25	
Northern	Malakand	11	0	2	5	9	27	**45**
	Swat	0	0	0	11	7	18	
Southern	D.I.Khan	20	0	14	0	1	35	**85**
	Karak	0	0	0	14	11	25	
	Lakki Marwat	0	0	0	18	6	24	
Total		**34**	**1**	**26**	**58**	**51**	**170**	**170**

The data analysis indicates consistent progress in achieving KPIAIP's main goals across several performance areas. Notable improvements have been seen in expanding irrigated land through better watercourse management and increased water storage capacities. These improvements have resulted in higher cropping intensity, improved crop yields, and more diversified cropping patterns, demonstrating the project's effectiveness. A crucial objective of reducing water losses is being successfully addressed, with increases in

water productivity, especially for key crops like wheat and maize. Beyond technical achievements, KPIAIP has also made strides in environmental sustainability and social impact, focusing on community welfare and gender inclusivity. For a comprehensive review of KPIAIP's progress and detailed findings from various interventions, please refer to the **Annex III** and the quarterly progress and monitoring reports of the M&EC.

During the reporting period, environmental and social compliance monitoring was also conducted for sampled completed schemes across eight districts. Staff collected data through direct engagement with WUA members and local farmers. The discussions allowed the identification and resolution of potential environmental issues, such as water pollution, soil degradation, deforestation, use of pesticides and over-irrigation. Farmers largely responded positively, with no adverse environmental impacts observed during or after construction activities. Field verification visits also confirmed that none of the project sites were in environmentally sensitive zones.

Overall, the positive momentum is a testament to the effective implementation and management of the irrigation schemes. Looking ahead, the focus of the M&EC will shift to analyzing Component B1 (Installation of High-Efficiency Irrigation Systems i.e. HIES) and Component B3 (Provision of Laser Land Leveling Units), in addition to the completed watercourses and water storage tanks. There is a strong expectation that the targets associated with all these components will be met in the upcoming year. The ongoing success of these initiatives will play a crucial role in enhancing the project's overall impact. By ensuring sustainable improvements in the irrigation system, the project aims to create lasting benefits for the communities involved, ultimately fostering agricultural productivity and resource efficiency.

Farmers provided crucial feedback during field visits, offering insights into the project's on-ground impacts and suggesting areas for improvement. Since all interventions are conducted on land owned by these farming communities across the central, northern and southern regions of the province, the project benefits from a collaborative approach facilitated through close coordination with local stakeholders. Many farmers reported noticeable improvements in water availability, especially in previously underserved areas like the tail ends of watercourses. This increased water access has enabled farmers to cultivate more land, resulting in higher production of crops, vegetables, and fodder, directly contributing to better livelihoods and economic stability.

Farmers expressed hope that KPIAIP would continue supporting and building on the progress achieved so far. While improvements in irrigation and agricultural productivity are essential milestones, ongoing capacity building of WUAs is crucial for ensuring sustainable agricultural progress. Strengthening their skills and knowledge will be key to maximizing the project's benefits and fostering resilience against future challenges.

Key Challenges faced by the Team

1. During the reporting period, there were security concerns reported in the southern districts. In response, field teams were instructed to exercise increased caution during their field visits. To ensure both safety and smooth operations, they stay in constant contact and coordinate closely with district officials. This approach helped to mitigate potential risks and continuity of impact data collection and monitoring activities.
2. Notable progress was made in reconciling KPIAIP data on the MIS-Dashboard. However, the team faced challenges in streamlining this activity as staff were occupied with other responsibilities and scheme data was not coming in smoothly. Despite these obstacles, IT staff from both the PIU and M&EC offices continue to collaborate in streamlining and updating scheme data and processes. These developing mechanisms will improve KPIAIP operations, ensuring accuracy and easy access for timely decision-making & reporting.
3. In all operational districts visited during the month, intermittent or slow internet services posed challenges for FEs in ensuring accurate and systematic data recording. To prevent reporting delays, they were advised to upload all collected data at their respective district offices of the OFWM, where reliable Wi-Fi connections are available. This approach ensured timely submission of field updates.

Next Month Activities of the M&EC

- Monthly progress and monitoring report will be submitted to the PIU as a key deliverable.
- The IT team will be sitting with PIU experts regarding the MIS dashboard and data uploaded on the server.
- Field staff will carry out site visits to the sampled schemes for impact data collection as per below plan.

Field Monitoring and Data Collection Target for the Month of November 2024		
Region	**District**	**No. of Schemes Planned for the Visit**
Central	Abbottabad	01
	Haripur	13
	Mohmand	10
	Peshawar	22
Northern	Bajaur	02
	Battagram	03
	Dir Lower	25
	Shangla	01
	Torghar	03
Southern	D I Khan	40
	Lakki Marwat	05
Total		**125**

- Key experts will conduct field visits to the selected districts for quality assurance and assistance to the staff for success stories and focused case studies.
- Key experts will maintain close communication with the relevant staff at the PIU as needed to ensure seamless collaboration and advancement of the project.

Annex I: Minutes of the Progress Review and Planning Meeting held in October 2024

The M&EC Meeting on Progress Review and Planning on October 30, 2024

Purpose	Monthly Progress Review and Planning
Location /site	M&EC Project Office Peshawar
Date	October 30th , 2024
Time	12:30 PM to 01:30 PM (Wednesday)

Participants of the Meeting

1. Mr. Intisar Ahmed (M&E Specialist)
2. Dr. Sajidin Hussain (Agri Expert) via WhatsApp
3. Mr. Amir Hadi (IT Expert) via WhatsApp
4. Mr. Zulqarnain (Environmental Expert) via WhatsApp
5. Mr. Mubarik Syed (Admin Assistant)
6. Mr. Umar Khan (HR and Admin)
7. Ms. Rakshanda Tayyab (M&E Assistant) via WhatsApp
8. Ms. Sumayya Khan (Field Enumerator)
9. Mr. Iftikhar Bashir (Field Enumerator) via WhatsApp
10. Mr. Abdul Fattah (Field Enumerator) via WhatsApp
11. Mr. Shahryar (Field Enumerator) via WhatsApp
12. Mr. Rafiqullah (Field Enumerator)
13. Mr. Faheem Ullah (Field Enumerator)
14. Mr. Jawad Ahmed (Field Enumerator) via WhatsApp
15. Mr. Muhammad Hamza (Field Enumerator)
16. Mr. Waqar Younis (Field Enumerator) via WhatsApp
17. Mr. Wajahat Ullah (Field Enumerator)
18. Mr. Umar Saeed (MIS Technician)
19. Mr. Sohrab Khan (Data Analyst)
20. Mr. Aammad Ahmed Khan (Data Analyst)

Agenda of the Meeting

1. Progress Review as per Work-plan submitted for the Month
2. Work Planning for the month of November 2024
3. Update on Meetings held in PIU on KPIAIP Data Reconciliation
4. Update on the M&EC deliverables for the KPIAIP

Detail of the Meeting

The meeting commenced with the recitation of the Holy Quran, followed by the warmly welcome to all the participants. This initial overview provided a clear framework for the discussions and activities to follow.

The staff presented detailed reports on their office activities and the data they had gathered during field visits. FEs explained respective data collected during their field visits and systematically uploaded to the Kobo server. To provide a comprehensive overview, the field staff also presented a summary of their visits against the planned targets. The detailed table below illustrates the extent to which the field visits met the planned objectives, offering a clear picture of the progress made during this period.

Target Vs. Achievement of October 2024 for the M&ECs Field Monitoring Visits			
Region	**District**	**No. of Schemes Planned**	**Achieved during the Month**
Central	Charsaddah	16	16
	Peshawar	25	25
Northern	Malakand	27	27
	Swat	18	18
Southern	D I Khan	35	35
	Karak	21	25
	Lakki Marwat	28	24
Total		**170**	**170**

The M&E Specialist presented the field visit targets for the upcoming month of November 2024. This followed thorough input and coordination with district officials of OFWM. The targets set are based on detailed planning to ensure effective monitoring and assessment. It was agreed that a total of 125 site visits would be conducted across 11 districts, ensuring comprehensive coverage and attention to all relevant areas. Below are the specific details of the planned visits.

Field Monitoring and Data Collection Target for the Month of November 2024		
Region	**District**	**No. of Schemes Planned for the Visit**
Central	Peshawar	22
	Mohmand	10
	Abbottabad	01
	Haripur	13
Northern	Bajaur	02
	Dir Lower	25
	Shangla	01
	Turgher	03
	Battagram	03
Southern	D I Khan	40
	Lakki Marwatt	05
Total		**125**

The participants were informed that the M&EC has successfully uploaded all completed schemes data of the KPIAIP to the MIS available in the STF (Social, Technical and Financial) format. Initial work began during the month to integrate and reconcile this data with the ongoing and initiated schemes data available with the Finance and IT departments at the PIU. This integration will allow real-time monitoring, financial and physical reconciliation, streamlined decision-making, and coordinated planning. A dedicated team, under the guidance of the IT and M&E Specialist of the M&EC, will regularly visit the PIU to ensure the early completion of this task.

It was communicated to the team that all pending periodic reports were submitted during the month, ensuring all indicative deliverables were met by the month's end. Moving forward, the M&EC will begin work on case studies and provide assistance to the PIU with impact evaluations as needed.

The meeting concluded with a vote of thanks to all participants.

Annex II: Summary Detail of KPIAIP Schemes Visited by the M&EC during the Month

Region	District	Tehsil	Village	Scheme Name	Component	Location Coordinates
Central	Peshawar	Badhber	Surizai Payan	8958/TL Surezai Minor	A1.2	33.9532583 71.6318506
Central	Peshawar	Badhber	Urmar Miana	156268/L WGC	A1.2	33.920773 71.7186798
North	Malakand	Dargai	shingrai	Tail Shingrai Minor	A1.2	34.4084285 71.8798582
North	Malakand	Dargai	Dilawar Kalay	Mogha # 4195/R	A1.2	34.4135059 71.8513173
North	Malakand	Dargai	Palo Nawo	Mogha # 23640/L	A1.3	34.4250179 71.8144692
North	Malakand	Dargai	habib Gul banda	Mogha # 25640/L	A1.3	34.4321806 71.8078139
North	Malakand	Dargai	habib Gul banda	Mogha # 27000/L	A1.1	34.4339825 71.8018097
North	Malakand	Dargai	Kodo	Mogha # 36400/L Hero Shah Minor	A1.1	34.4179458 71.7816538
North	Malakand	Dargai	Gandero Shah	Mogha # 20200/L	A1.2	34.4391833 71.82539
North	Malakand	Dargai	Wartair	Mogha # 18426/R	A1.1	34.5363046 71.9726646
South	D.I.Khan	Paharpur	Ameer Shah	WC No: 9520/R Amir Shah Minor	A1.2	32.1076291 71.0361476
South	D.I.Khan	Paharpur	Amir Shah	WC No: 5958/L Amir Shah Minor	A1.2	32.103191 71.0406068
South	D.I.Khan	D.I.Khan	Paharpur Chak ganda	WC No: 2187/L D/S	A1.2	32.1277607 70.9962145
South	D.I.Khan	D.I.Khan	Hisam	WC No: 11000/L M-1 D-5	A1.1	31.9542061 70.8575452
South	D.I.Khan	Paharpur	Machota	WC No: 900/L Pooran Minor	A1.1	32.1715165 71.0847786
South	D.I.Khan	Paharpur	Rakh Band Military	WC No: 6700/L Rakh Rajbah	A1.1	32.0511321 70.9190614
South	D.I.Khan	D.I.Khan	Ghaibi	WC No: 9500/R Shah Kot Minor	A1.2	32.0122447 70.9240247
South	D.I.Khan	D.I.Khan	Kotla Saidan	WC No: 51500/R Dera Disty	A1.1	31.8291241 70.855768
Central	Charsadda	Tangi	Abazai	Mogha No.9080/R	A1.1	34.3334761 71.5952129
South	D.I.Khan	D.I.Khan	Bhutaiser	WC No: 17560/R D-20	A1.2	31.8253924 70.8912874
North	Malakand	Dargai	G U Khail	Mogha # 35888/ L	A1.2	34.4981806 71.8353476
North	Malakand	Dargai	Dobanai	Mogha # 19450/L	A1.1	34.518694 71.9372686
South	D.I.Khan	Parao	Lok	WC No: 750/R D-10	A1.2	31.7833922 70.7108251
South	D.I.Khan	D.I.Khan	Lok	WC No: 3990/R D-10A	A1.2	31.7701022 70.7305157
South	D.I.Khan	D.I.Khan	Lok	WC No: 7150/R D-10	A1.2	31.7933863 70.7296481
South	D.I.Khan	D.I.Khan	Kotla Habib	WC NO: 24000/R D-7	A1.2	31.806116 70.7797553
South	D.I.Khan	D.I.Khan	Kotla Habib	WC No: 25090/R D-7	A1.2	31.8057388 70.7823164
South	D.I.Khan	D.I.Khan	Tekan	WC NO: 5290/R MD-4 D-7	A1.1	31.8223224 70.795257
South	D.I.Khan	D.I.Khan	Haji Mora	WC No: 19600/R Mehmood Minor	A1.1	31.7755329 70.8219949
South	D.I.Khan	D.I.Khan	Haji Mora	WC No: 19656/L Mehmood Minor	A1.2	31.7753557 70.8229127
South	D.I.Khan	Parao	Bhutaiser	WC No: 28170/R D-19	A1.2	31.5178324 70.7548105
South	D.I.Khan	Parao	Bhutaiser	WC No: 19360/R D-19	A1.1	31.5178461 70.7548226
South	D.I.Khan	D.I.Khan	Haji Mora	WC NO: 10761/R	A1.1	31.790196 70.8511182
North	Malakand	Dargai	Khusahal Garh	Mogha # 15900/L	A1.2	34.3930065 71.8802589
Central	Peshawar	Peshawar	Urmar	Ikramullah LIS (civil canal)	A2.1	33.952209 71.6883361
Central	Peshawar	Badhber	Mera Badhber	Hamza TWC	A3	33.8883252 71.5969175
Central	Peshawar	Peshawar	Aza Khel	Amjad Khan TWC	A3	33.8096113 71.6062233
Central	Peshawar	Badhber	Adezai	Ihtesham UL Haq	A3	33.7752146 71.5869535
Central	Peshawar	Badhber	Mera Badhber	Imdad Khan TWC	A3	33.8843386 71.5982953
Central	Peshawar	Badhber	Badhber	Masood Khan TWC	A3	33.9017592 71.5974785
Central	Peshawar	Badhber	Telaband	Muhammad Amin TWC	A3	33.886343 71.6461937
Central	Peshawar	Peshawar	Gulozai	Adnan Muhammad TWC	A3	33.79495 71.70261 23 17
South	D.I.Khan	Paharpur	Pahapur Kalan	Muhammad Saqlain TW WC	A3	32.1209833 70.968951
Central	Charsadda	Tangi	Station Kallay	TWC Yousaf	A3	34.3111673 71.6246261
Central	Charsadda	Tangi	Barazai Tangi	Parviz TWWC	A3	34.3122435 71.6266079
South	D.I.Khan	Paharpur	Thathal	Faiz Ullah TW WC	A3	31.9734657 70.9934924
North	Malakand	Thana baizai	Thana baizai	T/W w/C of Shakeel Ahmad	A3	34.6307618 72.0452458
South	D.I.Khan	Paharpur	Thathal	Muhammad Nawaz TW WC	A3	31.9801513 70.9940495
South	D.I.Khan	Paharpur	Thathal	Muhammad Asad TW WC	A3	31.9640399 71.0030943
Central	Charsadda	Tangi	Khaista Khan Korona	TWC Rahmat Khan	A3	34.3788078 71.6442354
South	D.I.Khan	D.I.Khan	Musa Khar	Allah Diwaya TW WC	A3	31.9614498 70.991612
South	D.I.Khan	D.I.Khan	Muryali	Noor Hassan TW WC No 1	A3	31.7947542 70.9076935
South	D.I.Khan	D.I.Khan	Muryali	Noor Hassan TW WC No 2	A3	31.7891372 70.9095746
South	D.I.Khan	D.I.Khan	Sheikh Raju	Syed Najaf Ali Shah TW WC	A3	31.7515964 70.9138995
South	D.I.Khan	D.I.Khan	Kachi Paind Khan	Qadir Bakhsh TW WC	A3	31.855946 70.9864125
South	D.I.Khan	D.I.Khan	Muryali	Haji Muhammad Aslam TW WC	A3	31.7595148 70.8795841
South	D.I.Khan	D.I.Khan	Zandani	Allah Bakhsh TW WC	A3	31.8181388 70.6614005
South	D.I.Khan	D.I.Khan	Khutti	Hafiz Muhammad Nawaz TW WC	A3	31.8445574 70.661439
North	Malakand	Dargai	Shingrai	TWC of Mukmil Shah	A3	34.3936787 71.8876009
South	D.I.Khan	D.I.Khan	Dhap Chabak	Tariq Ijaz TW WC	A3	31.7912552 70.9234493

South	D.I.Khan	D.I.Khan	Jhoke Obechar	Abid Mansoor Ahmad TW WC	A3	31.8132453 70.9762205
Central	Peshawar	Charnkani	Kachori	Shah Nawaz TWC	A4	33.8608878 71.7189497
North	Swat	Khwaza Khela	Baghdehrai	Muhammad Ishaq-I PWC	A4	35.0591962 72.4831723
Central	Peshawar	Peshawar	Ghari Chandan	Aqeel Afzal TWC	A4	33.875267 71.6796888
North	Swat	Matta	Barawal Matta	Hakim Zada PWC	A4	34.9321582 72.3323827
North	Swat	Matta	Bar Bakor	Mia Baz PWC	A4	35.0294278 72.3504397
North	Swat	Matta	Dandani	Mohammad Rahman PWC	A4	35.0147344 72.3659288
North	Malakand	Dargai	haryankot	T/W W/C of Sohail Ahmad	A4	34.487505 71.8334892
North	Swat	Matta	Nelagram	Shujat Ali Nelagram PWC	A4	34.9533509 72.3245683
North	Swat	Matta	Talkar	Sher Azam Khan PWC	A4	34.9657879 72.2716754
North	Swat	Matta	Chuprial	Muhammad Salar PWC	A4	34.9964582 72.3540546
North	Swat	Khwaza Khela	Kasi Jukhtai	KASAI PWC	A4	35.0538331 72.5130877
North	Swat	Khwaza Khela	Shaheed Abad	Azmat Ali PWC	A4	35.0893899 72.5026446
North	Swat	Bahrain	Damlai Shamira Terat	Imranullah PWC	A4	35.134482 72.5012702
North	Swat	kabal	Kotlai	Israil Ali PWC	A4	34.7863797 72.2466808
Central	Charsadda	Tangi	Keer ra	PWC Wakeel khan	A4	34.3338169 71.617503
North	Malakand	Thana	Alladand	TWC of Muhammad Javed	A4	34.6061641 72.0391264
North	Malakand	Thana Baizai	Nai Thana	TWC of Fazal Hakeem	A4	34.6056535 72.0911091
Central	Charsadda	Tangi	Manan Baba kalay	PWC Naveed khan	A4	34.378968 71.6429322
Central	Charsadda	Tangi	Behram Dheri	Muhammad Riaz	A4	34.4067448 71.7539348
Central	Charsadda	Tangi	Sheikh Sardar kly	PWC Imam Hussain	A4	34.3900236 71.6533256
Central	Charsadda	Tangi	Palay	PWC Salman Khan	A4	34.4065657 71.6578808
Central	Charsadda	Tangi	Palai	Muhammad Tahir PWC#2	A4	34.3968472 71.6696266
Central	Charsadda	Tangi	Pindi Kallay	Hazrat Ali	A4	34.4139063 71.7119621
Central	Charsadda	Tangi	PalaiAzeem Shah Koror	PWC Ilyas	A4	34.4061861 71.7548352
South	Lakki Marw	Serai Naurang	Mash Masti Khani	Saif Ullah Khan Watercourse	A4	32.82618 70.9671967
South	Lakki Marw	Serai Naurang	Wanda Machan Khel	Muhammad Rashid Watercourse	A4	32.8304513 70.9103382
South	Lakki Marw	Baisat Khel	Harama Tala	Pir Rehman Watercourse	A4	32.6816339 70.8169738
South	Lakki Marw	Lakki Marwat	Kotka Azad Pahar Khel	Mir Hakim Khan Watercourse	A4	32.6684504 70.8281401
South	Lakki Marw	Lakki Marwat	New Ayaz Wala	Muhammad Pasham Watercourse	A4	32.6822309 70.8558858
South	Lakki Marw	Lakki Marwat	Ihsan Pur	Javed Iqbal Water Course	A4	32.6391636 70.9563975
South	Lakki Marw	Lakki Marwat	Ihsan Pur	Nabi Ullah Watercourse	A4	32.6625673 70.9013374
South	Lakki Marw	Lakki Marwat	Ihsan Pur	Noor Ali Khan Water Course	A4	32.6333867 70.9450533
South	Lakki Marw	Lakki Marwat	Jabbar Khel	Muhammad Nazir Watercourse	A4	32.5700225 71.1482489
South	Lakki Marw	Lakki Marwat	Wazarka Land Ahmad K	Ali Jan Watercourse	A4	32.5613396 71.1445494
South	Lakki Marw	Lakki Marwat	Shuja Wanda	Badsha Gul Water Course	A4	32.623686 70.9990104
South	Lakki Marw	Lakki Marwat	Pir Wala	Rahim Ullah Khan Watercourse	A4	32.6251866 70.9751393
South	Lakki Marw	Lakki Marwat	Dalo Khel	Dil Jan Watercourse	A4	32.6244527 70.8668688
South	Lakki Marw	Lakki Marwat	Abba Khel	Akbar Ali Watercourse-II	A4	32.6054996 70.7985922
North	Malakand	Thana Baizai	Bazdara	TWC of Sayed Badshah	A4	34.5381087 72.1219316
North	Malakand	Thana Baizai	wacha dara	TWC of Sahib Zada	A4	34.5540817 72.0873872
South	Lakki Marw	Ghazni Khel	Kaka Khel	Habib Khan Watercourse	A4	32.5383589 70.783978
South	Lakki Marw	Ghazni Khel	Bega Tajazai	Maza Din Water Course	A4	32.6527654 70.7338428
South	Lakki Marw	Ghazni Khel	Khawaja Khel	Muhammad Usman Watercourse	A4	32.6055662 70.6911113
South	Karak	Karak	Talab Khel	Sadiq Nawab WC	A4	33.1573702 71.2638098
South	Karak	Karak	Talab Khel	Khan Badshah WC	A4	33.1602566 71.2621002
South	Karak	Karak	EsakChuntra	MatiUllah WC	A4	33.1338602 71.2364885
South	Karak	Karak	Tarkha Koi	Anar Farooq WC	A4	33.1520048 71.1928643
South	Lakki Marw	Ghazni Khel	Tajazai	Ijaz Khan Watercourse	A4	32.6440402 70.7406902
South	Karak	Tekhti Nasrati	Soli Khel	Haroon Nasir WC	A4	32.9790288 70.9500476
South	Karak	Tekhti Nasrati	Khowjaki Kala	Qadar Zaman WC	A4	32.9747294 70.9479753
South	Karak	Tekhti Nasrati	Khojaki Kala	Bashir Ullah WC	A4	32.976364 70.9528222
South	Karak	Tekhti Nasrati	Haji Banda	Muhammad Yasir WC	A4	32.9729329 70.9297025
South	Karak	Tekhti Nasrati	Tatar Khel	Naveed Iqbal WC	A4	32.992218 70.9407672
South	Karak	Tekhti Nasrati	Sai Kot	Dost Muhammad Khan WC	A4	33.0656378 70.9744586
South	Karak	Tekhti Nasrati	Muhabati Kala	Muhammad Rauf WC	A4	32.9978375 70.9325422
South	Karak	Tekhti Nasrati	Muhabati Kala	Bashir Zuman WC	A4	33.0080964 70.933719
South	Karak	Tekhti Nasrati	Warana Walayat Khel	Hamid Sardar WC	A4	33.0413676 70.9335058
South	Karak	Karak	Dabli Lawaghar	Zakir Ullah WC	A4	33.0924797 71.1169463
Central	Peshawar	Charnkani	Kachori	Shah Nawaz WST	B2	33.8607504 71.719001
Central	Peshawar	Badaber	Azakhel	Irshad Khan TWC	B2	33.9029184 71.6189254

Central	Peshawar	Badaber	Azakhel	Malang Sher WST	B2	33.8367086 71.6226445
Central	Peshawar	Badaber	Mera Badhabir	Shafi ullah WST	B2	33.8884427 71.6119922
Central	Peshawar	Chamkani	Musazai	Farman ullah WST	B2	33.8817798 71.6976361
Central	Peshawar	Badaber	Azakhel	Abid Ullah WST	B2	33.8545035 71.6218223
Central	Peshawar	Badaber	Azakhel	Sajjad Ahmad WST	B2	33.8331965 71.6134995
Central	Peshawar	Badaber	Azakhel	Raziullah WST	B2	33.845197 71.612402
Central	Peshawar	Badaber	Telaband	Shabir Ahmad WST	B2	33.8800854 71.6458316
North	Swat	Matta	Mandan	Mian Hussain Shah WST	B2	35.0089164 72.4251982
North	Swat	Matta	Nawkhra	Masoom Jan WST	B2	35.0687938 72.4283395
North	Swat	charbagh	Toha	Jamal Hussain WST	B2	34.8603702 72.5152932
North	Swat	Matta	Mandan	Khurshed Alam WST	B2	35.0097999 72.423612
Central	Peshawar	Badaber	Azakhel	Gul Dad WST	B2	33.8550265 71.6177286
North	Malakand	Dargai	Dir Town	WST of Ibrahim	B2	34.4586678 71.8186254
North	Malakand	Dargai	Haryankot	WST of Akmal Khan	B2	34.5025664 71.8325011
North	Malakand	Dargai	beghum banda	WST Amir Hayat	B2	34.5090518 71.8333717
Central	Peshawar	Badaber	Azakhel	Zarmast WST	B2	33.8706153 71.658388
Central	Peshawar	Peshawar	Mariamzai	S.Noor Qadeem Shah WST	B2	33.8435243 71.5768345
Central	Peshawar	Badaber	Azakhel	Irshad Khan TWC	B2	33.7473 71.546
North	Swat	kabal	Malooka	Gul Akbar WST	B2	34.8909381 72.3513921
North	Swat	kabal	Malooka	Iqbal Ghani WST	B2	34.8858343 72.35444
North	Swat	kabal	Segram	Biradar WST	B2	34.8704017 72.3546607
Central	Charsadda	Tangi	Nao Kalay	WST Noor Muhammad	B2	34.3785875 71.6394724
Central	Charsadda	Tangi	Buche Kallay	Muhammad Ali WST	B2	34.3861351 71.6556801
South	D.I.Khan	D.I.Khan	Hissam	Sherabat Khan TW WST	B2	31.9771 70.831711
North	Malakand	Thana Baizia	Alladand	WST of Shah Nawaz	B2	34.6067471 72.0194033
North	Malakand	Thana Baizia	Thana	WST of Sajjad Ali	B2	34.624027 72.089631
North	Malakand	Thana Baizia	Obo Khwar Thana	WST of Shah Faisal	B2	34.6269509 72.0990745
Central	Charsadda	Tangi	Abazai	Gulistan WST	B2	34.3410179 71.6374114
Central	Charsadda	Tangi	Palai	WST Akhtar Muhammad	B2	34.4160218 71.7222536
North	Malakand	Thana	Jalal Pur Palai	WST of Sadam Uddin	B2	34.5405364 72.0735008
South	Lakki Marw	SERAI NOURANG	Gandi Umar Chikar	Tahir Kamal W.S.Tank	B2	32.7344741 70.8244459
South	Lakki Marw	SERAI NOURANG	Mir Alam Manjiwala	Bait Ullah W.S.Tank	B2	32.7333293 70.8220852
South	Lakki Marw	Lakki Marwat	Pahar Khel Thal	Islam Din W.S.Tank	B2	32.6358555 70.9029742
North	Malakand	Thana Baizia	Bazdara Payeen	WST of Zia Ul haq	B2	34.5345207 72.1411999
North	Malakand	Batkhel	Palai	WST of Nasrullah	B2	34.4910752 72.0775948
South	Lakki Marw	Lakki Marwat	Aba Khel	Muhammad Ismail W.S.Tank	B2	32.5418978 70.8219172
South	Lakki Marw	Lakki Marwat	Tajazai	Inam Ullah W.S.Tank	B2	32.5981273 70.7737655
South	Lakki Marw	Ghazni Khel	Dolat Tajazai	Ayub Khan W.S.Tank	B2	32.6615962 70.7751628
South	Karak	Karak	Lucky Ghundaki	Wahid Ahmad WST	B2	33.1413263 71.1597093
South	Karak	Karak	Shankai/Ghar Kala	Muhammad Yasar Khan WST	B2	33.1010401 71.1811311
South	Karak	Karak	Kanda Karak	Ikram WST	B2	33.1056793 71.1368756
South	Karak	Takhti Nasrati	Sultan Banda	Umer Nawaz WST	B2	32.977784 70.9598519
South	Karak	Takhti Nasrati	Soli Khel	Hazrat Bilal WST	B2	32.9792567 70.9454577
South	Karak	Takhti Nasrati	Haji Banda	Iftikhar Hussain WST	B2	32.9737975 70.9360086
South	Karak	Takhti Nasrati	QadirKhel	Sadiq Nawaz WST	B2	32.9930234 70.97903
South	Karak	Takhti Nasrati	Shiekhan Banda	WajidUllah Khan WST	B2	32.9936658 70.9217102
South	Karak	Takhti Nasrati	Tatar Khel	Zahoor Ur Rehman WST	B2	32.9921727 70.9611299
South	Karak	Takhti Nasrati	Warana Musakan	Eid Muhammad WST	B2	33.0113202 70.9460728
South	Karak	Takhti Nasrati	Mohabati Kala	Muhammad Ishaq WST	B2	33.0025345 70.947048

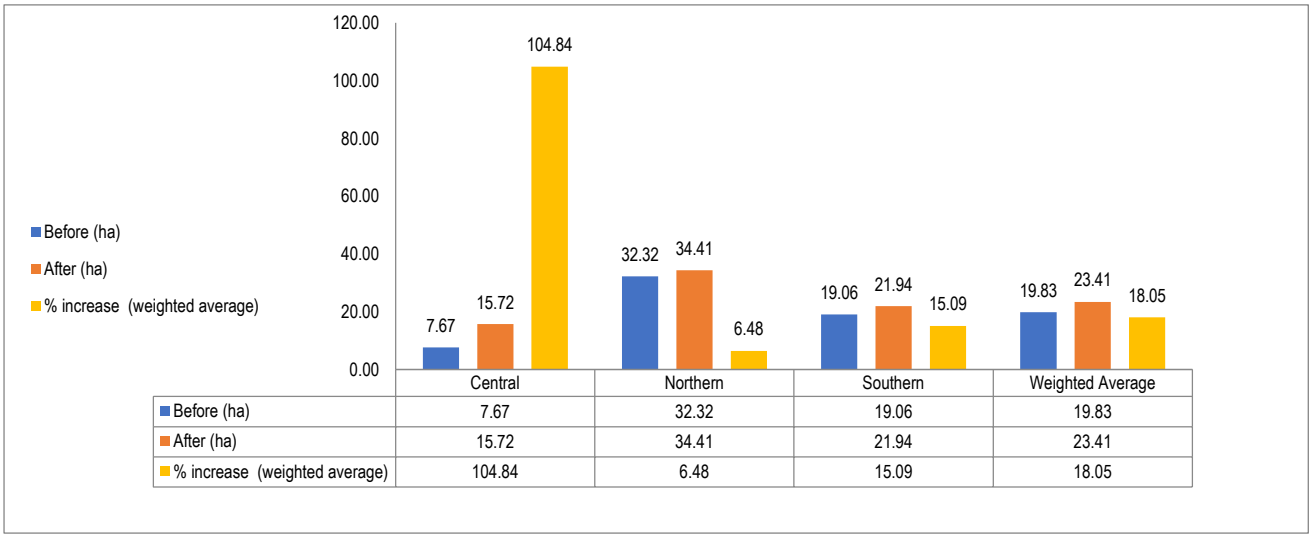
Annex III: Outcome and Impact Analyses of Sampled sub-component Schemes

Data analyses of 170 sampled schemes have been completed to evaluate the impact of the KPIAIP. The evaluation was conducted through a randomly selected sample of completed schemes by sub-components focusing on interventions classified under Component A (community watercourse improvement schemes) and Component B2 (water storage tanks). Detail of corresponding data analyses is given below.

Increase in Irrigated Area (Net Sown Area (NSA)

The Net Sown Area (NSA) is expressed in hectares (ha). A notable increase in the NSA has been observed across all regions. Overall 18.06% is increased in NSA of component 'A'.as shown in Figure 1, while component 'B2' details are shown in **Annex IV**. Highest increase in NSA was observed in Central region i.e. 104.84% in component 'A' for more in-depth analyses please see Annex IV for the sub-components (A1 to A4).

Figure 1: Average Increase in Irrigated NSA by Region (ha)-Component 'A'



	Central	Northern	Southern	Weighted Average
Before (ha)	7.67	32.32	19.06	19.83
After (ha)	15.72	34.41	21.94	23.41
% increase (weighted average)	104.84	6.48	15.09	18.05

Increase in Crop Yield

This indicator measures the impact of the KPIAIP's interventions on the yields of the different crops under the schemes. The results indicate that yields for wheat crop under component 'A' has increased by 29.4% as shown in Figure 2. Similarly, in Component 'A', the weighted increases in Maize yield is 21.8% as shown in Figure 3. Further detail analyses of other crops such as sugarcane, orchards and vegetables of all components are mentioned in Annex IV.

Figure 2: Increase in Wheat Yield (tonn/ha) -Component 'A'

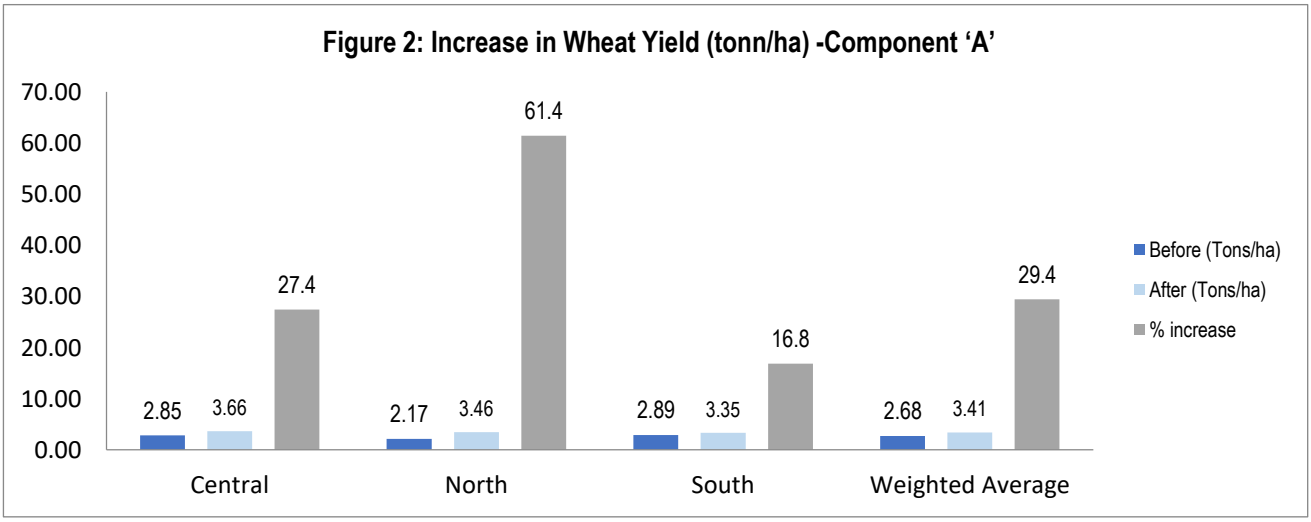
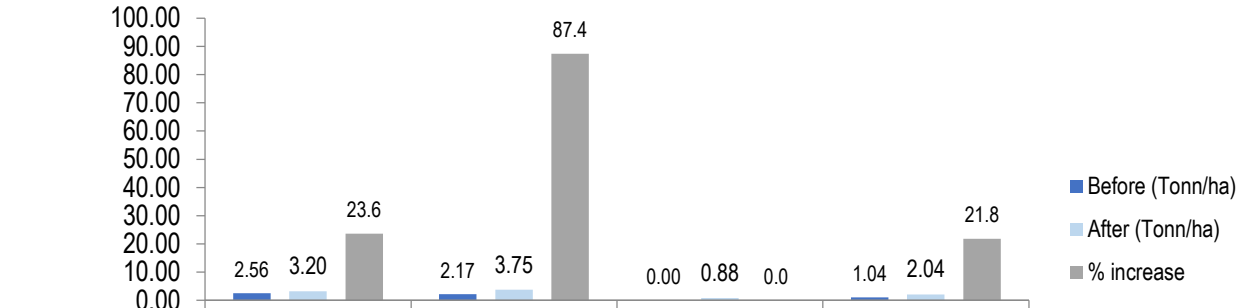


Figure 3: Average Increase in Maize Yield (Tons/ha) - Component 'A'



	Central	North	South	Weighted Average
Before (Tonn/ha)	2.56	2.17	0.00	1.04
After (Tonn/ha)	3.20	3.75	0.88	2.04
% increase	23.6	87.4	0.0	21.8

Change in Cropping Pattern

The change in cropping pattern refers to the alteration in the types of crops grown in a specific region over time. The traditional growing crops like wheat is increased to 52.40% as shown in the Table 1 under component 'A' while for other crops and component details are mentioned in Annex IV.

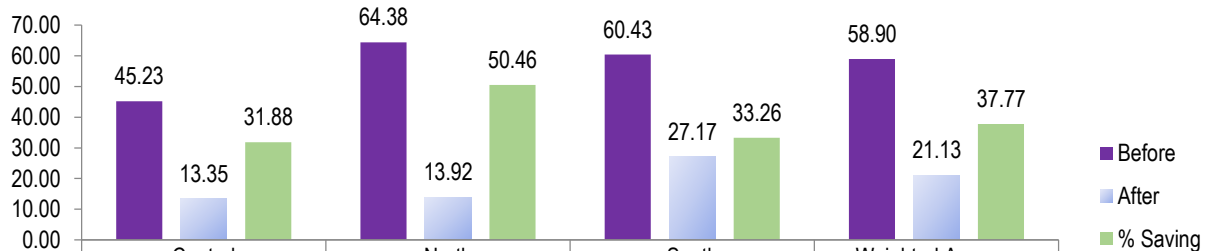
Table 1: Average Change in Wheat Crop Area (ha) - Component 'A'

Region	Before	After	% increase
Central	10.86	22.23	104.64
Northern	0.84	1.30	55.17
Southern	8.41	10.13	20.38
Total Weighted	**7.81**	**11.90**	**52.40**

Reduction in Water Losses

Analyses reveal that the watercourse improvement have helped in reducing water losses from 58.90% (before) to about 21.13% leading to about 37.77% is savings in the irrigation water as shown in Figure 5. This is impressively encouraging savings of the water due to watercourse lining which was lost in the conveyance of ill-managed structured watercourses. All regions recorded reduction in water losses due to watercourse lining. The results indicate that the project has reduced water losses to 37.77%, more than the project target of 25%.

Figure 5: %age of Reduction/Saving in water Losses Region wise - Component A

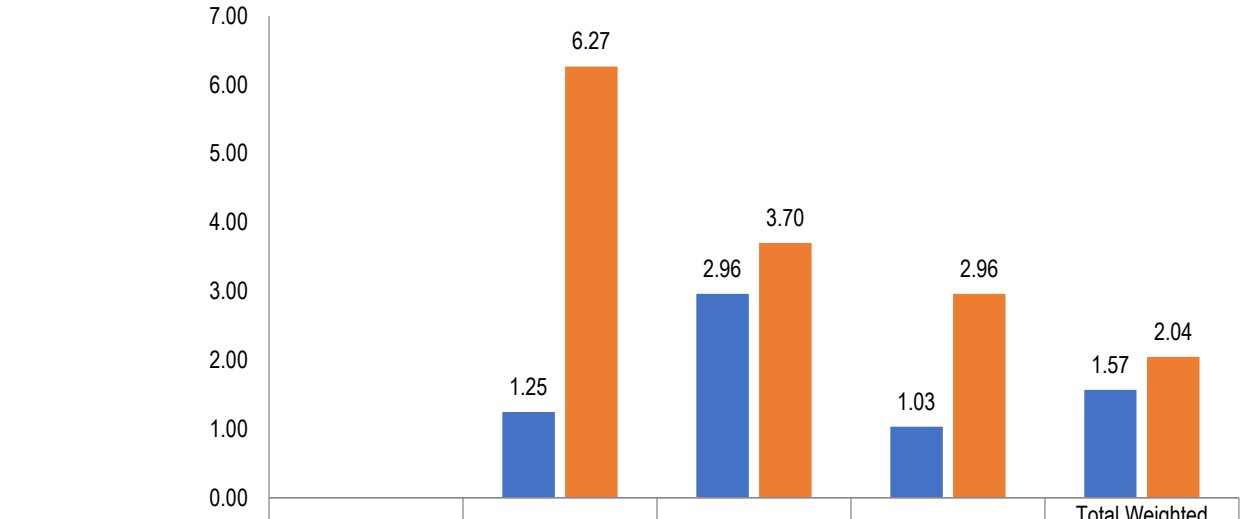


	Central	North	South	Weighted Average
Before	45.23	64.38	60.43	58.90
After	13.35	13.92	27.17	21.13
% Saving	31.88	50.46	33.26	37.77

Water Productivity

Water Productivity has been calculated for Wheat and Maize crop yields. As shown in Figure 6, water productivity for Wheat and Maize was measured as 1.57 kg/m3 and 2.04 kg/m3 respectively. While water productivity of Maize is significantly higher in Central region, while for Wheat the water productivity has high value in Northern areas. Other regions also showed some increase in water productivity.

Figure 6: Average Water Productivity (Kg/m3) of Wheat and Maiz

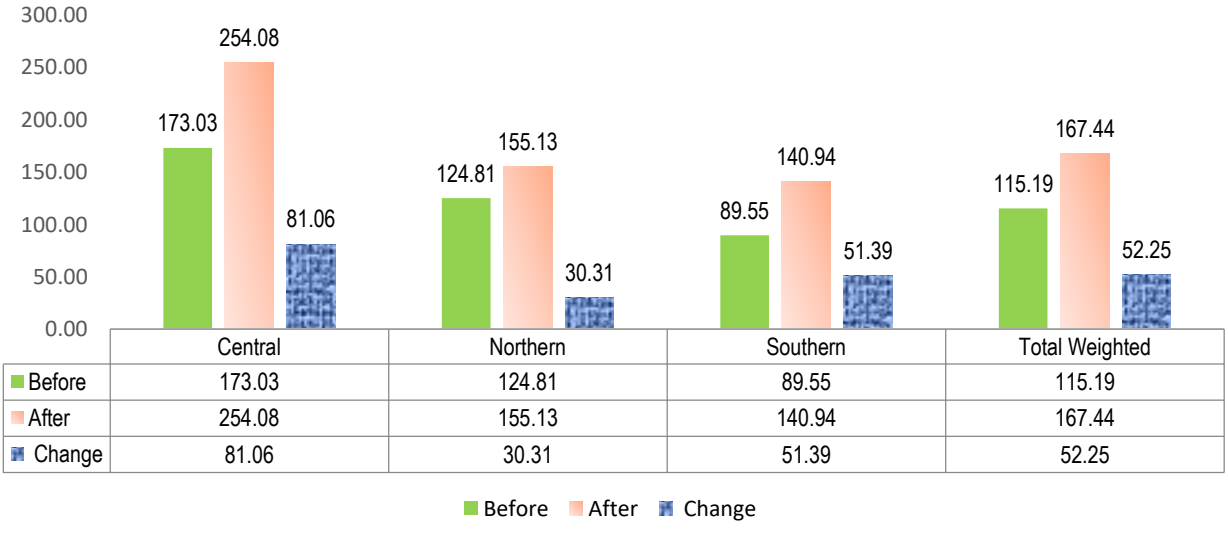


	Central	North	South	Total Weighted Average
Weighted Average (wheat)	1.25	2.96	1.03	1.57
Weighted Average (Maize)	6.27	3.70	2.96	2.04

Cropping Intensity

Cropping intensity refers to the frequency with which crops are grown on a particular piece of land during a year. Figure 7 shows the average percentage change in annual cropping intensity. The Central region of Component 'A' shows the highest increase in cropping intensity from 115.19.03% (before) to 167.44% (after), with a 52.25% net change after the construction of improved schemes.

Figure 7: Average % change in Annual Cropping intensity - Component A

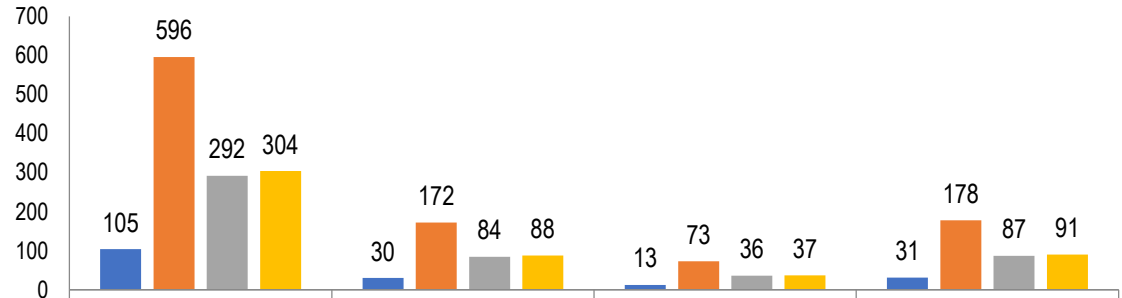


	Central	Northern	Southern	Total Weighted
Before	173.03	124.81	89.55	115.19
After	254.08	155.13	140.94	167.44
Change	81.06	30.31	51.39	52.25

Community Well-being

The KPIAIP aims to improve beneficiary's well-being and social indicators have been used to measure the impact on farmers' lives. The total number of beneficiaries including both Male and Female the weighted average is 178, in which the number of Female is 91 while the number of Men are 87. Similar analyses were carried out for the sampled schemes 'A' sub components and Component 'B' as mentioned in Annex IV.

Figure 8: Average Project Beneficiaries (Nos)



	Central	North	South	Weighted Average
Household(HH)	105	30	13	31
Persons	596	172	73	178
Male	292	84	36	87
Female	304	88	37	91

Environmental Compliance of Impact Data Collected by the Team

During the reporting month, environmental compliance was monitored for 170 completed schemes across seven districts in the project area. In detailed discussions with WUA members, issues related to water pollution, disease spread from human and animal waste, soil contamination, nutrient leaching from over-irrigation, and changes in soil properties were examined. Members reported no negative impacts associated with these factors during or after earthwork activities. In the South region, only 3% of tree cutting was noted i.e. 40 number of trees were removed due to earth work activities and 50 number of trees were planted further details are discussed in table below.

Region	Any Tree cut during work		Number of trees cut during the work	Number of trees planted
	Yes	No	Number	Number
Central	0%	88%	0	0
North	0%	83%	0	0
South	3%	80%	40	50
Average	**2%**	**82%**	**40**	**50**

The beneficiaries informed that healthy tree plantations of indigenous species were subsequently established by WUA members and the local farming communities and many more trees are planned to be planted. Field data indicated that some WUA members would benefit from capacity-building support to help them apply insecticides and pesticides effectively for better pest management.

Increase in Employment Opportunities

The boost in employment has benefitted both skilled and unskilled workers, making such opportunities more readily available at an increased rate. Analyses of the data have shown that there is marked increase in employment of skilled and unskilled labour due to the watercourse interventions as shown in table 2 & 3. The data indicates a significant improvement, especially with unskilled labours now having more employment per scheme, showing a higher likelihood of finding employment because of KPIAIP.

Table 2: Average Increase in Employment Opportunities due to Watercourse in Numbers

Region	Unskilled Labour		Skilled Labour	
	Before	After	Before	After
Central	4	7	6	8
North	4	8	4	8
South	79	83	16	17
Weighted Average	**45**	**48**	**11**	**13**

Table 3: Average Increase in Employment Opportunities due to Water Storage Tanks in Numbers

Region	Unskilled Labour		Skilled Labour	
	Before	After	Before	After
Central	2.41	3.94	3.18	4.82
North	7.06	11.25	5.00	5.44
South	7.11	8.56	1.89	2.22
Weighted Average	**5.53**	**7.86**	**3.29**	**4.10**

Promoting Female Empowerment and Gender Equality

Equal opportunities and outcomes for females and men are important in order to have a vital role in socio-economic development of the communities. On an average 59% of women have directly benefited due to KPIAIP interventions in the project area in terms of easy access to clean water, kitchen gardening and availability of water for domestic purpose. More details are mentioned in table 4.

Table 4: %age of Region-wise Female Beneficiaries Analyses with answer "Yes"

Region	Women benefited	Access to clean water	Kitchen Gardening	Drinking water	water for bathing washing	water for cloth washing	time for social & economic activities	irrigation by women	Accessible road
Central	88%	54%	96%	96%	75%	21%	0%	0%	0%
North	55%	93%	86%	21%	17%	41%	48%	83%	0%
South	47%	64%	61%	53%	15%	12%	12%	8%	0%
Weighted Average	**59%**	**66%**	**75%**	**59%**	**32%**	**20%**	**15%**	**19%**	**0%**

Annex IV: Supporting graphs and tables of the Outcome and Impact Analysis

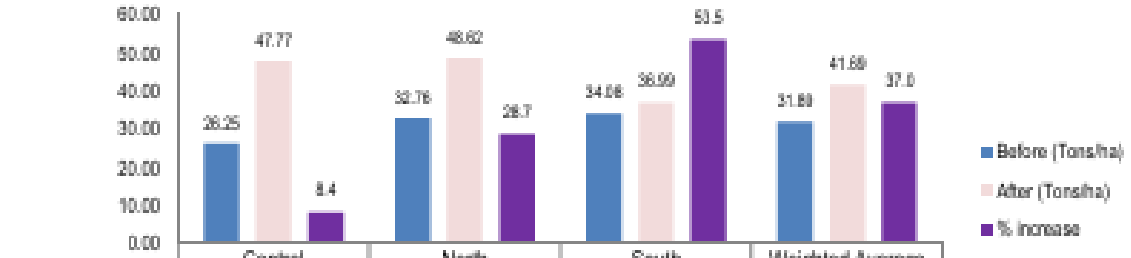
1. Net Sown Area (NSA) of 170 sub-component schemes

Table 1-A: Average % Increase in (Net Sown Area (NSA)) by Sub Components					
Regions	A1	A2	A3	A4	Average % increase
	% Increase	% Increase	% Increase	% Increase	
Central	110	77	91	114	105
Northern	6	0	200	12	6
Southern	4	0	28	174	15
Weighted Average	**9**	**77**	**50**	**90**	**18**

Figure 1-A: Average Increase in Irrigated NSA by Region (ha)-Component 'B2'			
Regions	Before	After	% increase
Central	2.88	5.81	101.65
Northern	2.33	2.43	4.35
Southern	0.93	1.57	69.00
(weighted average)	**2.02**	**3.25**	**61.15**

2. Increase in crops yields

Figure 2-A: Sugarcane Yield (Tons/ha) Yield - Component 'A'



	Central	North	South	Weighted Average
Before (Tons/ha)	26.25	32.76	34.08	31.89
After (Tons/ha)	47.77	48.62	36.99	41.69
% increase	8.4	28.7	53.5	37.0

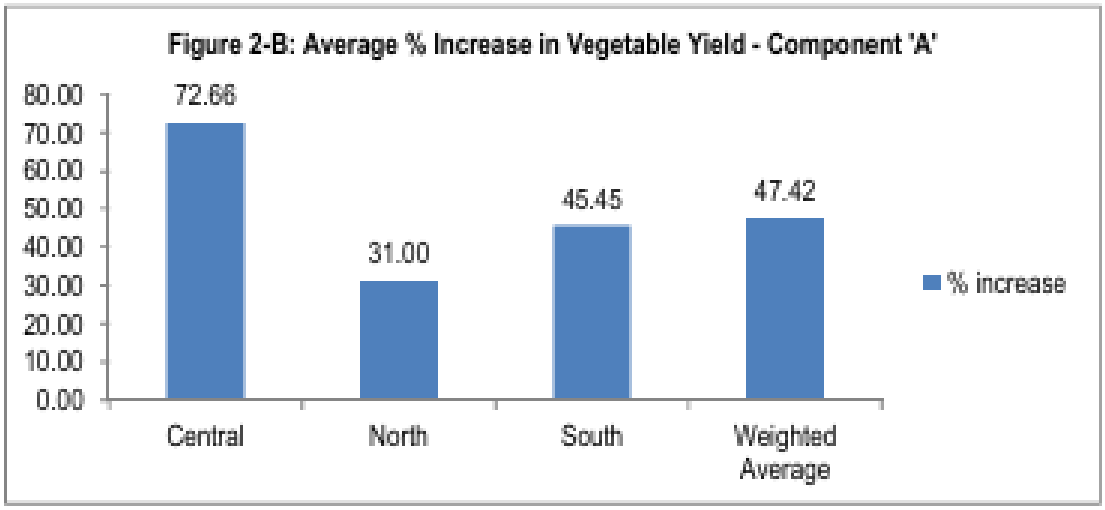


Table 2-A: Increase in Yield (ton/ha) - Component B2						
Regions	Wheat			Maize		
	Before	After	% increase	Before	After	% increase
Central	2.63	3.55	25.84	2.48	3.28	24.42
Northern	0.73	1.86	60.01	0.41	1.28	70.73
Southern	1.50	2.72	48.54	0.00	0.11	100.00
(weighted average)	**1.64**	**2.73**	**42.77**	**0.95**	**1.54**	**41.58**

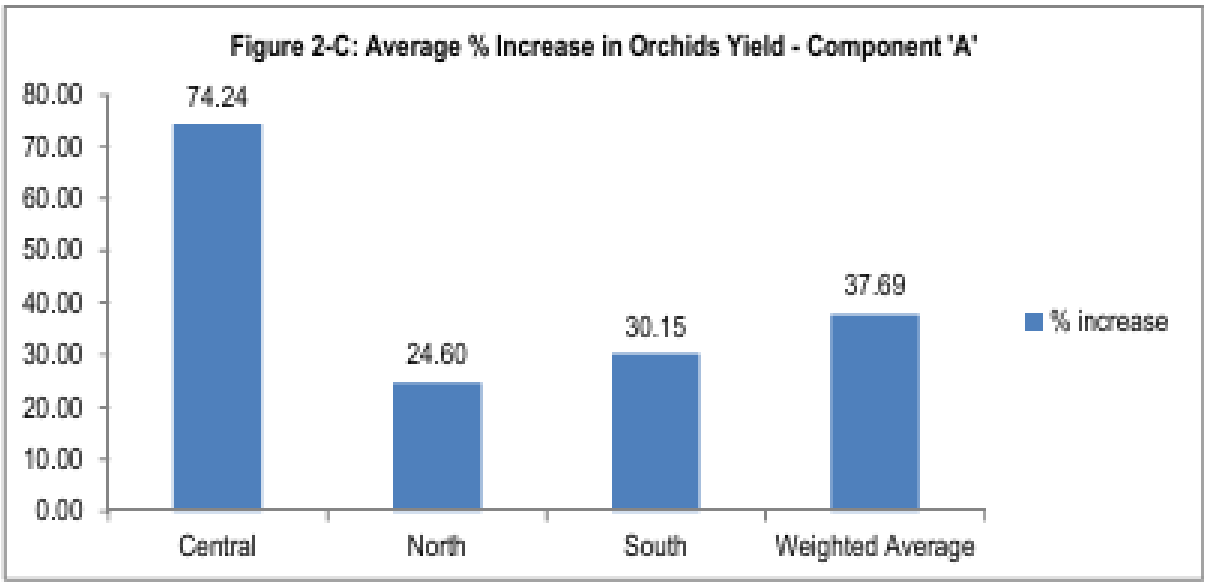


figure 2-D: % Orchid Yield - Component B2

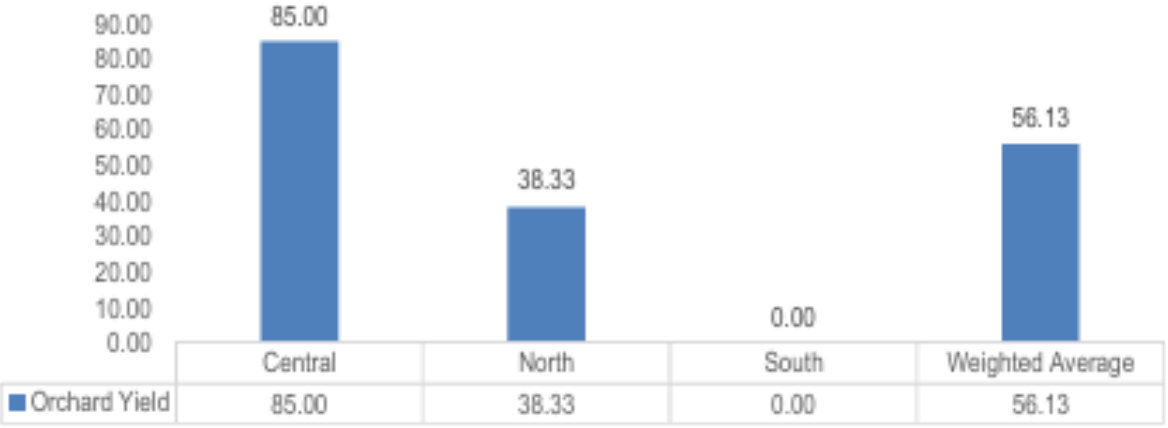
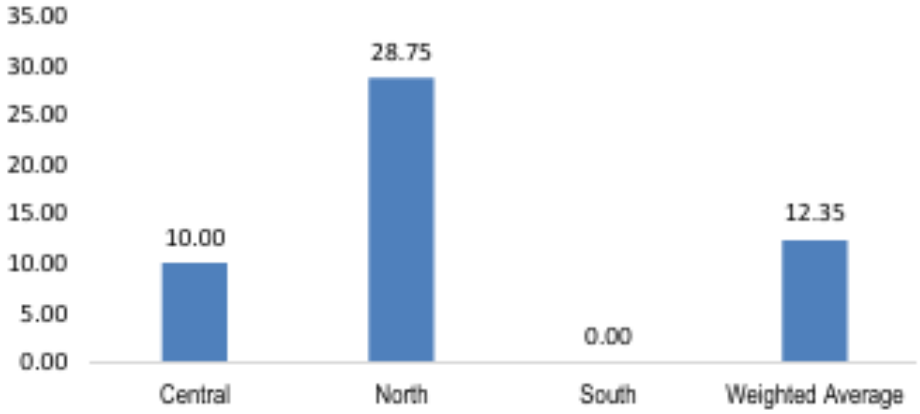


Figure 2-E: %age of Vegetable Yield - Component B2



3. Change in Cropping Pattern

Table 3-A: An average change in Maize Crop area (Ha) - Component A

Region	Before	After	% increase
Central	4.34	11.81	171.84
Northern	0.06	0.40	587.50
Southern	0.34	0.66	91.18
Total Weighted average	**1.37**	**3.66**	**167.61**

Table 3-B: Showing an average change in Sugarcane Crop area (Ha) - Component A

Regions	Before	After	% increase
Central	2.65	3.51	32.20
Northern	0.00	0.00	0.00
Southern	3.75	4.84	29.09
Total Weighted average	**2.93**	**4.57**	**56.16**

Table: 3-C: Average change in Hybrid Maize Crop area (Ha)) - Component A			
Regions	**Before**	**After**	**% increase**
Central	1.64	2.94	78.90
Northern	0.64	0.94	46.07
Southern	0.03	0.11	0.00
(weighted average)	**0.57**	**1.00**	**77.34**

Table: 3-D: Average changes in Crop area (Ha)) - Component A									
Region	Orchids			Vegetable			Fodder		
	Before	After	% increase	Before	After	% increase	Before	After	% increase
Central	1.25	1.55	18.68	1.75	3.90	122.56	0.95	1.67	76.96
Northern	1.59	2.11	34.88	0.35	1.23	247.96	0.31	0.52	69.41
Southern	0.18	0.19	14.09	0.29	0.69	139.81	0.53	0.77	45.65
(weighted average)	**0.70**	**0.87**	**22.91**	**0.71**	**1.70**	**139.70**	**0.60**	**0.97**	**60.84**

Table: 3-E: Average Change in Wheat Crop Area (Ha) - Component B				
Region	**Before**	**After**	**Increased**	**% Change**
Central	2.19	4.76	2.57	117.39
North	0.73	0.94	0.20	27.59
South	0.82	1.41	0.59	72.09
Average	**1.25**	**2.38**	**1.13**	**90.36**

Table: 3-F: Average Change in Maize Crop Area (Ha) - Component B				
Region	**Before**	**After**	**Increased**	**% Change**
Central	1.74	3.59	1.86	106.85
North	0.19	0.37	0.18	93.33
South	0.00	0.00	0.00	0.00
Average	**0.64**	**1.31**	**0.67**	**105.59**

Table 3-G: Average change in area (Ha) Component 'B2'

Region	Orchids			Vegetable			Fodder		
	Before	After	% increase	Before	After	% increase	Before	After	% increase
Central	0.18	0.59	233.33	1.10	2.81	156.52	0.64	1.17	81.48
Northern	4.81	4.83	0.26	0.46	0.56	23.61	0.09	0.19	96.67
Southern	0.00	0.00	0.00	0.07	0.17	150.00	0.09	0.25	175.00
(weighted average)	1.57	1.71	9.00	0.53	1.17	120.52	0.28	0.53	93.88

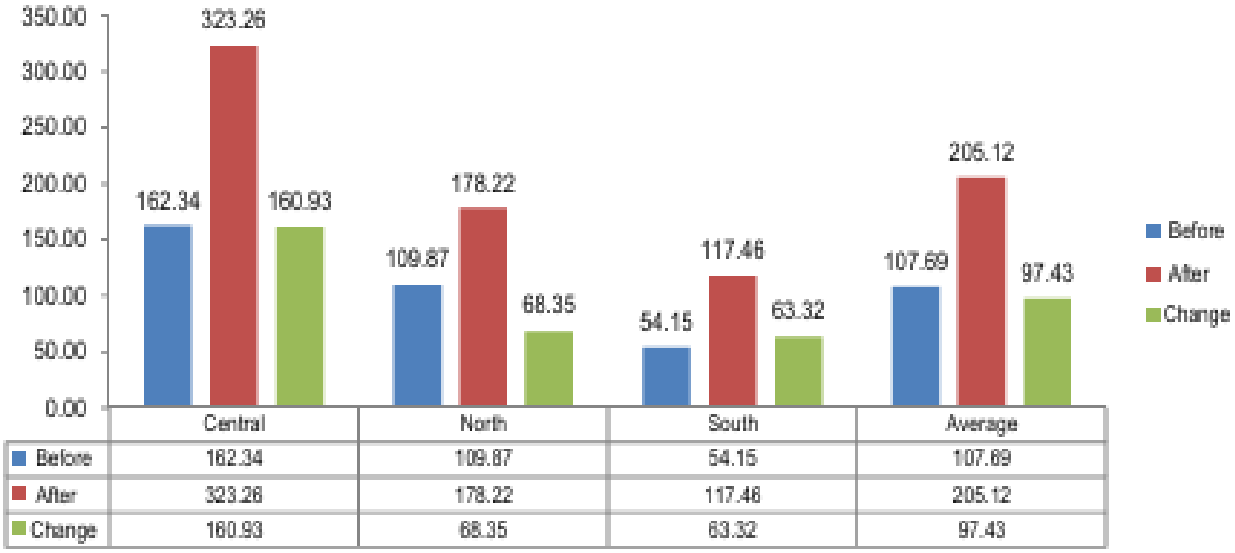
4. Water Productivity by sub components

Table 4-A: Average Water Productivity (Kg/m3) of Wheat and Maize by Sub Component

Region	A1		A2		A3		A4		Weighted Average	
	Wheat	Maize	Wheat	Maize	Wheat	Maize	Wheat	Maize	Wheat	Maize
Central	0.88	6.67	0.93	0.58	1.63	6.33	1.24	6.30	1.25	6.27
North	3.71	5.18	0.00	0.00	2.95	5.00	3.25	3.86	2.96	3.70
South	0.91	0.00	0.00	0.00	0.83	0.00	1.23	6.00	1.03	2.96
Weighted Average	1.81	5.50	0.93	0.58	1.30	1.22	1.62	1.14	1.57	2.04

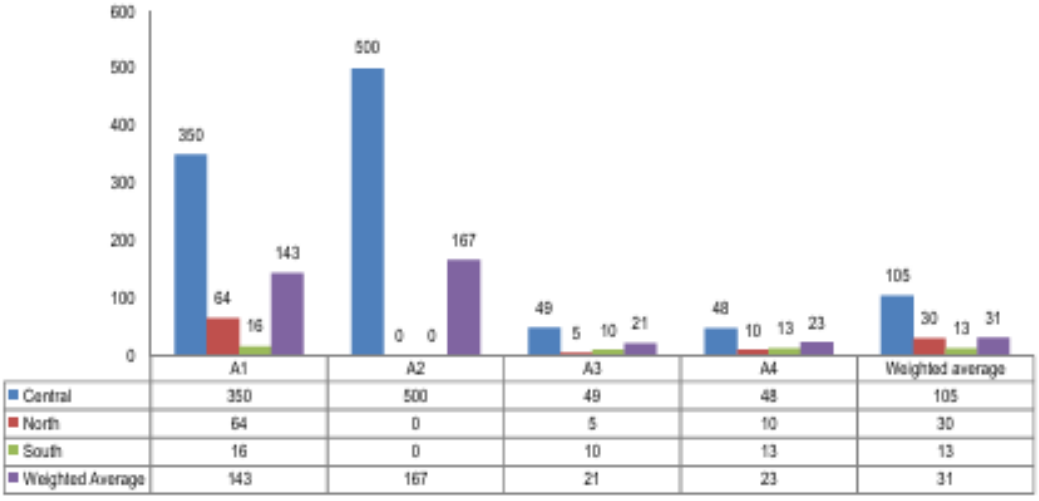
5. Croping intensity

Figure 5-A: Average % change in Annual Cropping intensity Component B2



6. Community well being

Figure 6-A: Average Household(HH) Beneficiaries (Nos) 'A' Sub-Components



	A1	A2	A3	A4	Weighted average
Central	350	500	49	48	105
North	64	0	5	10	30
South	16	0	10	13	13
Weighted Average	143	167	21	23	31

Table 6-A: Household Beneficiaries per Scheme- Component B

Region	Male	Female	Total (HH) per Scheme
Central	82	41	29
North	14	15	5
South	24	38	9
Total Average	**39**	**41**	**14**

Table 6-B: Average Male Beneficiaries (Nos)

Region	A1	A2	A3	A4	Total
Central	978	1397	135	133	**292**
North	180	0	13	27	**84**
South	44	0	27	35	**36**
Weighted Average	400	466	58	65	**87**
Average Percent of Male Beneficiaries					**49**

Table 6-C: Average Female Beneficiaries (Nos)

Region	A1	A2	A3	A4	Total
Central	1017	1454	141	138	**304**
North	187	0	13	29	**88**
South	46	0	28	36	**37**
Weighted Average	417	485	61	68	**91**
Average Percent of Female Beneficiaries					**51**