**CORE COMPETENCIES OF PCRWR:**

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| **S/n** | **Features** | **Description** |
| 1. | **Products** | PCRWR has developed the following low cost R&D products:* Tensiometer for determining soil moisture
* Arsenic Water Testing Kit
* Microbiological water testing kit
* Household Safe Water Filter (Capacity 20 liters)
* Arsenic Removal Community Filter (Capacity 250 liters)
* Mahfooz Pani Disinfection Tablets (For treatment of 20 liters & 500 gallons)
 |
| 2. | **Facilities** | * State -of-the-art National Water Quality Laboratory (NWQL) having major equipments *viz.* Flame Photometers, EC-Meters, PH Meters, Turbidity Meter, Chlorine Meter, Atomic Absorption Spectrometer, Inducto-couple Plasma, Gas Chromatography Mass Spectrometry and Liquid Chromatography Mass Spectrometry
* Advisory Services for Installation of Drinking Water Filtration Plants, Ultra-filtration System and Reverse Osmosis System
* Technical Services for Ground Water Investigation with equipment *viz.*Resistivity Meter, Magnetic Pulsation Machine etc.
* Advisory Services for Remote Sensing Satellite Based Water Resources Management through Gravity Recovery and Climate Experiment (GRACE)
* Advisory Services for Rain Water Harvesting, Tile Drainage, Solar Powered Groundwater Pumping
* Technical Expertise for Installation of Drip IrrigationSystem
 |
| 3. | **Major Strengths** | **Resources*** Ph.Ds: 5
* M.Engg./M.Phil/M.Sc./B.E.: 87
* Regional Offices: 8
* Water Quality Testing Laboratories: 24
* Research (Agriculture) Farms : 10
 |
| 4. | **Designing** | Designing Services for* Solar Based Pumping
* Drip Irrigation System
* Field Irrigation Systems
* Drinking Water Filtration Plant
* Ultra-filtration Units
* Reverse Osmosis System
* Project Planning & Management + Feasibility Studies in Water Sector
 |
| 5. | **Quality Assurance** | ISO 17025 Accredited National Water Quality Laboratory |

 **Pakistan Council of Research in water (Data base):**

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| **1.1 National Water Quality Laboratory, Islamabad** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Gas Chromatograph Mass Spectrometer  | 1 |
| 2) | Atomic Absorption Spectrometer | 3 |
| 3) | Spectrophotometer  | 2 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. ShakeelBadshah | Research Officer | Organic Chemistry |
| 2) | Mrs. Saiqa Imran | Senior Research Officer  | Organic Chemistry |
| 3) | Mrs. ShaziaGhaffar | Research Officer  | Bio-chemistry |
| 4) | Mr. Muhammad Asghar | Assistant Scientific Officer  | Water Quality |
| **C** | **Services:** |
|  | **a** | **Water Testing/ Analytical: i.** Trace elements (arsenic, copper, zinc, manganese, chromium, lead etc.) ii. Physico-chemicals and microbiologyiii. Persistent Organic Pollutants) |
|  | **b.** | **Consultancy:** Provide Consultancy to Public and Private Sectors in various fields. |

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| **1.1 Soil Physics Laboratory, PCRWR, Islamabad** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Pressure Plate | 2 |
| 2) | Hain’s Apparatus  | 18 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mrs . Arsalan Aslam | Research Associate  | GIS/Remote Sensing |
| 2) | Mr. Aleem Ahmad  | Research Assocaite | Agricultural Engineering |
| 3) | Mr. Ali Bahzad | Assistant Director  | Water Resources Management |
| 4) | Mr. Abbas  | Research Associate  | Agricultural Engineering |
| **C** | **Services:** |
|  | **a** | **Testing/ Analytical:** i**.** Soil Moisture Retention Curves.ii. Soil Textural Analysis |
|  | **b.** | **Consultancy:** Provide Consultancy to Public and Private Sectors in different fields (water, Agriculture). |

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| **1.1 Commercialization Cell, PCRWR, Islamabad** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Incubators  | 2 |
| 2) | UV Enclaves  | 1 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Engr. Masood Ahmad  | Assistant Director  | Water Treatment Technology |
| **C** | **Services** |
|  | **a.** | **Testing/ Analytical :** Water quality field testing  |
|  | **b**. | **Consultancy:** Provide consultancy toCommunity and household drinking water treatment |

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| **1.1 Water Management Section, PCRWR, Islamabad** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Terrameter | 1 |
| 2) | Total Station  | 1 |
| 3) | Differential GPS | 1 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. Naveed Iqbal | Assistant Director  | Groundwater Hydrology |
| 2) | Mr. Ahmad Zeeshan Bhatti | Assistant Director  | Water Management |
| **C** | **Services:** |
|  | **a.** | **Consultancy:** Provide consultancy toPrivate Clients in water management |

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| **1.1 PCRWR R&D Centre, Mera Katchori, Peshawar** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Bed and Furrow Planter | 1 |
| 2) | Tractor with Agriculture implements | 1 |
| 3) | Leaser Land Leveler | 1 |
| 5) | Lysimetric research station  | 1 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. Naeem Khan  | Deputy Director  | Agriculture water management  |
| 2) | Mr. Khan Muhammad | Technician | Agricultural machinery  |
| **C** | **Services:** |
|  | **a.** | **Consultancy (**Water Management, Irrigation, WAPDA) |
|  | **b.** | **Training:** Provides training to Professionals and Farmers |

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| **1.1 Water Quality Laboratories, Peshawar, DI Khan, Abbotabadand Muzzaffarabad** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Auto Clave | 4 |
| 2) | Atomic Absorption Spectrometer  | 1 |
| 3) | Flame photometer | 4 |
| 4) | UV-Visible Spectrophotometer | 4 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. Muneeb-ur-Rehman Khattak (Abbotabad) | Research Officer | Applied Chemistry |
| 2) | Mr. Shakeel Ahmad (Peshawar) | Assistant Scientific Officer | Organic Chemistry |
| 3) | Mr. Shafique Ahmad (DI Khan) | Research Officer  | Water quality  |
| 4) | Mr. Akram Aziz (Muzzaffarabad) | Research Officer  | Water quality  |
| **C** | **Services:** |
|  | **a.** | **Testing/ Analytical (**Water Testing and analysis) |
|  | **b.** | **Consultancy:** Consultancy provide to Public and Private sectors in different fields of water quality. |

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| **1.1 Drainage Research Centre, Tando Jam** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Lysimetric Research Station  | 1 |
| 2) | Trenching Machine Gravel Lying | 1 |
| y | Ditch Witch Synthetic Lying | 1 |
| 4) | Back Hoe Case | 1 |
| 5) | Excavator O & K | 8 |
| 6) | Geho Pumps | 2 |
| 7) | Tractors with Gravel Hoppers | 1 |
| 8) | Bed planters | 2 |
| 9) | Laser land levelers  | 1 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Engr. Abdus Salam Arain | Deputy Director  | Drainage systems |
| 2) | Hafiz Abdul Salam  | Assistant Director  | Water resources management  |
| 3) | Mr. Nazar Gul | Research Associate  | Agriculture water management  |
| **C** | **Services:** |
|  | **a.** | **Consultancy:** Consultancy provide to Public and Private Sectors in various fields. |
|  | **b.** | **Training:** Organize and offer trainings to Professionals and Farmers: |
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| **1.1 Water Quality Laboratories, Karachi, Tando Jam, Hyderabad, Nawabshah, Sukkar and Badin** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Atomic Absorption Spectrometer | 1 |
| 2) | Flame Photometer  | 5 |
| 3) | Spectrophotometer  | 5 |
| 4) | Autoclave  | 4 |
| 5) | BoD system | 4 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Dr. Ghulam Murtaza (Karachi) | Senior Research Officer  | Analytical chemistry  |
| 2) | Mr. Abdul Jabbar Pathan (Tando Jam) | Assistant Director  | Water quality and chemistry  |
| 3) | Mr. Parvez Ahmad Soomro (Sukkar) | Assistant Scientific Officer  | Biochemistry  |
| 4) | Mr. Noor Zaman Shair (Nawabshah) | Assistant Scientific Officer  | Water quality  |
| 5) | Mr. Abdul Ghaffar (Hyderabad) | Research Officer  | Water quality  |
| 6) | Mr. Tariq Mehmood (Badin) | Research Officer  | Water quality  |
| **C** | **Services:** |
|  | **a** | **Testing/ Analytical (**Water quality testing regarding physic-chemical, microbiological and trace elements,  |
|  | **b.** | **Consultancy:** Provide Consultancy to Public and Private Sectors in different fields. |
|  |  |
| **Regional Office, PCRWR, Lahore****1.1 R&D Centre, Sial Mor, Sargodha** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Bed & Furrow Planter  | 2 |
| 2) | Laser land leveling Unit  | 2 |
| 3) | Zero Tillage  | 2 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Engr. Dilshad Arshad | Assistant Director  | Water Resources Engineering  |
| 2) | Engr. Khurram Ejaz | Assistant Director  | Agricultural Engineering  |
| **C** | **Services** |
|  | **a.** | **Consultancy:** Provide consultancy inCultivation of crops on high efficiency irrigation systems. |
|  | **b.** | **Training**: Provide trainings to Professionals and Farmers in various fields. |

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| **1.1 Water Quality Laboratories, Lahore, Faisalabad, Gujranwala, Sialkot, Sahiwal and Sargodha**  |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Atomic Absorption Spectrometer | 1 |
| 2) | Flame Photometer  | 6 |
| 3) | Spectrophotometers | 6 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. Munawar Hussain (Lahore) | Research Officer | Chemistry and water quality  |
| 2) | Mr. Waqar Ahmad (Faisalabad) | Research Officer | Chemistry and water quality  |
| 3) | Mr. AamirEjaz (Gujranwala) | Research Officer | Chemistry and water quality  |
| 4) | Mr. Sajjad Ahmad (Sahiwal) | Research Officer | Chemistry and water quality  |
| 5) | Mr. Muhammad Sarfaraz (Sargodha) | Research Officer | Chemistry and water quality  |
| 6) | Mr. Tajjamul Hussain (Sialkot) | Research Officer | Chemistry and water quality  |
| **C** | **Services:** |
|  | **a** | **Testing/ Analytical :**Water quality testing regarding physic-chemical, microbiological and trace elements |
|  | **b.** | **Training:** Provide training to Professionals and Farmers in different fields. |

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| **Regional Office, PCRWR, Bahawalpur** |  |
| **1.1 Desert Research Stations, Cholistan** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Laser land leveler | 1 |
| 2) | Bed planter  | 2 |
| 3) | Rotavator | 2 |
| 4) | Post hole digger | 2 |
| 5) | Ditcher | 2 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Engr. Asmatullah Khawja | Deputy Director  | Water management  |
| 2) | Mr. M. Tahir Saleem | Assistant Scientific Officer  | Agronomy  |
| **C** | **Services** |
|  | **a.** | **Consultancy:** Provide consultancy to Public and Private Sectors in different fields. |
| **D** | **Pilot Plant Facility** |
|  | **(Briefly describe, if available)** |
|  | Pilot sites established in the deserts for rainwater harvesting and desertification control  |

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| **1.1 Water Quality Laboratories, Bahawalpur, Multan, DG Khan** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Atomic Absorption Spectrometer | 2 |
| 2) | Flame Photometer  | 3 |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mr. Muhammad Akram (Bahawalpur) | Research Officer | Water quality chemistry |
| 2) | Mr. Muhammad Waseem (Multan) | Research Officer  | Water chemistry |
| 3) | Mr. Naeem Ahmad Dogar (DG Khan) | Assistant Scientific Officer  | Water chemistry  |
| **C** | **Services:** |
|  | **a** | **Testing/ Analytical :** Water quality testing regarding physic-chemical, microbiological and trace elements |
|  | **b.** | **Consultancy:** Provide Consultancy to Private and Public Sectors in different fields. |
|  |  |
| **1.1 Regional Water Quality Laboratory, Quetta** |
| **A** | **List of Major Equipment** | **Quantity** |
|
| 1) | Atomic absorption spectrometer  | 1 |
| 2) | U.V (Optizon) | 1 |
| 3) | U.V (Specord 40) | 1 |
| 4) | Fuming Hood | 1 |
| 5) | Flame Photometer | 1 |
| 6) | Autoclave | 2 |
| 7) | Laminar | 1 |
| 8) | Incubator | 3 |
|  | Serial No.3 is presently out of order |
| **B** | **List of Experts** | **Designation** | **Major Field** |
| 1) | Mrs. Ziviqar | Deputy Director  | Water quality analysis  |
| 2) | Mrs. Zumar Naz Bugti | Research Officer  | Water testing, calibration, process validation and instrumentation  |
| 3) | Mr. Sibghatullah Qureshi | Assistant Research Officer  | Analysis and reporting  |
| **C** | **Services:** |
|  | **a** | **Testing/ Analytical (**Water Testing and analysis) |
|  | **b.** | **Consultancy:** Provide Consultancy to Private and Public Sectors in different fields. |