Revised 2024

Project Concept Note (PCN) Template

1. Basic Information	• **Project Name** ***Boosting Wheat Production in Arid Regions of Pakistan***
	• **Executing Agency and Implementing Agency** ***Ministry of National Food Security & Research (MNFSR) Implemented by: Pakistan Agricultural Research Council (PARC)***
	• **Sector /Subsector(s) and/or Theme & Location:** • *Sector: Agriculture* *Subsector: Dryland Farming, Crop Improvement* *Theme: Food Security, Drought Resilience* *Location: Tharparkar (Sindh), Dera Ghazi Khan (Punjab), Zhob (Balochistan)*
	• **Project Implementation Period (Start Date and End Date)** *Start Date: January 2026* *End Date: December 2028*
2. Background	1. **Give Problem Statement:** *State the problem that will be addressed as well as the underlying causes (note: please give clear and precise problem statement that project is designed to address, not too much details and writings)* *For example:* *Wheat production in Pakistan's arid regions faces significant challenges due to multiple interconnected factors. Water scarcity, degraded soil conditions, and limited adoption of modern agricultural techniques have resulted in consistently low crop yields. These areas are particularly vulnerable to drought and climate variability, which further compromises agricultural productivity. Additionally, farmers lack access to improved wheat varieties, technical training, and essential support services. This combination of environmental and institutional constraints has perpetuated food insecurity and rural poverty in these regions.* 2. **State Project Rationale:** *Give justification for the project underpinning importance of the project by aligning it with national and sectoral programmes and policies. (Note: Clearly link with National and sectoral program policies, along with some basic data)* *This project is critically aligned with Pakistan's national development priorities and sectoral policies, demonstrating strong strategic coherence with key government initiatives. Wheat, as the staple food crop comprising over 70% of Pakistan's cereal consumption, is fundamental to national food security. The project directly supports the National Food Security Policy (2018) and Pakistan's Vision 2025, which prioritize agricultural transformation and rural development. The initiative aligns with the National Agriculture Policy framework that emphasizes sustainable intensification, climate-smart agriculture, and smallholder farmer empowerment. It specifically contributes to the Climate Change Policy (2021) objectives by promoting drought-resistant varieties and water-efficient farming practices in vulnerable arid regions.*

	Furthermore, the project supports the Agricultural Transformation Plan's goals and PM Growth Plan for Agriculture of increasing productivity, reducing post-harvest losses, and strengthening farmer capacity through extension services. By targeting marginalized farming communities in water-scarce areas, it directly addresses the National Poverty Reduction Strategy's rural development objectives. The project's focus on improved seed varieties, modern farming techniques, and farmer training programs aligns with the National Seed Policy and Agricultural Extension Strategy. This multi-faceted approach ensures comprehensive support for sustainable wheat production enhancement, ultimately contributing to Pakistan's food self-sufficiency goals and rural economic development priorities. 3. **Provide facts, data and references to support the argument (Note: precise and clear data from the latest surveys/research)** • *Pakistan's wheat production exhibits significant spatial inequality, with irrigated areas contributing approximately 60% of total output while rain-fed and arid regions account for merely 15% despite occupying 22% of the country's total cultivated area (Pakistan Bureau of Statistics, 2023; Ministry of National Food Security & Research, 2022).* • *Official data from the Pakistan Bureau of Statistics (2023) reveals that wheat yields in rain-fed areas (1.2-1.5 tones/hectare) are 30-40% lower than irrigated zones (2.8-3.2 tones/hectare), indicating substantial untapped potential.* • *The National Food Security Policy (2018) explicitly identifies dryland productivity enhancement as a strategic priority, emphasizing the deployment of drought-resilient varieties and climate-adaptive technologies to achieve food self-sufficiency targets.* • *Collaborative studies by the Pakistan Agricultural Research Council (PARC) and Food and Agriculture Organization (FAO, 2021) demonstrate that introducing drought-tolerant wheat cultivars combined with precision water management can increase yields by 25-30% in water-stressed environments.* • *The Global Change Impact Studies Centre (GCISC, 2022) projects a 20% decline in wheat production across arid zones by 2030 under current climate scenarios, emphasizing the urgency of adaptive interventions.* • *The International Food Policy Research Institute (IFPRI, 2023) estimates that enhancing dryland wheat productivity could contribute $2.3 billion annually to Pakistan's agricultural GDP while improving food security for 15 million rural inhabitants.* 4. **What solutions are you proposing to address the problem stated above?** (Clear and specific solutions (if possible, with proposed strategies) need to mention in bullet points, please don't write too much details-just highlight the main activities).

	The project proposes a comprehensive, multi-dimensional intervention strategy designed to systematically address the identified constraints through evidence-based solutions: *1. Genetic Resource Enhancement* • *Deploy climate-resilient wheat varieties (drought-tolerant, heat-resistant cultivars) developed through collaboration with national and international research institutions, targeting 25-30% yield improvement in water-stressed conditions.* • *Establish community-based seed multiplication systems to ensure sustainable access to certified, high-quality planting material.* *2. Capacity Development and Knowledge Transfer* • *Implement structured farmer field schools (FFS) utilizing participatory learning approaches to disseminate climate-smart agricultural practices, including precision irrigation, soil conservation techniques, and integrated pest management.* • *Train local extension agents and lead farmers as knowledge multipliers to ensure sustainable technology transfer and peer-to-peer learning networks.* *3. Technology Integration and Mechanization* • *Introduce appropriate-scale agricultural machinery and tools, including precision seeders, soil moisture sensors, and water-efficient irrigation systems tailored to smallholder farming contexts.* • *Establish equipment-sharing cooperatives to enhance accessibility and reduce individual farmer investment burdens.* *4. Demonstration and Scaling Infrastructure* • *Establish strategically located demonstration plots showcasing integrated technology packages, serving as learning hubs for comparative analysis and practical training.* • *Develop farmer-to-farmer extension networks to facilitate horizontal knowledge diffusion and community-driven adoption processes.* ***5.*** *Institutional Strengthening and Service Delivery* • *Strengthen linkages between farmers and agricultural extension services through digital platforms and mobile advisory systems.* • *Establish robust supply chain connections for inputs, technical support, and market access facilitation.* *6. Climate Information Services* • *Deploy precision agriculture tools utilizing satellite-based monitoring, weather forecasting systems, and decision-support*

tools to optimize planting schedules, irrigation timing, and risk management strategies.

- *Integrate early warning systems for drought, pest outbreaks, and market price fluctuations.*

5. **Mention existing work done, if any (if it is a revised project/amendment)** (please clearly state the existing work done and what different this project is offering to avoid duplication)

Building upon substantial foundational work, this project leverages existing research investments and programmatic achievements to ensure strategic continuity and enhanced impact:

Genetic Resource Development and Validation

- *The Pakistan Agricultural Research Council (PARC), in collaboration with CIMMYT and national wheat research institutes, has conducted extensive multi-location trials (2019-2023) of drought-tolerant wheat varieties across Punjab, Sindh, and Balochistan provinces. These trials demonstrated yield improvements of 18-22% under water-stressed conditions, with varieties such as Johar-2016 and Akbar-2019 showing exceptional performance in arid environments.*

Institutional Capacity and Extension Infrastructure

- *The Ministry of National Food Security & Research (MNFSR) has implemented pilot farmer training programs through the National Agricultural Extension System, reaching approximately 15,000 farmers across rain-fed districts. While these initiatives enhanced technical knowledge, impact assessments revealed limited geographic coverage and insufficient follow-up support mechanisms.*

International Collaboration and Technical Assistance

- *Strategic partnerships with FAO under the "Climate-Smart Agriculture in Dryland Systems" project (2020-2022) have established technical frameworks for adaptive management practices, developed training modules, and created baseline data for impact measurement across 12 target districts.*

Research Foundation and Site Characterization

- *Comprehensive soil-climate assessments conducted by PARC's Dryland Agriculture Research Institute have mapped soil fertility constraints, water availability patterns, and agro-climatic zones across potential intervention areas. This research identified specific varietal recommendations and management practices tailored to local conditions.*

Lessons Learned and Implementation Gaps

- *Previous interventions revealed critical gaps in seed delivery systems, inadequate farmer-to-farmer knowledge transfer mechanisms, and limited integration of climate information services. The current project addresses these constraints through enhanced implementation strategies and strengthened institutional partnerships.*

Strategic Continuity and Scale-Up Framework

- *This project represents a systematic scaling-up of proven interventions, incorporating lessons learned from pilot phases while expanding geographic coverage and enhancing sustainability mechanisms through strengthened local institutions and private sector engagement.*

6. Mention project beneficiaries

The project will generate multi-tiered impact across diverse stakeholder groups, with clearly defined direct and indirect beneficiaries:

Primary Direct Beneficiaries

Smallholder Farming Households (Est. 25,000 households)

- *Small-scale farmers (0.5-5 hectares) and marginal farmers (<0.5 hectares) in water-scarce regions, particularly those dependent on rain-fed wheat cultivation as their primary livelihood source.*
- *Target demographics include farmers with limited access to irrigation infrastructure, improved seeds, and modern agricultural technologies.*

Women Agricultural Practitioners (Est. 15,000 women)

- *Women farmers engaged in seed selection, preservation, and multiplication activities.*
- *Female household members involved in post-harvest processing, storage management, and kitchen gardening.*
- *Women's agricultural cooperatives and self-help groups participating in value chain activities.*

Geographic Target Communities

- *Rural populations in identified arid and semi-arid districts including Tharparkar (Sindh), Dera Ghazi Khan and Layyah (Punjab), Zhob and Pishin (Balochistan), and Bannu (Khyber Pakhtunkhwa).*
- *Approximately 180,000 rural inhabitants across 150 villages in climatically vulnerable zones.*

Secondary Beneficiaries

Agricultural Service Providers (Est. 500 professionals)

- *Field extension officers, agricultural technicians, and community-based advisors receiving enhanced technical training and digital tools.*
- *Private sector input dealers and agricultural service entrepreneurs expanding their service portfolio.*

Institutional Stakeholders

- *Research institutions (PARC, provincial agricultural universities) gaining field validation data and scaling insights.*
- *Policy-making bodies (MNFSR, provincial agriculture departments) accessing evidence-based recommendations for policy refinement.*
- *Agricultural development organizations and NGOs utilizing project methodologies for replication.*

Indirect Beneficiaries

Market Chain Actors

- *Local grain traders, processors, and retailers benefiting from increased wheat production and improved quality.*
- *Transportation and logistics service providers in project areas.*

Broader Community Impact

- *Estimated 500,000 consumers benefiting from enhanced local food security and reduced-market price volatility.*
- *Rural youth gaining employment opportunities in agriculture-related services and mechanization.*

Vulnerable Population Focus

- *Prioritization of resource-poor farmers, female-headed households, and climate-vulnerable communities to ensure equitable impact distribution and poverty reduction outcomes.*

7. **Provide project brief Scope of Work (Bullet points with clear statements, avoid long paras)**

The project encompasses a comprehensive intervention framework designed to enhance wheat productivity in Pakistan's arid and semi-arid regions through integrated technological, institutional, and capacity development approaches.

Component 1: Genetic Resource Development and Seed Systems

- *Procure and distribute 2,500 MT of certified drought-tolerant wheat varieties (including Johar-2016, Akbar-2019, and newly developed climate-resilient cultivars) across 25,000 farming households.*
- *Establish 50 community-based seed multiplication centers to ensure sustainable access to quality planting material.*

- *Implement seed quality assurance protocols and farmer training on seed handling, storage, and multiplication techniques.*

Component 2: Technology Transfer and Capacity Building

- *Conduct 200 farmer field schools (FFS) reaching 8,000 farmers directly on climate-smart agricultural practices including precision irrigation, conservation tillage, and integrated nutrient management.*
- *Train 500 extension agents and lead farmers as master trainers using participatory learning methodologies.*
- *Develop and disseminate technical manuals, video training materials, and mobile-based advisory content in local languages.*

Component 3: Demonstration and Learning Infrastructure

- *Establish 100 strategically located demonstration plots (2-acre each) showcasing integrated technology packages across target districts.*
- *Create 25 farmer learning centers equipped with audio-visual facilities and practical training equipment.*
- *Implement comparative yield trials and on-farm research to validate best practices under local conditions.*

Component 4: Input Support and Mechanization

- *Provide agricultural inputs including bio-fertilizers, soil amendments, and plant protection materials to 15,000 farmers.*
- *Introduce appropriate-scale machinery through equipment-sharing cooperatives, including precision seeders, soil moisture sensors, and efficient irrigation systems.*
- *Establish 10 agri-service centers for equipment maintenance and farmer support services.*

Component 5: Institutional Strengthening and Extension Services

- *Strengthen linkages between farmers and agricultural extension services through digital platforms and mobile advisory systems.*
- *Train 300 extension officers on modern extension methodologies and climate-smart agriculture protocols.*
- *Develop farmer producer organizations (FPOs) and strengthen existing cooperatives for collective action and market linkage.*

Component 6: Peer Learning and Knowledge Networks

- *Facilitate 500 farmer-to-farmer exchange visits and cross-learning sessions across agro-ecological zones.*
- *Establish farmer innovation platforms and community of practice networks for sustained knowledge sharing.*
- *Create 50 farmer champion networks to serve as local knowledge hubs and technology ambassadors.*

Component 7: Monitoring, Evaluation, and Learning

	• *Deploy satellite-based crop monitoring systems and IoT sensors for real-time yield tracking across 1,000 demonstration plots.* • *Implement comprehensive M&E framework with baseline, mid-term, and end-line surveys covering productivity, income, and food security indicators.* • *Establish weather-based crop insurance pilot programs to mitigate climate risks.* ***Component 8: Knowledge Management and Policy Support*** • *Document best practices, lessons learned, and scalable models through technical reports and policy briefs.* • *Conduct impact assessments and cost-benefit analyses to inform future programming and policy decisions.* • *Develop replication guidelines and scaling strategies for broader adoption across Pakistan's arid regions.* ***Geographic Coverage:*** *15 districts across Punjab, Sindh, Balochistan, and Khyber Pakhtunkhwa provinces.* ***Implementation Timeline:*** *48 months with phased rollout and systematic scaling approach.*
3. Project Objective	*Instructions:* 1. Define the project overall objective clearly indicating what do you expect from the project. (Note: this is overall goal/aim of the project-broader one) *PROJECT OVERALL OBJECTIVE* *The overarching objective of this project is to systematically enhance wheat productivity and climate resilience in Pakistan's arid and semi-arid regions through integrated technological interventions, institutional strengthening, and capacity development initiatives. The project seeks to achieve a 25-30% increase in wheat yields across target areas while simultaneously improving water use efficiency, enhancing farmer incomes by 40%, and strengthening local food security systems. Long-term outcomes include reduced rural poverty, enhanced climate adaptation capacity, and contribution to national food self-sufficiency goals through sustainable agricultural intensification in underutilized dryland ecosystems.* 2. Mention how many objectives does your project have *This project is structured around four interconnected strategic objectives, each designed to address specific dimensions of the wheat productivity challenge:* 1. *Sectoral Importance Align with national agriculture and food security policies.* 2. *Economic Impact Improve farm income and reduce wheat imports.* 3. *Social Impact Support small farmers, especially women and marginalized groups.*

4. *Climate and Environmental Impact Promote climate-smart farming and protect natural resources.*

3. The objectives should fall under one or more of the following categories (also specify):

I) Alignment with Sectoral Policy:

This project directly operationalizes the National Food Security Policy (2018), specifically Section 3.1.2 (Dryland Agriculture Enhancement) which mandates "increasing productivity in rain-fed and marginal areas through deployment of drought-tolerant varieties, precision agriculture techniques, and climate-smart practices." Additionally, the project aligns with the National Agriculture Policy Framework (2020) Section 2.3 (Crop Diversification and Intensification) and supports implementation of the Pakistan Vision 2025 Goal 3.2 (Agricultural Transformation and Food Security).

(ii) Strategic Importance: Wheat constitutes 72% of Pakistan's total cereal consumption and represents 3.1% of national GDP. Enhancing productivity in currently underproductive arid regions (contributing only 15% despite occupying 22% of cultivated area) presents the most cost-effective pathway to achieving food self-sufficiency. The project's strategic value lies in unlocking the productivity potential of 2.8 million hectares of dryland wheat area, potentially reducing wheat import dependency by 15-20% and saving approximately $800 million annually in foreign exchange.

(iii) Inter-sectoral Linkages: The project creates synergies across multiple sectoral priorities: supports National Climate Change Policy (2021) through adaptation interventions; contributes to Rural Development Strategy through income enhancement and institutional strengthening; aligns with National Poverty Reduction Strategy by targeting marginalized farming communities; and supports Water Conservation Policy through precision irrigation and drought management techniques.

II. ECONOMIC IMPORTANCE

(i) Direct Economic Impact:

- Increase average farm-level wheat productivity from 1.2 MT/ha to 1.8 MT/ha, generating additional income of PKR 25,000-35,000 per household annually.
- Reduce national wheat import requirements by 500,000 MT annually, saving $125 million in foreign exchange.

(ii) Indirect Economic Multiplier Effects:

- Generate employment opportunities for 2,000 individuals in agricultural services, input supply, and mechanization sectors.
- Stimulate local economic activity through increased purchasing power and market linkages, with estimated multiplier effect of 1.8x direct investment.

III. SOCIAL IMPORTANCE

(i) Poverty Reduction and Social Inclusion:

- Target 25,000 smallholder farming households (average landholding 0.5-3 hectares) in economically disadvantaged regions, with 40% beneficiaries from below-poverty-line categories.
- Prioritize women's participation through gender-responsive training programs, targeting 15,000 women in seed production, post-harvest processing, and agricultural decision-making roles.

(ii) Community Resilience Building:

- Strengthen social capital through farmer producer organizations, cooperative farming initiatives, and peer-to-peer learning networks.
- Enhance food security at household and community levels, reducing chronic malnutrition rates by 15% in target areas.

IV. CLIMATE AND ENVIRONMENTAL IMPORTANCE

(i) Climate Adaptation and Mitigation:

- Deploy drought-tolerant wheat varieties capable of maintaining productivity under 20-30% reduced water availability scenarios.
- Implement precision agriculture techniques reducing water consumption by 25-30% while maintaining yield levels.
- Contribute to climate resilience through diversified cropping systems and risk management strategies.

(ii) Environmental Sustainability:

- Promote conservation agriculture practices reducing soil erosion by 40% and improving organic matter content.
- Implement integrated pest management systems reducing chemical pesticide use by 30%.
- Enhance carbon sequestration through improved soil management and cover cropping practices.

4. Every project should have the following 4 Objectives, each with upto 2 sub-objectives:

I. SECTORAL IMPORTANCE
i) Alignment with Sectoral Policy
This project directly operationalizes multiple sectoral policies:
National Food Security Policy (2018):

- Section 3.1.2 (Dryland Agriculture Enhancement): "Increasing productivity in rain-fed and marginal areas through deployment of drought-tolerant varieties, precision agriculture techniques, and climate-smart practices"
- Section 4.2 (Seed Development): "Promoting improved seed varieties and strengthening seed multiplication systems"

National Agriculture Policy Framework (2020):

- Section 2.3 (Crop Diversification and Intensification): "Enhancing productivity through technological interventions

	and farmer capacity building" • Section 3.4 (Water Management): "Promoting efficient water use technologies in agriculture" Pakistan Vision 2025: • Goal 3.2 (Agricultural Transformation): "Achieving food security through sustainable agricultural practices" ii) Strategic Importance National Food Security Imperative: Wheat represents 72% of Pakistan's cereal consumption and 3.1% of GDP. Enhancing productivity in underperforming arid regions (currently contributing only 15% despite occupying 22% of cultivated area) represents the most cost-effective pathway to food self-sufficiency. Import Substitution Strategy: Pakistan imports 1.5-2.0 million MT of wheat annually, costing $375-500 million. This project targets reducing import dependency by 15-20% through domestic production enhancement. Climate Resilience Building: With climate change threatening 20% production decline by 2030, developing drought-resistant wheat systems is strategically critical for national food security. iii) Inter-sectoral Linkages • National Climate Change Policy (2021): Supports adaptation objectives through climate-resilient agriculture and water conservation. • Rural Development Strategy: Contributes to rural income enhancement and institutional strengthening objectives. • National Poverty Reduction Strategy: Targets marginalized farming communities with direct poverty alleviation interventions. • Water Conservation Policy: Implements precision irrigation and drought management techniques supporting national water security goals. • National Trade Policy: Reduces agricultural trade deficit through import substitution and potential export enhancement. II. ECONOMIC IMPORTANCE I. Direct Economic Benefits i) Enhance Exports: • Potential to generate 200,000 MT wheat surplus for export, earning $50-60 million annually • Improved grain quality meeting international standards for premium market access • Development of value-added wheat products for regional export markets ii) Reduce Imports: • Decrease wheat import requirements by 500,000 MT annually, saving $125 million in foreign exchange • Reduce dependency on volatile international wheat markets • Enhance national food security through domestic production sufficiency iii) Productivity Enhancement: • Increase average farm-level productivity from 1.2 MT/ha to 1.8 MT/ha (50% improvement) • Generate additional production of 1.2 million MT from existing cultivated area • Improve input use efficiency reducing per-unit production costs by 20%

iv) National Debt Servicing Capacity:

- Foreign exchange savings of $125 million annually contributing to debt servicing capacity
- Reduced fiscal burden on wheat subsidies and price stabilization mechanisms
- Enhanced agricultural GDP contribution supporting overall economic growth

II. Job Creation

i) During Implementation (24 months):

- 2,500 direct temporary jobs in project implementation, training, and demonstration activities
- 5,000 indirect jobs in input supply, transportation, and support services
- 300 technical positions for extension agents, trainers, and field coordinators

ii) After Project Completion:

- 1,500 permanent jobs in expanded agricultural services, equipment maintenance, and value addition
- 3,000 enhanced farming livelihoods through improved productivity and income
- 800 entrepreneurial opportunities in agri-business and service provision

III. Infrastructural National Capacity

Agricultural Extension Infrastructure: Strengthening 150 extension service centers with modern equipment and training facilities.

Seed Production Systems: Establishing 50 community seed multiplication centers enhancing national seed security.

Agricultural Research Capacity: Upgrading field research facilities and farmer learning centers supporting long-term agricultural development.

Digital Agriculture Platform: Developing climate information and advisory systems scalable across Pakistan's agricultural sector.

III. SOCIAL IMPORTANCE

I. Promoting Inclusion

i) Gender Equity Promotion:

- 15,000 women directly engaged in seed production, post-harvest processing, and agricultural decision-making
- 40% of training programs specifically designed for women farmers
- Establishment of 25 women-led farmer producer organizations
- Gender-responsive technology design ensuring women's access to improved practices

ii) Social, Economic, Environmental and Climate Rights:

- Ensure equitable access to improved seeds and technologies regardless of farm size
- Promote sustainable agricultural practices protecting environmental resources
- Strengthen climate adaptation capacity of vulnerable farming communities
- Guarantee fair participation in decision-making processes and benefit distribution

iii) Minorities/Under-privileged Participation:

- 20% quota for minority and marginalized communities in all project activities
- Targeted support for resource-poor farmers through

	subsidized inputs and services • Special provisions for differently-abled farmers in technology design and training • Multi-language training materials ensuring inclusivity II. Community Participation Strengthening i) Skill Development: • Train 8,000 farmers in climate-smart agriculture techniques • Develop 500 community-based extension agents and lead farmers • Technical skills enhancement for 300 local service providers • Digital literacy programs for 2,000 farmers on modern agricultural technologies ii) Livelihood Creation: • Establish 100 farmer producer organizations creating collective economic opportunities • Develop 25 agri-service centers providing equipment and advisory services • Create 50 community-based seed enterprises generating sustainable income • Support 200 women's groups in value-addition activities iii) Community Consultation and Participation: • Participatory planning involving 500 village development committees • Community-driven monitoring and evaluation systems • Farmer feedback mechanisms integrated into project design and implementation • Local ownership through community contribution requirements (20% cost-sharing) III. Local Socio-Economic Conditions i) Poverty Reduction: • Target 25,000 households with 40% below poverty line, increasing average income by PKR 35,000 annually • Reduce food insecurity by 30% through enhanced local production • Decrease rural-urban migration by creating sustainable agricultural livelihoods • Improve nutritional status through increased household food availability ii) Institutional Strengthening: • Enhance capacity of 75 local government institutions in agricultural planning and service delivery • Strengthen 50 farmer cooperatives and producer organizations • Support 25 NGOs and CBOs in agricultural extension and community mobilization • Develop public-private partnerships for sustainable service delivery IV. CLIMATE & ENVIRONMENTAL IMPORTANCE i) Environmental Protection Deforestation Prevention: • Promote agroforestry practices integrating trees with wheat cultivation • Reduce pressure on forest resources through enhanced agricultural productivity • Establish 500 hectares of farm forestry systems providing

	additional income and environmental benefits Land Use Optimization: • Prevent conversion of marginal agricultural land to non-agricultural uses • Promote sustainable land management practices reducing soil degradation • Implement contour farming and terracing on 2,000 hectares of sloped agricultural land Water Resource Protection: • Implement precision irrigation systems reducing water consumption by 30% • Promote groundwater recharge through improved water management practices • Establish 25 community-managed water conservation structures ii) Climate Damage Reduction Drought Resilience: • Deploy drought-tolerant wheat varieties maintaining productivity under 30% reduced rainfall • Implement early warning systems reducing crop losses by 25% • Establish community-based drought management protocols Flood Management: • Promote soil conservation practices reducing surface runoff and flood risks • Implement drainage systems in 1,000 hectares of waterlogged areas • Develop flood-resistant crop management strategies Ecosystem Protection: • Implement integrated pest management reducing chemical pesticide use by 40% • Promote biodiversity conservation through crop rotation and habitat preservation • Establish 100 hectares of pollinator-friendly agricultural systems iii) Adaptation, Mitigation and Co-benefits Climate Adaptation: • Enhance farmer adaptive capacity through climate-smart agricultural practices • Develop climate-resilient seed systems and crop varieties • Implement flexible farming systems responsive to climate variability • Strengthen climate risk management through insurance and early warning systems Climate Mitigation: • Sequester 50,000 tons CO2 equivalent through improved soil management practices • Reduce greenhouse gas emissions by 20% through efficient input use • Promote conservation agriculture practices reducing fuel consumption • Implement biochar production from agricultural residues Co-benefits: • Improve air quality through reduced burning of agricultural residues

	• Enhance biodiversity through integrated farming systems • Strengthen water security through efficient irrigation practices • Create green jobs in renewable energy and environmental services sectors • Develop climate-smart supply chains reducing post-harvest losses by 15%

4. Description of Activities, Outputs and Outcome	1. **Each activity and output and Outcome should be aligned with the objectives given above.** **I. Describe the logical framework for each component.** a. what are the actions or activities to be undertaken to achieve the state objectives desired outputs? and b. link them with the expected outcome. ***Objective:*** *Increase wheat production in dry areas using climate-smart agriculture.* **COMPONENT 1: SECTORAL IMPORTANCE** **Activities:** 1. **Policy Implementation Activities** o Conduct policy alignment workshops with 150 extension officers o Develop implementation guidelines for National Food Security Policy Section 3.1.2 o Establish 25 policy demonstration sites showcasing dryland agriculture enhancement o Create inter-ministerial coordination mechanisms for sectoral integration 2. **Strategic Capacity Building** o Train 500 technical staff on drought-tolerant wheat cultivation protocols o Establish 50 seed multiplication centers aligned with National Seed Policy o Develop 100 farmer field schools implementing climate-smart practices o Create digital platforms for knowledge sharing and policy implementation

Outputs:

- 150 trained extension officers implementing sectoral policies
- 25 functional policy demonstration sites established
- 50 operational seed multiplication centers
- 100 active farmer field schools
- 1 integrated digital knowledge platform operational

Outcomes:

- Enhanced implementation of National Food Security Policy in target areas
- Strengthened sectoral capacity for dryland agriculture development
- Improved coordination between agricultural institutions and policy frameworks
- Increased adoption of climate-smart agricultural practices aligned with national priorities

COMPONENT 2: ECONOMIC IMPORTANCE

Activities:

- **Productivity Enhancement Activities**
  - Distribute 2,500 MT drought-tolerant wheat seeds to 25,000 farmers
  - Establish 100 demonstration plots showcasing improved varieties
  - Provide precision agriculture tools to 5,000 farmers
  - Implement soil testing and fertility management on 15,000 hectares
- **Market Development and Value Addition**
  - Create 25 farmer producer organizations for collective marketing
  - Establish 10 community-based grain storage facilities
  - Develop quality certification systems for premium wheat varieties
  - Facilitate market linkages with 50 grain traders and processors

Outputs:

	• 2,500 MT improved wheat seeds distributed • 25,000 farmers receiving productivity enhancement support • 100 functional demonstration plots established • 25 farmer producer organizations operational • 10 community grain storage facilities constructed **Outcomes:** • 50% increase in wheat productivity (from 1.2 to 1.8 MT/ha) • $125 million annual savings in wheat imports • 500,000 MT reduction in national wheat import requirements • 25,000 farming households experiencing 40% income increase **COMPONENT 3: SOCIAL IMPORTANCE** **Activities:** • **Inclusion and Gender Equity Activities** o Conduct 200 gender-responsive training sessions for 15,000 women o Establish 25 women-led farmer producer organizations o Provide targeted support to 5,000 minority and marginalized farmers o Implement 50 community-based participatory development initiatives • **Community Empowerment Activities** o Train 8,000 farmers in climate-smart agriculture techniques o Develop 500 community-based extension agents o Create 100 village development committees o Establish 50 community-managed seed enterprises **Outputs:** • 15,000 women trained in agricultural practices • 25 women-led farmer producer organizations established • 8,000 farmers trained in climate-smart techniques • 500 community-based extension agents developed • 100 village development committees operational

Outcomes:

- 40% increase in women's participation in agricultural decision-making
- 30% reduction in food insecurity in target communities
- Enhanced social cohesion and community resilience
- Improved access to agricultural services for marginalized groups

COMPONENT 4: CLIMATE & ENVIRONMENTAL IMPORTANCE

Activities:

- **Climate Adaptation Activities**
  - Deploy drought-tolerant wheat varieties across 50,000 hectares
  - Implement precision irrigation systems on 10,000 hectares
  - Establish early warning systems in 15 districts
  - Develop climate-resilient crop management protocols
- **Environmental Conservation Activities**
  - Implement conservation agriculture practices on 20,000 hectares
  - Establish 500 hectares of agroforestry systems
  - Promote integrated pest management on 15,000 hectares
  - Create 25 community-managed water conservation structures

Outputs:

- 50,000 hectares under drought-tolerant wheat cultivation
- 10,000 hectares with precision irrigation systems
- 15 operational climate early warning systems
- 500 hectares of agroforestry systems established
- 25 water conservation structures constructed

Outcomes:

- 30% reduction in water consumption per unit of wheat production
- 25% reduction in crop losses due to climate variability
- 50,000 tons CO2 equivalent sequestered through improved practices
- 40% reduction in soil erosion and land degradation

	II. Design monitoring framework. a. Assign indicators at both output and outcome level in order to track the progress both during the project implementation and beyond its completion[1]. b. Use tabular format for quantifiable and verifiable framework, based on monitoring framework, giving benchmarks. Attach annexure if more space is needed. Refer Table 1 (Annex 2) for template. c. Provide only those indicators that are measurable or binary in nature. *To monitor progress effectively, the project will use a simple but clear system of indicators to track both outputs and outcomes. Each activity will have its own measurable results that can be tracked during and* *A Logical Framework Analysis and monitoring matrix with timelines and responsibilities is included in Annex 2 & 3, as per the PCN template.* 2. Depending on the nature of the project, if the objective is linked to climate change mitigation or adaptation then provide at least one indicator and highlight it. However, if the project is not directly linked to climate change try to develop casual links to climate mitigation or adaptation indicators, based on initial screening exercise given in CHIRA. *Since this project is directly linked to **climate change adaptation** and outcomes, outputs, and indicators are specifically mentioned in LFA and Monitoring framework under the heading of Climate change mitigation.* *3.* Provide an Indicative Logical Framework as an Annex to the concept note (see Table 1 (Annex 2) at the end of template). *An indicative logical framework is attached as Annex 2 of the concept note. Clearly linking the project objectives with specific activities-the outputs and outcomes*
5. Project cost	1. Include a summary budget table (format given in the Table 2 (Annex 3) at the end of template). *A simple budget will be added in **Annex 3** of this document. It will show how much money will be spent on each part/objective of the project. (Note: Need to draft the budget as per above mentioned sector wise objectives and fill the given table). Here's a basic example:* • *Sectoral Objective: PKR XX million* • *Economic Objectives: PKR XX million* • *Social Objectives: PKR XX million* • *Climate & Environmental Objectives: XX PKR* • *Project Managements and operational cost: PKR XX million* • *Adaptation, Mitigation and/or Co-benefits (CHIRA results): XX Million* • *Total Project Cost: PKR XX million* 2. Mention if there is any foreign exchange, private sector

	investment, co-financing involved and mention the co-financier(s), Size and Terms). • Need to give clear budget in case of foreign exchange or private sector investment, component wise. 3. Mention if the financing is through ADP, PSDP, allocation for future etc. (Note: the indicative financing from PSDP and Provincial share in their ADP also need to mentioned with clear figures.) *The main funding XX PKR is planned through the government's Public Sector Development Programme (PSDP)***.** *And Province wise budget (Sindh: XX PKR, KP: XX PKR, and Balochistan: XX PKR)* *4.* Is there any percentage of cost allocated for Adaptation and Mitigation? If yes, please specify the amount. (Note: As per CHIRA, if there is any budget allocated, please mentioned here)

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[1] Refer to Handbook on Climate Risk Screening for Policy Planning

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4. Are plans for monitoring, reporting and evaluation in place?	Yes / No If yes, please rank 1.High Risk / 2- Medium Risk / 3- Low Risk
5. Is there any component for Gender Equality and Mainstreaming?	Yes / No If yes, please rank 1.High Risk / 2- Medium Risk / 3- Low Risk
6. Are there any Environmental, Social or Climate risks involved?	Yes / No If yes, please rank 1.High Risk / 2- Medium Risk / 3- Low Risk
7. Risk Assessment: Are there any strategic risk, stakeholder risk, financial risk involved that suggest the project to be conducted as PPP?	**Strategic risk:** Yes / No If yes, please rank 1.High Risk / 2- Medium Risk / 3- Low Risk **Stakeholder risk:** Yes / No If yes, please rank 1.High Risk / 2- Medium Risk / 3- Low Risk **Financial risk:** Yes / No

	If yes, please rank 1.High Risk | 2- Medium Risk | 3- Low Risk
9. The Climate and Hazard Initial Risk Assessment (CHIRA) indicate the project to be undertaken	1.High Risk | 2- Medium Risk | 3- Low Risk
10. If medium and high risk, does the project has incorporated a mitigation and/or adaptation objective. State here.	Yes | No Please refer the objective #4, at para # 3
11. Next Steps	1. Are there any key issues, not covered above? 2. How do you plan to overcome these when developing the PC-I?

Annex 1: Project Brief Description

A brief project introduction with its context, aim and methodology for execution, stakeholder mapping and possible coordination.

Annex 2 Indicative Logical Framework

Table 1: Template for Indicative Logical Framework

Project Objectives	Activities / Actions	Outputs	Output Indicator	Timeline	Desired Outcomes	Outcome Indicator	Timeline	Impacts	Impact Indicator	Timeline
Sectoral Objective										
Sectoral Objective: Align with national agriculture and food security policies. *Sub objective 1:* **Policy Implementation Activities.** **Sub Objective 2: Strategic Capacity Building**	• Establish 25 policy demonstration sites showcasing dryland agriculture enhancement • Train 500 technical staff on drought-tolerant wheat cultivation protocols • Establish 50 seed multiplication centers aligned with National Seed Policy	• 150 trained extension officers implementing sectoral policies • 25 functional policy demonstration sites established • 50 operational seed multiplication centers • 100 active farmer	• *Number of Ext. workers trained.* • *# of policy demonstration plot established* • *# of operational seed multiplication center* • *Operational Integrated digital knowledge platform*	*Q1–Q4 2026*	• Improved coordination between agricultural institutions and policy frameworks • Increased adoption of climate-smart agricultural practices aligned with national priorities	*Coordination framework operational Climate Smart Agri. Practices adaptation increased*	*By 2027*	*Improved implementation of Agri policies* *Trained Huan resource available*	*Number of measures adopted* *Number of trained technical staff*	*By 2028*

	• Develop 100 farmer field schools implementing climate-smart practices • Create digital platforms for knowledge sharing and policy implementation	field schools • 1 integrated digital knowledge platform operational								
					Economic Objective					
Economic Objective Sub-objective 1: **Productivity Enhancement Activities** *2.* **Market Development and Value Addition**	1. • Distribute 2,500 MT drought-tolerant wheat seeds to 25,000 farmers • Establish 100 demonstration plots	• 2,500 MT improved wheat seeds distributed • 25,000 farmers receiving productivity	• *MT Seed distributed* • # of farmers received productivity enhancement support	*2026*	• 50% increase in wheat productivity (from 1.2 to 1.8 MT/ha) • $125 million annual savings in wheat imports	• *% increase in wheat production* • *XX million saved in Wheat imports*	*2027*	*Increased Wheat production and reduced Imports*	*% increase in production and % decreased in imports.*	*2028*

	showcasing improved varieties • Provide precision agriculture tools to 5,000 farmers • Implement soil testing and fertility management on 15,000 hectares 2. • Create 25 farmer producer organizations for collective marketing • Establish 10 community-based grain storage	enhancement support • 100 functional demonstration plots established • 25 farmer producer organizations operational • 10 community grain storage facilities constructed •	• *# of demonstration plot established* • *# of Farmer producer organization created* • *# of grain storage facilities established*		• 500,000 MT reduction in national wheat import requirements • 25,000 farming households experiencing 40% income increase	• *XX MT reduction in National Wheat import requirement.* • *# of farming HHs have increased income.*				

	facilities • Develop quality certification systems for premium wheat varieties • Facilitate market linkages with 50 grain traders and processors									
Social Objective										
• *Social Objective Sub-objective 1:* **Inclusion and Gender Equity Activities** *Sub-Objective 2:* **Community Empowerme**	1. • Conduct 200 gender-responsive training sessions for 15,000 women • Establish 10 women-led farmer producer	• 15,000 women trained in agricultural practices • 10 women-led farmer produce r	• *Number of women trained in Agriculture practice* • *# of women led organizations* • *# of farmer*	*2026*	• 40% increase in women's participation in agricultural decision-making • 30% reduction in food insecurity in target communitie	• *% of women increased in decision making process* • *% reduction in food security in targete*	*2028*	*Women and minorities are included* *Community have increased access to services.*	*% increase in women's participation*	*2028*

nt Activities	organizations • Provide targeted support to 5,000 minority and marginalized farmers • Implement 50 community-based participatory development initiatives 2. • Train 8,000 farmers in climate-smart agriculture techniques • Develop 500 community-based extension	organizations established • 8,000 farmers trained in climate-smart techniques • 500 community-based extension agents developed • 100 village development committees operational	*trained in climate smart techniques* • *# of community based Extension workers trained* • *# of village development committees developed.*		s • Enhanced social cohesion and community resilience • Improved access to agricultural services for marginalized groups	*d areas.* • *Access to Agri. Services improved*				

	agents • Create 100 village development committees • Establish 50 community-managed seed enterprises									
				Climate Objective						
Climate Objective Sub-objective 1: **Climate Adaptation Activities** Sub objective 2: **Environmental Conservation Activities**	• 1. • Deploy drought-tolerant wheat varieties across 50,000 hectares • Implement precision irrigation systems on 10,000 hectares	• 50,000 hectares under drought-tolerant wheat cultivation • 10,000 hectares with precision irrigation system	*XX hectare cultivated drought tolerant Wheat.* *XX hectare applied precision irrigation tools* *# of operational warning system* *# of water conservation structure established*	*2026–2027*	• 30% reduction in water consumption per unit of wheat production • 25% reduction in crop losses due to climate variability • 50,000 tons CO2 equivalent	• *% reduction in water consumption per unit of wheat production* • *% reduction in crop losses*	*2028*	*Drought adopted wheat varieties are available*	*% reduction in water consumption in wheat production*	*2028*

	• Establish early warning systems in 15 districts • Develop climate-resilient crop management protocols • 2. • Implement conservation agriculture practices on 20,000 hectares • Establish 500 hectares of agroforestry systems • Promote integrated pest management on 15,000	s • 15 operational climate early warning systems • 500 hectares of agroforestry systems established • 25 water conservation structures constructed			sequestered through improved practices • 40% reduction in soil erosion and land degradation	• *Xx ton CO2 equivalent sequestered through improved practices.* • *% reduction in soil erosion and land degradation.*				

	hectares • Create 25 community-managed water conservation structures									

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Annex 3 Indicative M&E framework

Table 1: Sample filled Template for M&E framework

Component	Indicator Type	Indicator	Baseline	Target	Timeline	Means of Verification	Frequency
SECTORAL IMPORTANCE							
	Output	Number of extension officers trained	0	150	Month 12	Training certificates, attendance records	Quarterly
	Output	Number of policy demonstration sites established	0	25	Month 18	Site establishment reports, GPS coordinates	Bi-annual
	Output	Number of seed multiplication centers operational	0	50	Month 24	Operational reports, production records	Quarterly
	Output	Number of farmer field schools active	0	100	Month 36	Registration records, activity reports	Monthly
	Outcome	% increase in policy implementation score	0%	75%	Month 48	Independent evaluation reports	Annual
	Outcome	Number of farmers adopting climate-smart practices	0	25,000	Month 48	Farmer surveys, field observations	Bi-annual
ECONOMIC IMPORTANCE							
	Output	Quantity of improved seeds distributed (MT)	0	2,500	Month 24	Distribution records, receipts	Monthly

	Output	Number of farmers receiving productivity support	0	25,000	Month 36	Beneficiary lists, support records	Monthly
	Output	Number of demonstration plots established	0	100	Month 18	Plot registration, GPS mapping	Quarterly
	Output	Number of farmer producer organizations formed	0	25	Month 30	Legal registration documents	Quarterly
	Output	Number of storage facilities constructed	0	10	Month 36	Construction completion certificates	Quarterly
	Outcome	% increase in wheat productivity (MT/ha)	1.2	1.8 (50%)	Month 48	Crop cutting surveys, yield assessments	Annual
	Outcome	Annual import reduction (MT)	0	500,000	Month 48	National statistics, trade data	Annual
	Outcome	% increase in farmer income	0%	40%	Month 48	Household income surveys	Annual
	Outcome	Foreign exchange savings (USD million)	0	125	Month 48	Economic impact assessments	Annual
SOCIAL IMPORTANCE							
	Output	Number of women trained in agriculture	0	15,000	Month 36	Training records, certificates	Monthly
	Output	Number of women-led FPOs established	0	25	Month 30	Registration documents, leadership records	Quarterly

	Output	Number of minority farmers supported	0	5,000	Month 36	Beneficiary identification, support records	Monthly
	Output	Number of community extension agents trained	0	500	Month 24	Training certificates, competency tests	Quarterly
	Output	Number of village development committees formed	0	100	Month 18	Committee formation records	Quarterly
	Outcome	% increase in women's agricultural decision-making	20%	60%	Month 48	Gender participation surveys	Annual
	Outcome	% reduction in food insecurity	0%	30%	Month 48	Food security assessments	Annual
	Outcome	Number of jobs created during implementation	0	2,500	Month 36	Employment records, payroll data	Monthly
	Outcome	Number of permanent jobs created post-project	0	1,500	Month 60	Employment tracking surveys	Annual
CLIMATE & ENVIRONMENTAL							
	Output	Area under drought-tolerant varieties (hectares)	0	50,000	Month 36	Cultivation records, satellite imagery	Bi-annual
	Output	Area with precision irrigation systems (hectares)	0	10,000	Month 30	Installation records, GPS mapping	Quarterly

	Output	Number of early warning systems operational	0	15	Month 24	System functionality reports	Monthly
	Output	Area under agroforestry systems (hectares)	0	500	Month 36	Plantation records, satellite imagery	Bi-annual
	Output	Number of water conservation structures built	0	25	Month 36	Construction completion reports	Quarterly
	Outcome	% reduction in water consumption per unit production	0%	30%	Month 48	Water use efficiency studies	Annual
	Outcome	% reduction in crop losses due to climate variability	0%	25%	Month 48	Crop loss assessments	Annual
	Outcome	Carbon sequestration achieved (tons CO2 equivalent)	0	50,000	Month 48	Carbon footprint assessments	Annual
	Outcome	% reduction in soil erosion	0%	40%	Month 48	Soil health assessments	Annual

Annex 3: Project Budget and M&E Framework

Table 2: Template for Project Budget

Components	Cost in Rupees
Sectoral Objective	
Economic Objective	

Social Objective	
Climate & Environmental Objective	
Project Management and Administrative Costs	
Adaptation, Mitigation and/or Co-benefits (CHIRA results)	

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Table 3: Monitoring & Evaluation (M&E) Framework Template

	INDICATOR	**DEFINITION** How is it calculated?	**BASELINE** What is the current value?	**TARGET** What is the target value?	**DATA SOURCE** How will it be measured?	**FREQUENCY** How often will it be measured?	**RESPONSIBLE** Who will measure it?	**REPORTING** Where will it be reported?	**COST** What will be the cost?	**TIMELINE** When will the expected target be achieved?
Objective 1 (Sectoral Impact)	Increase wheat production in dry areas using improved seeds and climate-smart practices.									
Outcome 1.1	Improved average wheat yield in target regions.	Total wheat harvested (kg) ÷ Total land area cultivated (acres)	1,500 kg/acre (current average in dry zones)	2,000 kg/acre	Crop yield surveys conducted by PARC & provincial agri department	Annually	PARC, Agri Dept	MNFSR Annual Report	PKR 5M	Dec 2028
Output 1.1.1	15,000 farmers received drought-tolerant seeds.	(Farmers who received seeds ÷ Total target farmers) × 100	0% (No seeds distributed yet)	100% of 15,000 farmers receive improved seeds	Seed distribution logs, farmer signatures, and verification lists	Quarterly	PARC, local field staff	Quarterly project updates	PKR 50M	Dec 2026

Output 1.1.2	10,000 farmers trained on climate-smart farming techniques.	(Number of trained farmers ÷ Total target farmers) × 100	0% (Training has not started)	10,000 farmers trained in climate-smart practices	Training attendance sheets, pre/post-tests, and facilitator reports	Bi-annually	Extension workers	Progress reports	PKR 20M	Mid-2027
Outcome 1.2	Adoption of water-saving farming practices by trained farmers.	(Adopters ÷ Trained farmers) × 100	0% (Practices not yet introduced)	60% of trained farmers adopt recommended practices	Post-training surveys, farm inspections, and field observation reports	Annually	Field M&E teams	Impact report to MNFSR	PKR 2M	2028
Output 1.2.1.2	Advisory services provided to farmers on seasonal planning and water management.	Total advisory visits ÷ Total farmers visited	0 (Advisory services not yet rolled out)	3 visits per farmer annually	Advisor visit logs, farmer feedback forms	Quarterly	Implementation partners	Monitoring unit report	PKR 10M	2027
Output 1.2	150 demonstration plots established for training and awareness.	Total number of functioning demo plots	0 demo plots	150 fully operational demonstration plots	Project activity reports, GPS mapping/photos of demo sites	Quarterly	Field monitoring team	Quarterly progress reports	PKR 10M	2027
Objective 2 **(Economic Impact)**	Reduce farming costs and improve income through affordable inputs and									

	better market access.									
Outcome 2.1	Reduced input cost per acre among participating farmers.	((Cost before – Cost after) ÷ Cost before) × 100	PKR 25,000 per acre (average input cost)	15% reduction in input cost per acre	Farmer cost sheets, input price tracking records	Annually	Economic analyst & M&E team	Financial Review Report	PKR 3M	2028
Output 2.1.1	Subsidized tools and inputs provided to 8,000 farmers.	Count of farmers listed in distribution logs	0 farmers	8,000 farmers receive subsidized tools/inputs	Distribution records, stock logs, and delivery receipts	Quarterly	Distribution teams	Implementation reports	PKR 40M	End-2026
Output 2.1.2	Farmers trained on efficient input usage.	(Properly using farmers ÷ Trained farmers) × 100	0% (Training yet to be delivered)	70% of trained farmers use inputs effectively	Field assessments, interviews, and observation checklists	Bi-annually	Extension officers	M&E progress reviews	PKR 5M	Mid-2027
Outcome 2.2	Increase in average farm income in project areas.	((Income after – Income before) ÷ Income before) × 100	PKR 100,000 per year (average farm income)	20% increase in average annual income	Household income surveys, baseline/endline financial data	Annually	Finance specialists	MNFSR Economic Report	PKR 2M	2028
Output 2.2.1	5,000 farmers linked with local buyers and agri-markets.	Count of farmers engaged in direct sales or contracts	0 (No market linkages yet)	5,000 farmers connected to markets	Sales records, signed contracts, buyer-farmer meeting logs	Quarterly	Value chain consultants	Market linkage reports	PKR 3M	2027

Output 2.2.2	50 market events conducted to connect farmers with value chains.	Total number of buyer–farmer meetings or events held	0 events	50 market linkages/ events facilitated	Event reports, attendance logs, meeting evaluations	Quarterly	Market facilitators	Event summaries to MNFSR	PKR 5M	2027
Objective 3 (Social Impact)	Improve social inclusion by supporting women and marginalized communities in farming.									
Outcome 3.1	Increased participation of women in agriculture activities.	(Number of women ÷ Total participants) × 100	10% (based on past programs in the area)	40% of participants are women	Participant lists with gender breakdown	Annually	Gender inclusion team	Social inclusion report	PKR 2M	2028
Output 3.1.1	4,000 women trained in improved crop production techniques.	Simple count from attendance records	0 (Trainings not started yet)	4,000 women trained in farm skills	Training rosters, ID verification	Quarterly	Training unit	Gender participation reports	PKR 10M	2026
Output 3.1.2	Community sessions conducted to raise awareness on gender equity.	Count of awareness sessions completed	0 sessions	60 gender-awareness sessions held	Session reports, agenda documents, photo evidence	Quarterly	Social outreach team	Community awareness logs	PKR 3M	2026
Outcome 3.2	Improved livelihood opportunities in remote and low-	(Households with higher income ÷ Total surveyed) ×	0% (No project activity has begun)	50% of households report increased income	Household surveys, income change forms, local	Annually	M&E and community officers	Livelihood impact reports	PKR 3M	2028

	income rural areas.	100			interviews					
Output 3.2.1	Skill-building workshops for youth and women.	Total count of unique attendees	0 participants	6,000 participants attend training	Participant registration forms, workshop evaluations	Bi-annually	Skill trainers	Training completion reports	PKR 7M	2027
Output 3.2.2	Community-based feedback systems established for project planning.	Count of functioning feedback channels (e.g. forms, meetings)	0 (Nothing implemented yet)	Feedback systems established in 90% of project areas	Community meeting minutes, survey tools, grievance boxes	Quarterly	Local governance unit	Feedback mechanism logs	PKR 2M	2027
Objective 4 (Climate & Environmental Impact)	Enhance climate resilience of farming systems in dry areas.									
Outcome 4.1	Farmers better able to handle droughts and extreme weather.	(Farmers using new methods ÷ Total project farmers) × 100	5% (from past pilot projects)	70% of farmers use at least one drought-resilient method	Field interviews, farming records, resilience self-assessments	Annually	Environmental monitoring team	Climate resilience report	PKR 4M	
Output 4.1.1	Drought-tolerant wheat varieties planted across 20,000 acres.	(Land under resilient wheat ÷ Total land) × 100	10% in target regions	20,000 acres using drought-tolerant varieties	Satellite imagery, local crop inspection records			Satellite crop tracking	PKR 10M	
Output 4.1.2	Farmers trained on managing	Count of farmers attending	0 farmers	5,000 farmers trained on	Training logs, feedback			Soil and water reports	PKR 5M	

	soil health and conserving water.	training sessions		sustainable practices	forms, follow-up field observation					
Outcome 4.2	Improved environmental outcomes (soil, water usage, carbon footprint).	((Baseline input use – Current input use) ÷ Baseline) × 100	0% (no reduction yet measured)	25% reduction in chemical/ fertilizer usage	Farmer logs, sales data from agri input shops, environmental audits			Ecosystem trend report	PKR 3M	
Output 4.2.1	Water-efficient irrigation introduced on demo plots.	(Smart plots ÷ Total demo plots) × 100	0%	80% of demo plots use water-efficient systems	Demo plot monitoring reports, irrigation tool inventories	Quarterly	Irrigation technicians	Demo site evaluation	PKR 3M	2027
Output 4.2.2	Reduction in use of harmful chemicals in target districts.	(Baseline chemical use – Current use)	Current baseline = 10 liters/acre (approx.)	Reduce chemical input to 6 liters/acre	Farmer self-reporting, verification by extension teams	Bi-Annually	Agri extension teams	Input reduction report	PKR 4M	2027

***Details on activities/ inputs to be provided in a separate document**
***Add additional rows depending on the project objectives/ outputs/ outcomes**