Project Proposal
“Making a climate-change resilient community in Feroza, Rahim Yar Khan, Punjab through agriculture technical training, flood response training, and plant distribution”

Submitted by

Network for Human and Social Development (NHSD)

Introduction of Organization Network for Human and Social Development (NHSD)

NHSD is a non-government non-profit organization in Pakistan. It is registered with Islamabad Charity Commission, Pakistan Center of Philanthropy, Economic Affairs Division Government of Pakistan and, since 2012, has been working in the fields of disaster management, education, health, poverty alleviation, public health education, water and sanitation, women empowerment, and climate change advocacy. NHSD submits regular updates to our implementation partners, donors, and sponsors through our website as well as on international platforms such as GlobalGiving, Benevity, and Myriad USA. Our endeavors have been appreciated by the Government of Pakistan.

To date, we have actively participated and provided support to vulnerable communities in the following geographical areas.

Project Background:

Rahim Yar Khan district in southern Punjab represents Pakistan's most climate-vulnerable agricultural region, where extreme weather events have systematically destroyed rural livelihoods and triggered mass population displacement. The district experienced damages exceeding $40 billion nationally during the 2022 floods alone, while agricultural temperatures regularly surpass 50°C and annual precipitation remains among Punjab's lowest at 125-137mm (Government of Pakistan, 2023; IWMI, 2024). Research conducted by the International Water Management Institute in 2024 documented 500 climate migrants within Rahim Yar Khan, representing the first systematic district-level documentation of climate displacement in Pakistan (IWMI, 2024). With 65% of the district's 5.6 million residents employed in agriculture and 44% of children under five stunted due to malnutrition, the region exemplifies the intersection of climate extremes, agricultural dependency, and human vulnerability that threatens Pakistan's food security (World Food Programme, 2019; Pakistan Bureau of Statistics, 2023).

The 2022 Pakistan floods marked the country's worst disaster since independence, with Rahim Yar Khan among 94 calamity-hit districts where European Union satellite imagery documented catastrophic flooding between August and September affecting hundreds of thousands of acres during critical crop development phases (Nature, 2023). Cotton production declined 33% in 2024, forcing Pakistan to import over $2 billion worth of cotton, while citrus production fell 35% and wheat yields face projected declines of 5-25% due to heat stress during winter growing seasons (Anadolu Agency, 2024; Researchers Links, 2023). The 2023 Sutlej River flooding brought additional destruction with water flows reaching 278,000 cusecs, inundating 22 villages specifically within Rahim Yar Khan where individual farmers reported losses of 1.8 million PKR across 12 hectares while standing crops over hundreds of acres were destroyed (Arab News, 2024; Dunya News, 2024). Climate data reveals accelerating agricultural stress with summer temperatures now regularly exceeding 50°C, representing part of a +0.9°C warming trend over 45 years regionally, while the 2024-2025 winter season recorded 69% less rainfall than normal (Pakistan Meteorological Department, 2024; Pakistan Bureau of Statistics, 2023).

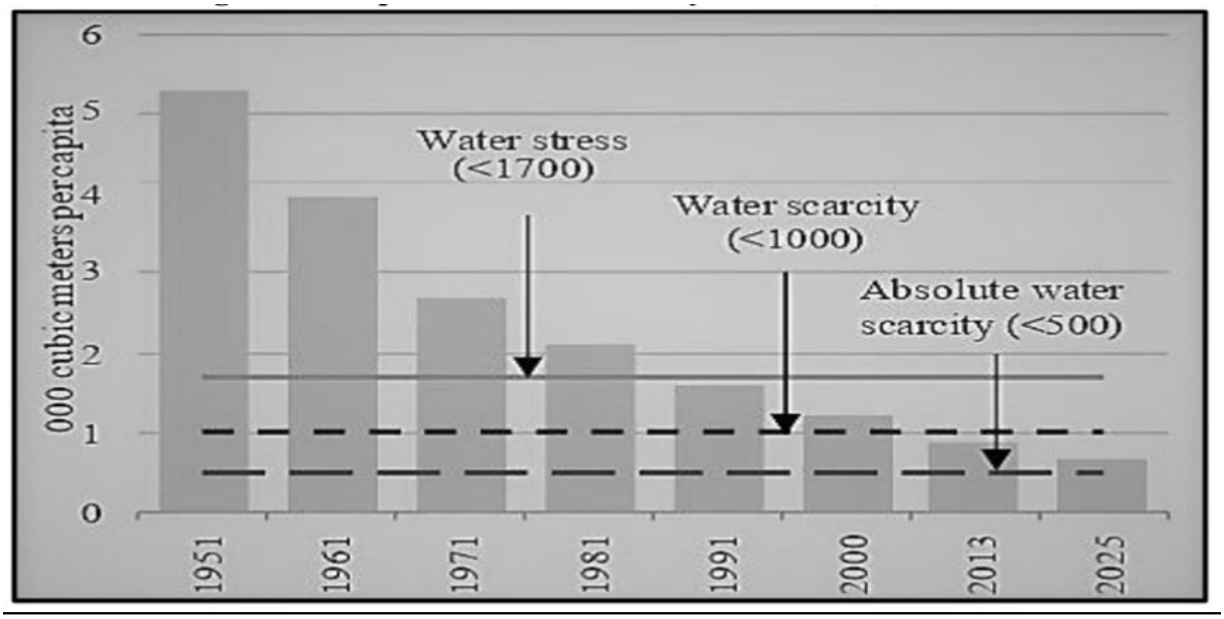

Figure 1 National Impact of Climate Change in Pakistan

Rahim Yar Khan functions simultaneously as a source of climate migrants and host community for displaced populations from neighboring Sindh and Balochistan provinces, with Pakistan expecting approximately 2 million people to become climate migrants by 2050 (IWMI, 2024; ReliefWeb, 2024). Primary migration destinations include Karachi, Lahore, and Faisalabad, where 63% of migrants moved to urban areas and 56% relocated to provincial or federal capitals, with land and asset-poor populations most likely to migrate following heat stress events and crop failures (ReliefWeb, 2024). Food security challenges compound migration pressures as Pakistan ranks 109th out of 127 countries in the 2024 Global Hunger Index, with 58% of Pakistanis food insecure and 82% unable to afford a healthy diet (World Food Programme, 2024). Current flood response capabilities include Punjab Rescue 1122's 15,000 personnel and 800 rescue boats across the province, but critical limitations undermine effectiveness with weak disaster management and inefficient governance structures identified in multiple assessments (National Disaster Management Authority, 2023; Pakistan Demographic and Health Survey, 2021).

The In-Service Agricultural Training Institute in Rahim Yar Khan, established in 1952-53, serves nine cotton zone districts with 3-year Diploma in Agricultural Sciences programs affiliated with the University of Agriculture Faisalabad, providing capacity building for agricultural extension workers across crop management, pest control, soil fertility, and water management (Punjab Government, 2024). Recent initiatives demonstrate growing climate focus through the FAO Digital Village Initiative in Ahmad Pur Lama providing tablet-based agricultural education targeting rural women, while Fatima Fertilizer's Sarsabz Tabeer Program has trained 300+ women in farm processing skills through six

completed training sessions (FAO, 2023; ProPakistani, 2023). World Bank climate resilience programs have invested $2 billion+ since 2020, including the Pakistan Disaster Risk Management Program and the Green Climate Fund's Recharge Pakistan project providing $35 million for ecosystem-based adaptation across the Indus Basin (World Bank, 2024; Green Climate Fund, 2023). However, scalability remains a critical challenge as most successful interventions operate at pilot scale with insufficient resources for expansion, while drip irrigation pilot projects achieve 30% yield increases with 50% water savings but remain limited in scope relative to the district's 475,000 acres under cotton and 600,000 acres under sugarcane cultivation (Nature, 2020).

Purpose of Project

The purpose of this project is technical training, resource provision, disaster response training, and sustainable farming practices. The focus is towards the following key thematic areas:

- Agriculture Technical Training
- Flood Response Training
- Food Package Distribution

The purpose is towards supporting the most vulnerable population in the area with a focus on women and youth. This project is focused on poverty alleviation with non-political and non-religious intentions and aims

Objectives of Project.

The objectives of this project are as follows:

- To provide agriculture technical training to 1000 farmers in Feroza, Rahim Yar Khan with a focus on sustainable technologies and improved agricultural practices
- To provide flood response training to 1000 members of the community and 50 key stakeholders
- To distribute 1000 plants in the area to support the local population and decrease the impact.

Methodology:

The target population has already been identified and is composed of a population of 35000 individuals. It will involve both agricultural technical training and flood response training. The synopsis of the training regime is provided as under:

Agricultural technical training:

- Adapting AI into the agricultural supply chain system
- Resource management for small scale farming

- Livestock farming options – milk farming, chick farming, home gardens
- Foundational Rights of Farmers and Legal Protections of Farmers and Small Landlords
- Supply Chain Management
- Water and Sanitation Best Practices
- Interdisciplinary Research and Innovation Adaptation

Flood Response Training

- Rainwater Harvesting
- Flood Embankment System
- Flood Warning Mechanism
- Sustainable House Development
- Climate Change Awareness
- Mitigation against Climate Change impact

The Agricultural Technical Training focuses on adapting local community knowledge about the land and the canals as well as rivers and weather patterns, as well as resources already available for the community, and then immersing them with capacity building technical training, as well as workshops which focus on reasonable practices which are within the capacity of the local population – the tools are immediately accessible and can be adapted by the most illiterate and unskilled person in the community. These technical skill training workshops and in-field practicals will be undertaken alongside the flood response training.

The Agricultural Training will also adapt AI related sensor installation and adaptation on the areas where agriculture developments are undertaken. The purpose is to provide farmers with a capacity to respond more efficiently to changes in their environment that ensure that their crops are responding exactly to the weather and also to ensure that the crops are maintained and safe from the impacts of climate change whether it be droughts, floods, soil impact, and diseases. These innovations are developed with sustainability in mind and will involve the training of farmers and key stakeholders so that the materials can be replaced when required, and repaired when required, as the project focuses on locally sourced and locally managed system implementation.

These innovations will happen alongside food package distribution in the area as this project proposal is estimated to be undertaken in the winter months, a season in which there is limited agricultural output and allows for the population to have preparation undertaken before the start of the summer and, ergo, before the start of the summer monsoon. The food kits will focus on children to ensure that they have sustainable nutrition and will focus on the most vulnerable population which suffered the hardest as a consequence of their houses being washed away, literally, by the floods which devastated Pakistan during the 2025 floods.

The project time-frame is 2 years: 1 year for the implementation of the project, with 1 year being for the sustainability and monitoring-and-evaluation phase of the project. This project is estimated to support the livelihood of at least 1000 individuals, and will ensure that the population benefits from this endeavor significantly.

Provided are the indicator sheets and Gantt Chart of the project.

Indicator Sheet

Objectives	Indicators	Outputs	Outcomes	Measurement Tools
To provide agriculture technical training to 1000 farmers in Feroza, Rahim Yar Khan with a focus on sustainable technologies and improved agricultural practices	# trained farmers # workshops completed % area made sustainable $ saving of trained farmer % engagement of youth in agricultural technical training	% increase in output from intervention % increase women engagement # farms utilizing modern practices # farms made sustainable	At least 50 farms made sustainable through the intervention of modern technologies At least 50 productive farms having sustainable practices and effective climate change adaptations	Workshop Reports Farm Output Pre- and Post-Intervention Focal Group Discussions Soil Quality Testing Crop Quality Testing
To provide flood response training to 1000 members of the community and 50 key stakeholders	# stakeholders involved # workshops conducted # flood warning systems implemented % area coverage of flood warning system # trained first responders	% area coverage in flood response # flood responders trained # safety nets established and maintained # key stakeholders made responsible	50 key stakeholders with significant roles to ensure maintenance of flood response 1000 primary responders 5 flood warning systems	Workshop Reports Flood Warning Systems Infrastructure Map List of Primary Responders and Key Stakeholders Map of Flood Warning Systems
·To distribute 1000 plants in the area to support the local population and decrease the impact.	# plants distributed # individuals designated to maintain the plants	% water retention % soil quality improvement # plants surviving past one year	At least 200 plants suriving past the first year and maintained for long term sustainable farming.	Distribution Report Food Package Recipient Details Distribution Locations

Gantt Chart

The Implementation Phase will be conducted as follows

Objectives	Project Action	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
To provide agriculture technical training to 1000 farmers in Feroza, Rahim Yar Khan with a focus on sustainable technologies and improved agricultural practices	Pre-KAP Survey	X											
	Farmer and Key Stakeholder Selection	X	X										
	Opening Ceremony		X										
	Workshop		X	X	X								
	Field Implementation					X	X	X					
	Output Measurement								X	X	X		
	Post-KAP Survey											X	X
	Monitoring and Evaluation	X	X	X	X	X	X	X	X	X	X	X	X
To provide flood response training to 1000 members of the community and 50 key stakeholders	Pre-KAP Survey	X											
	First Responders and Key Stakeholder Selection	X	X										
	Workshops		X										
	Establishment of Flood Response System		X	X	X	X	X	X					
	Area Coverage		X	X	X	X	X	X					
	Flood Response System Practical								X	X	X		
	Post-KAP Survey											X	X
	Monitoring and	X	X	X	X	X	X	X	X	X	X	X	X

	Evaluation												
To distribute 1000 plants in the area to support the local population and decrease the impact.	Identification of suitable plants for area	X											
	Procurement and Dispatch of Plant Seeds to Locationt	X											
	Distribution in area	X	X	X									
	Report				X								
	Monitoring and Evaluation	X	X	X	X								

The Sustainability Plan will be implemented after one year and will involve incorporating key stakeholders and interdisciplinary committees that are focused and will also involve the following:

- MOUs with universities, key government entities, local community leaders
- Reporting Mechanisms
- Anonymous Feedback Mechanisms for prompt implementation of safety systems

NHSD will take full responsibility of this intervention to ensure that the population is provided significant support during this endeavor.

Project Monitoring and Evaluation

The Monitoring and Evaluation of this project will utilize indicators from both the workshops as well as the food package distribution in the area. Because this project is focused to be undertaken in Feroza, the indicators for each aspect are focused on key points already highlighted in the indicator sheet on top of which are the following:

- Women Empowerment
- Youth Skill Development
- Development of Generational Wealth
- Sustainable Farming Practices
- Long-term correlation with SDGs of Education and Health
- Increased self-sufficiency in villages
- Decreased burden in urban settings
- Increased home-grown interdisciplinary research practices

The monitoring and evaluation aspect of this project will be undertaken by the following key ways:

- Independent Monitoring and Evaluation Team
- Third Party Audit
- Pre- and Post-KAP Survey with Baseline Survey as a control for independent comparisons
- Success Stories
- Qualitative Assessment through Focal Group Discussions, Independent interviews, and Detailed Independent Feedback Mechanisms

These ensure transparency, research innovation analysis and provide an opportunity for developing documents which can function as influential and provide an opportunity for international comparisons. These will be ongoing for the duration of the project.

Sustainability Plan

The sustainability of the project is ensured by involving the local community key stakeholders – landlords, market management, additional commissioners, local religious leaders, and union workers. The sustainability plan involves the deliberate, monitored, and smooth transition of the project locations from NHSD over to the elected and approved stakeholders to whom the responsibility of the management of this project will be handed over. This project will also involve the key stakeholders in ensuring that women empowerment is integrated into the overall project implementation strategy after project completion through MOUs, as well as deliberate agreements with the local communities so that they have roles to play towards the sustainable implementation of this project.

Women empowerment is important because whilst the majority of the work being done in this project will have men being involved, women can play a key role as well – literature regarding agricultural practices has shown the involvement of women in agriculture and that this practice is also common in major developing countries of South East Asia, Africa and South America. By

deliberately ensuring that women empowerment is integrated into the sustainability plan this project guarantees that women have a source of livelihood, that they can influence the best practices from the training done during the project are carried forward, that the community has a reasonable practice which benefits youth and furthermore, that the gender gap divide is also decreased. This is extremely important – climate change can only be sustainably contained if the gender gap is decreased to such an extent that agricultural practices are conducted by the family as a unit.

However, this will be undertaken whilst acknowledging the social, cultural, and sociodemographic practices of the community. This project also will be conducted a non-political and non-religious lens, ensuring that the project is independent of any prejudice and bias. This is important in the context of climate change because the factors which are likely to impact the local population does not care about ethnicity, gender, religion, or political identity – it impacts all, independent of these factors.

NHSD has a sustainability manual which is utilized for the purpose of ensuring that our projects continue to function independently.

Finances

The total budget which is requested from our donors is USD15000. Taking into account the conversion rate of 2025 (1 USD = 280 PKR), the budget is projected as under. The projected budget also takes into account NHSD contribution of the project.

Total Project Budget: USD 15,000
NHSD Contribution (10%): USD 1,500
Donor Funding Required: USD 13,500
Exchange Rate: 1 USD = 280 PKR
Project Duration: 24 months (12 months implementation + 12 months sustainability)

Project Budget Summary Sheet

Component	**Amount (USD)**	**Percentage**
Agricultural Training	5,400	36%
Flood Response Training	3,200	21%
Food Package Distribution	2,500	17%
Monitoring & Evaluation	1,500	10%
Administration (3%)	450	3%
Remaining for Sustainability Activities	**1,950**	**13%**
TOTAL	**15,000**	**100%**

A. AGRICULTURAL TECHNICAL TRAINING (USD 5,400 / PKR 1,512,000)

Item	Quantity	Unit Cost (USD)	Total (USD)	Justification
Training Materials & Resources			**1,200**	
Training manuals (Urdu/local language)	1,000 copies	0.80	800	Essential for farmer reference and knowledge retention
Demonstration kits (seeds, tools)	50 kits	6.00	300	Hands-on learning materials for 50 demonstration plots
Visual aids and charts	20 sets	5.00	100	Climate-smart agriculture visual training aids
Training Delivery & AI Systems			**2,800**	
Master trainer fees (agricultural experts)	3 trainers × 4 months	200.00	2,400	Certified agricultural extension specialists
AI delivery system training	50 sessions	8.00	400	Technology-enhanced agricultural education platforms
Modern Agricultural Tools & AI Systems			**1,400**	
Modern agricultural tools for distribution	100 tool sets	12.00	1,200	Technology-enhanced implements to support immediate implementation
Transportation for field visits	4 months	50.00	200	Vehicle costs for trainer mobility across target area

B. FLOOD RESPONSE TRAINING (USD 3,200 / PKR 896,000)

Item	Quantity	Unit Cost (USD)	Total (USD)	Justification
Training Materials			**800**	
Emergency response manuals	1,050 copies	0.60	630	Training materials for 1,000 community members + 50 stakeholders
First aid supplies for training	20 kits	8.50	170	Basic first aid training materials
Early Warning System Setup			**1,600**	
Community warning equipment	5 units	200.00	1,000	Solar-powered sirens and communication devices
Signage and evacuation route markers	25 signs	24.00	600	Flood evacuation route identification and marking
Training Implementation			**800**	
Disaster response trainer fees	2 trainers × 2 months	300.00	600	Certified disaster management specialists
Community drill organization	10 drills	20.00	200	Community-wide evacuation and response practice sessions

C. PLANT DISTRIBUTION (USD 2,500 / PKR 700,000)

Item	Quantity	Unit Cost (USD)	Total (USD)	Justification
Plant Materials & Soil Enhancement			2,000	
Native tree saplings (drought-resistant varieties)	600 saplings	1.00	600	Climate-adapted species suitable for local soil and water conditions
Fruit tree saplings (citrus, pomegranate)	400 saplings	1.50	600	Income-generating plants adapted to regional water availability
Soil amendment packages (compost, fertilizer)	500 packages	0.80	400	Soil enrichment materials to improve water retention and plant survival
Water retention materials (mulch, hydrogel)	500 packages	0.80	400	Water conservation materials essential for plant establishment in arid conditions
Distribution & Implementation			500	
Transportation for plant delivery	5 distribution events	60.00	300	Vehicle rental for sapling delivery to target households across Feroza
Planting tools and maintenance supplies	200 tool sets	1.00	200	Basic gardening tools and maintenance materials for sustainable plant care

D. MONITORING & EVALUATION (USD 1,500 / PKR 420,000)

Item	**Quantity**	**Unit Cost (USD)**	**Total (USD)**	**Justification**
Pre/Post KAP surveys	2,100 surveys	0.50	1,050	Baseline and endline knowledge, attitude, practice assessments
Data collection tools	10 tablets	30.00	300	Electronic data collection for accurate monitoring
External evaluator fees	1 evaluator × 2 months	75.00	150	Independent assessment of project outcomes

E. ADMINISTRATION (3% Of **Implementation Budget)**

Item	**Total (USD)**	**Justification**
Administrative costs	450	3% of Year 1 budget (USD 15,000 × 3%) - office expenses, communications, documentation

Total for Project Implementation: USD 13,050 / PKR 3,654,000

FUNDING BREAKDOWN

Source	Amount (USD)	Amount (PKR)	Percentage
Donor Contribution	13,500	3,780,000	90%
NHSD Contribution	1,500	420,000	10%
TOTAL PROJECT BUDGET	**15,000**	**4,200,000**	**100%**

Note: All costs calculated at exchange rate of 1 USD = 280 PKR as of 2025. Administrative costs maintained at 3% of total budget as specified. NHSD's 10% contribution (USD 1,500) will be allocated proportionally across all budget categories through in-kind contributions, volunteer time, and organizational overhead absorption. Remaining funds of USD 1,950 allocated for sustainability activities as needed during implementation phase.

Funding can be provided to NHSD in one of two ways:

- Direct Bank Transfer after signing of MOU
- Fund Transfer to NHSD Implementation Partners GlobalGiving, Benevity or Myriad USA.

Additional Information:

Alongside this project proposal, NHSD is submitting the following for your kind consideration:

- Registration Certificate (Original and Current)
- Latest Audit
- Paksitan Center of Philanthropy Certificate
- Profile
- Baseline Survey Feroza
- Organogram
- Bank Maintenance Letter
- Previous MOU with Economic Affairs Division
- Testimonials

References

- Anadolu Agency. (2024). Pakistan's agriculture feels heat of winter drought. Anadolu Agency. Retrieved from https://www.aa.com.tr/en/asia-pacific/pakistan-s-agriculture-feels-heat-of-winter-drought/3472846
- Arab News. (2024). Pakistan issues flood alert for River Sutlej over possible water discharge from India. Arab News Pakistan. Retrieved from https://www.arabnews.pk/node/2611433/pakistan
- CGSpace. (2024). Digital ecosystems and migration responses to climate extremes: Case study from Rahim Yar Khan District, Punjab in Pakistan. CGIAR CGSpace. Retrieved from https://cgspace.cgiar.org/items/2f9dc853-9cbb-4ba2-8fb5-6c5658fdcff3

- Dunya News. (2024). 22 villages inundated as water level continues to rise in River Sutlej. Dunya News. Retrieved from https://dunyanews.tv/en/Pakistan/506185-villages-inundated-water-level-rise-River-Sutlej
- Food and Agriculture Organization. (2023). Green Climate Fund approves major FAO climate change resilience project in Pakistan. FAO Family Farming. Retrieved from https://www.fao.org/family-farming/detail/en/c/1201646/
- Government of Pakistan. (2023). Pakistan 2023 Census: Population and housing census. Pakistan Bureau of Statistics.
- Green Climate Fund. (2023). Pakistan country profile: Climate finance and adaptation initiatives. Green Climate Fund. Retrieved from https://www.greenclimate.fund/countries/pakistan
- International Water Management Institute. (2024). The hidden crisis of disaster displacement and host community struggles in rural areas of Pakistan. IWMI News. Retrieved from https://www.iwmi.org/news/the-hidden-crisis-of-disaster-displacement-and-host-community-struggles-in-rural-areas-of-pakistan/
- National Disaster Management Authority. (2023). Annual natural disaster assessment report 2023. Government of Pakistan.
- Nature. (2023). A framework for multi-sensor satellite data to evaluate crop production losses: The case study of 2022 Pakistan floods. Scientific Reports, 13, Article 3537. https://doi.org/10.1038/s41598-023-30347-y
- Nature. (2020). Public institutions' capacities regarding climate change adaptation and risk management support in agriculture: The case of Punjab Province, Pakistan. Scientific Reports, 10, Article 14111. https://doi.org/10.1038/s41598-020-71011-z
- Pakistan Bureau of Statistics. (2023). Pakistan demographic and health survey 2017-18. National Institute of Population Studies.
- Pakistan Demographic and Health Survey. (2021). Key indicators report: Pakistan demographic and health survey 2017-18. National Institute of Population Studies.
- Pakistan Meteorological Department. (2024). Climate data bulletin: Temperature and precipitation trends 2024. Government of Pakistan.
- ProPakistani. (2023). Rewarding female resilience through farm processing. ProPakistani. Retrieved from https://propakistani.pk/2023/09/25/rewarding-female-resilience-through-farm-processing/
- Punjab Government. (2024). Agricultural Training Institute Rahim Yar Khan. District Government Rahim Yar Khan. Retrieved from https://rykhan.punjab.gov.pk/agricultural_training
- ReliefWeb. (2024). Navigating climate change, disasters and displacement in Pakistan: A case study of Rahim Yar Khan. ReliefWeb. Retrieved from https://reliefweb.int/report/pakistan/navigating-climate-change-disasters-and-displacement-pakistan-case-study-rahim-yar-khan
- Researchers Links. (2023). Impacts of spatio-temporal changes in rainfall and temperature on different crops in selected districts of Punjab, Pakistan. Researchers Links, 14(1), 1514. Retrieved from https://researcherslinks.com/current-issues/Impacts-of-Spatio-Temporal-Changes-in-Rainfall-and-Temperature-on-Different-Crops-in-Selected-Districts-of-Punjab-Pakistan/14/1/1514/html

- World Bank. (2024). Pakistan: Two new World Bank projects to support the digital economy and increase resilience to floods. World Bank Press Release. Retrieved from https://www.worldbank.org/en/news/press-release/2024/03/21/pakistan-two-new-world-bank-projects-to-support-the-digital-economy-and-increase-resilience-to-floods
- World Food Programme. (2019). Pakistan food security and vulnerability analysis. World Food Programme Pakistan.
- World Food Programme. (2024). Pakistan country profile: Food security assessment. World Food Programme. Retrieved from https://www.wfp.org/countries/pakistan

Photo Gallery

Flood Relief Campaign Banners

Campaign Promotion

Distributions


AQUAFINA
Rotary Club of Isla
Account No
NHSD


Rotary
Account No 0010026771610017
IBAN NUMBER PK83ABPA0010026771610017


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FLOOD RELIEF ACTIVITIES