



Staff and Volunteers of Pakistan Red Crescent Society during beneficiary registration in flood affected areas. Photo Credit: Media & Communication Department, Pakistan Red Crescent Society (PRCS)

sEAP No: EAP2023PK01	Operation No: MDRPK024	Total Budget CHF 200,000	Readiness: CHF 45,857	
			Prepositioning: CHF 1,978	
			Early Action: CHF 152,165	
People targeted: 14,820 (CVA) 37,315 (EW)	sEAP approved: 24/07/2023	sEAP timeframe: 2 Years	sEAP lead time: 3-5 days	Operational timeframe: 3 months
Prioritized geographical areas:				
Kabul River basin of Khyber Pakhtunkhwa Province.				

RISK ANALYSIS AND EARLY ACTION SELECTION

Prioritized hazard and its historical impact.

Pakistan is highly exposed to floods, which occur regularly in the country because of the summer weather system, which develops in the Bay of Bengal during the monsoon months of July and September. Depressions originate from the Bay of Bengal and pass over lower central India, enter Pakistan, and then move south-north

toward Kashmir. According to the Climate Risk Index 2021, Pakistan ranks 8th in terms of countries most affected by extreme weather conditions, and climate risk continues to increase.¹ This is due to its geophysical conditions, extreme climatic variations, and high degrees of exposure of the population to climatic shocks.

Pakistan has experienced around two floods every year between 1970 and 2015. According to the Federal Flood Commission,² major floods have affected 616,558 square kilometres of area, caused 13,460 human casualties, and caused losses worth approximately Rs 38 billion to the national economy till 2021.

In 2022 heavy rains combined with riverine, urban, and flash flooding have led to an unprecedented climate-induced disaster in Pakistan. Affecting approximately 33 million people, with severe impacts resulting in 1,739 deaths, 12,867 injured, 2,288,481 damaged houses, 13,115 km damaged roads, 439 collapsed bridges, and 1,164,270 perished cattle.³ Overall damages and economic losses are estimated at over USD 30 billion, and reconstruction needs over USD 16 billion.

During monsoon season flooding occurs throughout the country. This simplified EAP targets flood-prone areas along Kabul River basin of Khyber Pakhtunkhwa province of Pakistan. The Kabul River basin was chosen because it is categorised as frequently flooded with different magnitudes during monsoon (category A) in KP province. Moreover, the river channel frequently floods because the water overflows at Warsak dam during monsoon which impacts populated districts such as Peshawar, Nowshera and Charsadda.

River Kabul experienced record floods in 2010, passing the previous historic recorded flow of 1929 that caused serious destruction in District Charsadda, Nowshera and adjoining areas. The devastating floods 2010 caused 233 deaths, 100,892 houses destroyed 143,222 households affected in districts Charsadda and Nowshera.⁴ There was a low-level flood in 2013 along Kabul River basin affecting 75 people and in 2015, there was a low-level flood along the Kabul river basin causing three death.⁵ In the floods of 2022, 2 people died (because of timely evacuation), 1,466 houses damaged, 98,414 households affected, and 800 livestock perished in districts Charsadda and Nowshera. According to the impact assessment done for this SEAP, loss of life and livelihoods occur during high to very high flooding events in the target district. Medium to high floods also caused damage to crop and agricultural land in low-lying areas of the target districts.

There is no effective mechanism in place to support the communities to take anticipatory actions, preparing for and protecting their lives, livelihoods, shelters, and livestock. These communities suffer frequently due to pre-existing vulnerabilities including settlements along riverbanks, fragile construction of houses, and poor socioeconomic indicators. Considering climate change trends and the higher susceptibility of Pakistan to climate-induced flooding, these vulnerable communities will continue experiencing serious disruptions in future.

The Federal Flood Commission (FFC) also recommended initiating the simplified EAP along Kabul River basin due to the exposure of communities, frequent flooding and low coping capacity to deal with the floods. This also couples with PRCS previous working experience in these communities with regard to early warning dissemination and relief distribution.

Explain which risks have been selected for this protocol and why

The communities along Kabul River in Nowshera and Charsadda districts are highly exposed to flood risks and more susceptible to the adverse impacts of floods including loss of lives, injuries, loss of livelihood (damage to crops, livestock, small business, limiting daily labouring), damage to water and sanitation infrastructure, the spread of water-borne diseases, other health issues, temporary displacement, and associated challenges. These communities are vulnerable due to a number of factors including⁶ fragile construction of houses and

¹ German Watch 2021, Climate Risk Index

² Federal Flood Commission Pakistan, Annual Report 2021.

³ PAKISTAN: 2022 FLOODS RESPONSE PLAN Situation Overview

⁴ Provincial Disaster Management Authority Khyber Pakhtunkhwa, Monsoon Contingency Plan, 2012

⁵ Disaster History 1947 – 2016, Department of Anthropology, Quaid-e-Azam University, Islamabad

⁶ Impact assessment for development of this SEAP

infrastructure, limited access to information⁷ (on early warning, evacuation routes and sites etc.) poor socioeconomic indicators, and cultural issues. The vulnerable groups at high risks of these impacts are the elderly, women, children, people suffering from chronic diseases, people with disabilities (PWDs) and low-income households.

The major source of livelihood (farmers, daily labourers, and livestock) is affected by the floods due to the low-lying areas and proximity to the river. The loss of widespread crop, damage to livestock and other livelihood sources presents significant economic and food security repercussions. Low socio-economic conditions and the absence of proper social security mechanisms compel these marginalised households to have negative coping mechanisms for their subsistence during evacuation or/and displacement periods.

This simplified EAP will focus on protecting lives, reducing the loss of livestock and belongings by dissemination of early warning messages and disbursement of unconditional multipurpose cash to the most vulnerable. These two early actions were selected out of various potential early actions during the validation workshop of early actions with key stakeholders in light of early action selection criteria.

Describe the selected early actions and explain how they will address the risks and lead to the intended outcome.

Lives and livelihood are prioritised impacts identified by these vulnerable communities during risk/impact assessment exercises due to inadequate access to early warning information and poor socio-economic indicators. This simplified EAP will focus on protecting lives and minimising negative coping mechanisms. Therefore, two prioritised actions were identified through a consultative process with local communities and relevant stakeholders 1) strengthening early warning dissemination mechanisms and 2) provision of unconditional multipurpose cash grants for timely evacuation and to prevent the loss of livestock and belongings during the evacuation/displacement period. These prioritised actions are not only in line with PRCS strategic priorities, but PRCS also has the capacity and experience to implement these actions during emergency responses.

A cash feasibility survey was conducted with relevant stakeholders in the target area. For more details on the cash feasibility and cash intervention in general, please see **Annex C**.

Lastly, the cash transfer can cover hygiene and other critical health items if they are needed by the beneficiary. It was further decided not to focus on the impacts of damage to water and sanitation infrastructure, the spread of waterborne diseases, and other health issues, explicitly because the budget for the sEAP is not sufficient to cover all the needs of exposed communities and due to the short lead time, it would not be feasible to address those impacts.

EARLY ACTION INTERVENTION

<p>Overall objective of the intervention</p>	<p>The proposed early action interventions aim to minimise the impact of riverine flooding along the Kabul River basin by providing timely early warning, accompanied by multipurpose cash to save lives, prevent loss of livestock and belongings, and reduce the risks prior to the occurrence of flood events.</p>
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⁷ Women/children receive information and assistance from male members, therefore dependency for their survival reliant on male members of their families.

<p>Potential geographical high-risk areas that the simplified EAP would target</p>	<p>According to the National Disaster Response Plan 2019, District Nowshera and Charsadda⁸ are highly exposed to riverine floods along the Kabul River Basin.⁹ Khyber Pakhtunkhwa province has a complex river system with many smaller rivers converging into the Indus River. The major rivers that cross the region are Kabul, Swat, Pajkora, Kurram, Gomal and Zhob River. To determine flood levels, historical patterns of monsoon floods in the province have been reviewed with FFC and where FFC has categorised rivers into three broad categories. Category A, to which Kabul River belongs, for instance, reflects those rivers which receive floods of different magnitude frequently (every year). Please see Annex H for a map of the flood categorization.</p> <p>Kabul River is mostly flooded during the monsoon and districts Charsadda and Nowshera are highly vulnerable to these riverine floods. Furthermore, the Provincial Disaster Management Authorities contingency plan shows that Charsadda and Nowshera fall under the high ranking for riverine floods with high frequency.¹⁰ Flood Frequency Curve of Kabul River (Nowshera) - based on daily flow data from 1982 to 2022 is attached as Annex A.</p> <p>The Kabul River basin was selected based on the high frequency of floods and its humanitarian impact on the communities. The 2010, 2013, 2015 and 2022 floods caused serious consequences and caused loss of human lives, infrastructure, crops, livestock, housing, and other livelihoods of local communities (see also chapter on historical impact above). Majorly, due to inefficient early warning dissemination mechanisms or in some cases no evacuation despite evacuation warnings by the relevant authorities, people of these districts suffer greatly. PRCS has previously worked and has a presence in communities along Kabul River basin and enjoys cordial relations with district administrations which enables PRCS to take early actions well in time.</p>
<p>Who will be assisted through this operation and what criteria will be used for their selection?</p>	<p>The intervention will seek to target 37,315 people with the dissemination of early warning including 2,470 (14,820 people¹¹) most vulnerable households with unconditional multipurpose cash grants who have a high risk to riverine flooding in Kabul River basin. The following most vulnerable groups will be targeted with early actions in this simplified EAP.</p> <p>The communities along Kabul River basin will be selected when the trigger is met in consultation with the district disaster management authorities. The Additional Deputy Commissioner Relief of each district is responsible for monitoring risks, early warning and evacuation of at-risk communities. In discussions with him PRCS will determine the target areas for the early actions.</p> <p>2,470 verified households registered with Benazir Income Support Program (BISP), a social security program by the government for households with low socio-economic indicators and other marginalisation indicators for multipurpose unconditional cash grants.</p>

⁸ These two districts were also part of target districts where PRCS (with support from partners) provided flood relief to vulnerable population in 2022 floods.

⁹ National Disaster Response Plan 2019, National Disaster Management Authority

¹⁰ Monsoon Contingency Plan 2022, Provincial Disaster Management Authority, Khyber Pakhtunkhwa (KP)

¹¹ Average household size is 6 in target districts.

	<p>Currently, BISP provides three types of cash grants to eradicate the poverty and uplift marginalized and underprivileged sections of society. This includes Benazir Kafaalat¹², Benazir Waseela-e-Taleem¹³ and Benazir Nashonuma¹⁴ programs. The BISP's overall objective is to eradicate poverty and uplift marginalized and underprivileged sections of society.</p> <p>The PRCS cash grant has slightly different, short-term emergency objectives whereby the cash transfers support vulnerable households for 15 days during the evacuation process in meeting their basic needs and protect livelihood and assets. The cash will encourage people to evacuate by covering evacuation costs and also by giving them the means to cope at the evacuation site (which could motivate the decision to evacuate or not i.e. some people may not evacuate if they do not have the resources to move with their livestock and put themselves at risk). This EAP cash grant, when given to BISP recipients, is intended as a “top-up” (vertical expansion) to enable them to cope with the forecasted shock. The PRCS cash transfer will be PKR 15,000. PRCS criteria for the selection of the beneficiaries are:</p> <ul style="list-style-type: none"> • Women, pregnant or lactating women, women headed households, widows. • Old aged (60 and above) • People with disabilities and chronic illness • HHs with children • Daily wagers with low-income residing along Kabul riverbank
	<p>The beneficiaries will be selected based on risks, severity, and impact of the impending disaster. The primary target will be the most vulnerable community group members and priority will be given to the above-mentioned groups. PRCS will collect the details of vulnerable households from the social registry of the Benazir Income Support Program (BISP) and will further verify the list through its trained volunteers and ensure that the registration is inclusive of all vulnerable households in high-risk areas. PRCS staff and volunteers will coordinate with the village committees for the verification process and finalise the beneficiaries’ registration sheets in consultation with the village committees. This process will be done on a yearly basis before every monsoon season. Communities along the Kabul River basin received cash-based intervention through the government and different INGOs recently, therefore the FSPs have a strong capacity to disburse the cash within two days lead time and communities confirmed that they will be able to withdraw the cash and use it within 24-48 hours.</p>
<p>Trigger(s) statement</p>	<p>Currently, the Flood Forecasting Division (FFD) of Pakistan Meteorological Department (PMD) issues three kinds of flood bulletins regularly; Bulletin A provides a qualitative forecast of river level including Kabul River with a maximum of 3 days lead time, Bulletin B provides a quantitative forecast of river levels for the next 24 hours, Bulletin C is the weekly river catchment forecast providing qualitative information on the river level with maximum of 5 days lead time. Please find examples of these three bulletins in annex D, E, F.</p>

¹² <https://www.bisp.gov.pk/Detail/YTgzNjKxM2YtN2ViMCO0MjA5LWI0MDMtNzM4ZWJmMGVINzc5>

¹³ <https://www.bisp.gov.pk/Detail/YzNIY2Q2ZGYtNjIwZS00MjNlWFhMmEtZGM5NWNkMjZmMjQ3>

¹⁴ <https://www.bisp.gov.pk/Detail/YjAyMjI5ZDQ0MTVhOC00YTNlWE5NjctMjA1NTYwN2JhOTc3>

	<p>Apart from these three kinds of regular flood bulletins, FFD/PMD also issues weather advisories & significant flood warnings as and when required to all concerned, including PRCS. These bulletins are based on the forecast outcomes of hydrological models; Flood Early Warning System (FEWS) and Integrated Flood Analysis System (INDUS-IFAS) which takes into account the observed discharges and rainfall in the upstream area to predict the flood level range at downstream station. During 2022 August floods, the IFAS-Model output was correlating well with observed discharges in Kabul Nowshera, with accuracy of 91 % at 48h lead time.</p> <p>Trigger (3-5 days lead time):</p> <p>The activation trigger will be reached when flood bulletin C (Weekly River's Catchments Forecast) and significant flood warning/advisories from FFD/PMD predicts very high to exceptionally high flooding with river flow above 150,000 cusecs at Nowshera station of Kabul River with a lead time ranging from 3-5 days.</p> <p>Following the activation trigger with 3-5 days lead time, PRCS will start the process of dissemination of early warning messages to the target population along Kabul River basin. The early warning messages will be in accordance with the government, based on the flood categorization and significant flood advisories (alert messages) and bulletins (evacuation messages). The activation trigger with a 3-5-days lead time will also trigger the identification of the most vulnerable communities for AA intervention (in consultation with respective provincial and district management authorities), followed by validation/registration of beneficiaries for the cash assistance including funds disbursement to the financial service providers (FSPs) and their retailers.</p> <p>However, the distribution of cash to registered beneficiaries will be implemented within 24hr - 48hr lead time when the flood bulletin A (Qualitative Flood Forecast) or flood bulletin B (Quantitative flood forecast) from FFD/PMD confirms a very high-level flooding with flow above 150,000 cusecs at Nowshera station of Kabul River within the next 48hrs. This means a stop mechanism is put in place with regards to distribution of cash in case the flood bulletin A or B from FFD/PMD do not confirm the aforementioned very high flooding thresholds in Kabul River.</p>
<p>Trigger threshold justification</p>	<p>The proposed trigger mechanism makes use of existing flood forecast information provided by the Flood Forecasting Division (FFD) of Pakistan Meteorological Department (PMD) - the authorized designated national entity to provide flood-related warnings in Pakistan. The triggers are based on the flood flow forecast at Nowshera station of Kabul River. Please see Annex G for the forecast skill. A very high flood category with river flow above 150,000 cusecs has been proposed as the threshold for this SEAP. In the last 10 years, Kabul River surpassed the aforementioned very high flood thresholds in three instances: 2013, 2015, and 2022. The year 2022 was particularly significant in terms of humanitarian impact (2 people died and 201 injured, 1,466 houses damaged, 98,414 households affected, and 800 livestock perished) as Kabul River stayed above this very high flood threshold for more than 5 days recording a maximum flow of 318,500 cusec.</p>

	<p>During June 2013, Kabul River stayed above this flood threshold for two consecutive days reaching a maximum flow of 156,700 cusec that inundated several houses and roads nearby the riverbanks. The development of the trigger threshold has been done & agreed in consultation with the Pakistan Meteorological Department (PMD), Flood Forecasting Division (FFD), Provincial Irrigation Department and Federal Flood Commission and Red Cross Red Crescent Climate Centre (RCCC). PRCS will be closely coordinating with the Flood Forecasting Division (FFD) of PMD for the flood forecasts, bulletins, and warning advisories.</p> <p>Apart from the regular flood forecast information available in the public domain, a separate line of communication will be established between PRCS and FFD/PMD to exchange specific flood forecasts of Kabul River for the monitoring and confirmation of the trigger. In this regard, FFD (focal point - Forecasting Section) will share the specific forecast with the PRCS FbF Deputy Director through email, WhatsApp and/or fax. The PRCS FbF Deputy Director will further share it with the management at national and provincial levels to activate the trigger and to take the pre-agreed actions. A letter of understanding with Pakistan Meteorological Department will soon be signed and FFD Lahore shall then develop a dedicated trigger monitoring web interface for PRCS containing more specific and quantitative flood forecasts of Kabul river so that PRCS don't have to wait for the regular flood bulletin (generic) to confirm its trigger for the SEAP activation.</p>
<p>Next steps - For National Societies that intend to develop a full EAP (Optional)</p>	<p>PRCS will further refine the triggers & thresholds, including the detailed assessment of forecast skills and accuracy, and the selected early actions based on the lesson learnt from the activation of the simplified EAP. Also, the possibility to use Global Flood Awareness System (GLOFAS) for Kabul River to increase lead time shall be explored. All these will be incorporated into a full EAP to be developed in due course with support from the German Red Cross (GRC), RCCC, and the International Federation of Red Cross and Red Crescent Societies (IFRC). In addition, PRCS will also explore the possibility of a nationwide EAP covering the entire Indus River basin.</p>

PLANNED OPERATIONS

	<p>Multi-purpose Cash</p>	<p>Budget</p>	<p>CHF 151,538</p>	
		<p>No. people targeted</p>	<p>= 14,820 (6 persons per HH x 2,470HH)</p>	
<p>Indicator:</p>	<p><i># of HHs reached with multi-purpose cash grant</i></p> <p><i># of volunteers and staff trained on the simplified EAP intervention</i></p>	<p>Target:</p>	<p>One time</p>	

Readiness activities:	1. Signing of framework/service agreement with selected financial service providers (Telenor Easypaisa, UBL Omni and HBL Konnect) covering readiness and disbursement modalities. ¹⁵
	2. Data collection from BISP and verification before every monsoon season (disaggregated on SADDD, sex, age, disability disaggregated data).
	3. Sign data sharing agreement with BISP and annual exchange with BISP to ensure smooth access.
	4. Review mobile wallet status for verified households and reactivate / open mobile wallet as required.
	5. Preparation of service order and pre-approvals from PRCS management along with debit instructions and beneficiaries list to Financial Service Providers (FSPs).
	6. Training and refresher for staff and volunteers ¹⁶ on beneficiary targeting, registration, cash distribution process and quality standards like PGI, Code of Conduct, CEA etc.
	7. Annual update of Rapid Market Assessment in target districts.
	8. Annual review of Minimum Expenditure Basket.
Prepositioning activities:	
Prioritized Early Actions:	1. Disbursement of unconditional multi-purpose cash grant to most vulnerable households of Kabul River basin 24- 48 hours before the flooding to cover the period of 15 days
	2. Post distribution monitoring/Satisfaction Survey.

	Risk Reduction, climate adaptation and Recovery	Budget	CHF 11,927	
		No. people targeted	37,440 (37,315 +125)	
Indicator:	<i>% of target population who receive early warning information on the Anticipated floods.</i> <i># of teams formed and trained for dissemination of early warning messages</i>	Target:	70% of target population 125 people training on early warning messages	
Readiness activities:	1. Annual Review of agreements on early warning dissemination mechanism with Provincial Disaster Management Authority (PDMA) and relevant stakeholders including District Authorities, PMD etc.			

¹⁵ Signing of framework agreement with potential service providers including Telenor Easypaisa, UBL Omni, and HBL Konnect is in process.

¹⁶ All the volunteer engaged on implementation of this EAP will be those who are given insurance from National Society and/or IFRC blanket insurance as part of regular national society capacity development.

	<ol style="list-style-type: none"> 2. Development and pre-agreement on early warning messages with relevant authorities with clear triggers for these messages. 3. Meetings with Union Council administration for formation of Early Warning Dissemination teams in each vulnerable village in targeted areas for dissemination of EW Messages. 4. Development of early warning dissemination mechanism. 5. Capacity building of community early warning dissemination team. 6. Agreement with cellular companies for dissemination of early warning messages. 7. Drill/Simulation Exercises on Early Warning and Cash Disbursement. 8. Coordination and agreement with key stakeholders on clear role and responsibilities for early warning dissemination. 9. Development and printing of IEC Material on agreed early warning mechanism. 10. Awareness raising sessions on early warning dissemination mechanism in target communities. 11. Develop key messages around rationale for early action, false alarms and missed activations.
Prepositioning activities:	<ol style="list-style-type: none"> 1. Procurement of megaphones for dissemination of early warning messages.
Prioritized Early Actions:	<ol style="list-style-type: none"> 1. Flood early warning dissemination through local volunteers, announcement in mosques and short mobile messages (3-5 days).

	<p><u>Community Engagement and Accountability</u></p>	Budget	CHF 9,813	
		People targeted		
Indicator:	<i>% of HHs find the cash transfer amount and early warning messages adequate for meeting immediate needs.</i>	Target:	70% of interviewed HHs	
Readiness activities:		<ol style="list-style-type: none"> 1. Develop a feedback mechanism to collect feedbacks, complaints, and suggestions, based on the community preferred and trusted communication channels. 2. Strengthen existing toll-free numbers at NHQ and Provincial Level by providing the paid volunteers and subscription for toll free lines. 		

	<ol style="list-style-type: none"> 3. Setup or update referral pathways for sensitive complaints management. 4. Identify key community members to work with trained Red Cross volunteers to ensure protection risks are mitigated especially in overcrowded settings. 5. Development of IEC Material of CVA/FCM etc. 6. Development of tools for beneficiary registration, beneficiaries' satisfaction survey, exit survey and post distribution monitoring.
Prepositioning activities:	<ol style="list-style-type: none"> 1. Procurement of mobile hotlines and handsets.
Prioritized Early Actions:	<ol style="list-style-type: none"> 1. Establishment of FCM desk at distribution points to collect feedback, complaints, and suggestions. Validate with communities the beneficiary selection criteria. 2. Early mobilization of trained staff and volunteers to provide information and assistance to the target population related to the cash intervention and distribution of CEA IEC material.

ENABLING APPROACHES

	Secretariat services	Budget	CHF 8,064	
		No. People targeted	N/A	
Indicator:	<i>Funds for the cash-based intervention are transferred to PRCS to enable the completion of the early actions within the lead time.</i>	Target:	Yes (Regular)	
Readiness activities:	<ol style="list-style-type: none"> 1. Provide technical support in attainment of data collection tools (Red Rose for beneficiaries' registration, PDM Tool). 2. Support with the annual readiness activities and reporting. 3. Strengthen movement coordination to bring technical and operational complementarity and enhancing cooperation with external stakeholders. 			
Prepositioning activities:				
Prioritized Early Actions:	<ol style="list-style-type: none"> 1. Process the funds for the early actions. 2. Support PRCS with the cash distribution and all other early actions. 			

	National Society Strengthening	Budget	CHF 18,657	
		People targeted	N/A	
Indicator:	<i># of meetings with PRCS staff and key partners</i>	Target:	9 meetings	
Readiness activities:		<ol style="list-style-type: none"> 1. Regular meetings of PRCS/IFRC/GRC on EAP Implementation. 2. Conduct annual pre-monsoon coordination meetings on the simplified EAP with key partners/stakeholders on the EAP intervention to be ready for the activation. 		
Prepositioning activities:				
Prioritized Early Actions:		<ol style="list-style-type: none"> 1. Emergency coordination meeting with staff and volunteers on trigger activation. 2. Activation of EoC and 24/7 supervised risk monitoring. 3. Lesson learnt Workshop. 		

CONDITIONS TO DELIVER THE EARLY ACTION

<p>Experience and/or capacity to implement the early actions.</p>	<p>PRCS is officially recognized by the Government of Pakistan as a voluntary relief organization and an auxiliary to the public authorities. Its exclusive humanitarian mission is to assist the most vulnerable people and protect the dignity of the suffering humanity during war, conflict, and natural and man-made disasters. In peacetime it also carries out Disaster Management (Preparedness, Response/Relief & Risk Reduction), Health Care, Youth Activities, Emergency Volunteers Corps, and Trainings at national and international levels.</p> <p>PRCS has extensive experience and a strong operational capacity in implementing relief operations related to natural hazards. As such PRCS is in a strong position to implement FbF early actions, drawing on its existing institutional structures and administrative processes.</p> <p>Partnership agreements with key emergency response partners such as WFP, UNDP, NDMA, and NDRMF in the country are formalized and shared between branches and headquarters. In this way, PRCS positions itself in the right direction so when it comes to disaster response, PRCS enjoys a cordial relationship with key response partners.</p> <p>Well-developed emergency preparedness and response system, stock availability and warehouse: The Pakistan Red Crescent Society has disaster preparedness stocks available to provide immediate relief to some 20,000 affected households. To respond to health emergencies, PRCS has a well-developed emergency preparedness and response system with a dedicated Health department responsible for providing management and coordination of health emergencies, providing Emergency Medical Services, following international norms and standards, articulating evidence-based policy options for disaster risk</p>
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management for health, monitoring disease outbreaks and assessing the performance of health system of PRCS branches during emergencies.

In addition, PRCS has a trained pool of staff and volunteers for emergency needs assessment, distribution and post-distribution monitoring, communication, fundraising and resource mobilization, situation reporting, financial reporting and coordination. Pre-positioning exists fully at the national and partially at the provincial level.

Expertise in Cash and Voucher Assistance (CVA): PRCS has a CVA preparedness plan, properly budgeted and resourced with clear activities and outputs, based on analysis and discussion with key stakeholders. Moreover, the CVA preparedness plan is tailored to address NS opportunities and barriers to be ready to provide scalable emergency CVA. Four service level agreements with financial service providers are in place with: Telenor Easypaisa, Jazz Cash, UBL Omni and Pakistan Post Office, plus framework agreements with Telenor Easypaisa, UBL Omni and HBL Connect will be in place by end of March 2023. This step will further capacitate PRCS to disburse cash within a few hours (see **Annex B**: PRCS CVA related experience).

- Standalone CVA department functional at NHQ
- 3 PECT, more than 50 CVA specific NDRTs and pool of trained volunteers on CVA
- Trained CVA and RAM, Red Rose, ODK HR at NHQ and 7 Provincial branches
- Signed service level agreement with 4 Potential FSP
- Signing of framework agreement with 3 FSP in progress
- Developed Cash SoPs and guidelines
- Efficient and quick financial system for cash flow
- Cash amount Rs. 284 million disbursed to 21,752 HH in 2022
- Cash is an integral part of the contingency plan and DM policy
- Active member of the CPWG and national cash working group

Innovation in early warning: The NS makes use of conventional as well as new technologies appropriate for their context for sending alert messages (e.g.: text, Twitter, email, cell phone), and messaging is tested on diverse audiences to ensure understanding.

Cordial relationship with key stakeholders: PRCS has developed humanitarian scenarios for each high-risk area in the country and contingency plans are aligned with those of the public authorities. In addition, partnership agreements with key emergency response partners such as WFP, UNDP, NDMA and NDMRF in the country are formalized and shared between branches and headquarters.

Community Engagement and Accountability (CEA): PRCS has partially adopted the Community Engagement and Accountability mechanism. Community engagement and accountability (CEA) is a way of working that recognizes and values community members as equal partners. It requires that the opinions of communities are heard and are used in the design of the programme and guide its implementation. At PRCS, a logbook of feedback from the community is maintained and also shared with management for decision-making.

Trained staff and volunteers for emergency response: PRCS conducts regular staff capacity building training. PRCS has 629 RDRT/DDRT/CDRT, 77 NDRT, 133 RAM/CTP and 1724 Muhafiz force volunteers that can be deployed within a short time. In addition, PRCS has an extensive volunteer network of more than 50,000 volunteers

	<p>who play a vital role in the distribution and other humanitarian operations. The pool will be further strengthened in the context of early actions.</p> <p>PRCS works in close coordination with PDMA, local administration and other disaster management bodies for emergency response and preparedness activities. Capacity-building training is provided to local volunteers to enhance their capacity while keeping the local administration included. This training has many positive impacts for capacity and awareness building of communities to make the communities resilient. PRCS has experience and professional staff with the capacity to properly deliver capacity-building training.</p> <p>PRCS has the largest pool of volunteers consisting of 50,000 available at the grass-root level. Mostly they are well trained in risk management and early response to any emergency.</p>
<p>Red Cross Red Crescent Movement partners, Governmental / other agencies consulted/involved on this simplified EAP</p>	<p>The document has been drafted in consultation with relevant government agencies including Pakistan Meteorological Department & Flood Forecasting Division, Federal Flood Commission, Provincial Disaster Management Authority- KP, Provincial Irrigation Department- KP, District Authorities- KP, in country IFRC team, German Red Cross HQ and in country team, ICRC, Red Cross Red Crescent Climate Centre.</p> <p>Pakistan Meteorological Department (PMD) and Flood Forecasting Division (FFD) provided their support in determining the flood forecasting availability at the intervention area and data collection for development of the menu of forecast. PMD and FFD remained instrumental in the development of triggers and selection of early actions. FFD also supported the development of forecasted inundation maps for intervention areas and provided forecasting of river flow. These agencies will provide forecasts through bulletin A (Qualitative Flood Forecast), B (Quantitative Flood Forecast) and C (Weekly River's Catchment Forecast) as requirements to observe triggers. These agencies will also support the monitoring of thresholds and triggers during the monitoring window of EAP implementation as the only forecasting source.</p> <p>The Federal Flood Commission (FFC) supported PRCS in selection of river basins and provided historical impact data caused by floods in targeted areas. FFC also supported PRCS to understand flood events in Pakistan, in particular the events 2010 & 2022, river flows and return periods. FFC remained instrumental in determining the intensity and scale of past flood events at Kabul River which further enabled the team to develop flood impact levels and loss & damage data and also provide guidance for formulating the trigger statement. During the implementation phase, FFC's role will be to provide technical support.</p> <p>Provincial Irrigation Department (PID) shared real-time data of river flow and discharge on tributaries which channel floods on Kabul River. PRCS collected at least 17 years of past river flow data to identify flood peaks on Kabul River. PID's main functions include river survey and hydrological data, operation and maintenance of barrages, operation and maintenance of canals, distribution of water, installation of tube wells, flood protection works, drainage schemes, land reclamation, construction of small dams, irrigation research, administration of canal and drainage works and assessment of water charges. PID has also supported the development of triggers and selection of early actions. With regard</p>

<p>to the EAP Implementation, PID will support in providing real time river flow and flood level data in the intervention area.</p> <p>Provincial Disaster Management Authority and District authorities are the implementing, coordinating and monitoring body for disaster management in Pakistan at the provincial level and have supported the EAP in identification of high-risk communities to flooding at Kabul River. They have also supported the selection of target districts/communities and risk analysis exercises. These authorities also supported the development of triggers and the selection of early actions. For the EAP implementation, these agencies will be an integral part of the EAP readiness and early actions.</p> <p>The German Red Cross (both HQ and in country team) supported the entire process of the EAP development, from the review of tool development for impact assessment to the trigger and early actions.</p> <p>Red Cross Red Crescent Climate Centre provided their technical expertise in the development of trigger statements, selection of early actions and reviewing EAP documents.</p> <p>In country teams of IFRC, (DRM department) have provided their support in reviewing the Draft EAP. IFRC in country team will further support PRCS for the validation process and technical and financial support during the implementation of the EAP. To mitigate the delays in transfer of funds for early actions, PRCS will use its own funds to carry out the early action activities outlined in the plan, and subsequently, IFRC Country Delegation will reimburse the amount to the national society. This is a mutual understanding between IFRC and PRCS.</p> <p>International Committee of Red Cross:</p> <p>ICRC is present in the country and provides support to PRCS in Disaster Management, first aid, RFL, Community-based Risk Education (CBRE), and Communication. PRCS is regularly sharing and updating the ICRC on ongoing operations.</p>
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BUDGET



Early Action Protocol Summary EAP2023PK01 - Pakistan Red Crescent Society

Riverine Floods

<u>Operating Budget</u>	Readiness	Pre-Pos Stock	Early Action	TOTAL
Planned Operations	19,156	1,978	146,896	168,030
Shelter and Basic Household Items	0	0	0	0
Livelihoods	0	0	0	0
Multi-purpose Cash	9,207	0	145,374	154,581
Health	0	0	0	0
Water, Sanitation & Hygiene	0	0	0	0
Protection, Gender and Inclusion	0	0	0	0
Education	0	0	0	0
Migration	0	0	0	0
Risk Red., Climate Adapt. and Recovery	9,721	685	1,521	11,927
Community Engagement and Accountability	228	1,293	0	1,521
Environmental Sustainability	0	0	0	0
Enabling Approaches	26,701	0	5,269	31,970
Coordination and Partnerships	0	0	0	0
Secretariat Services	8,064	0	0	8,064
National Society Strengthening	18,638	0	5,269	23,907
TOTAL BUDGET	45,857	1,978	152,165	200,000

all amounts in Swiss Francs (CHF)

Contact information:

For further information, specifically related to this simplified EAP please contact:

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- Mr. Abaidullah Khan, Secretary General; phone: +92 304 1030 290; email: sg@prcs.org.pk
- Deputy Director – FbF; email: dd.fbf@prcs.org.pk

In the IFRC Pakistan Country Delegation:

- Mr Peter Ophoff, Head of Country Delegation; email: peter.ophoff@ifrc.org,
- Mr. Manzoor Ali, Programme Coordinator; email: manzoor.ALI@ifrc.org

In the IFRC Asia Pacific Regional Office, Kuala Lumpur:

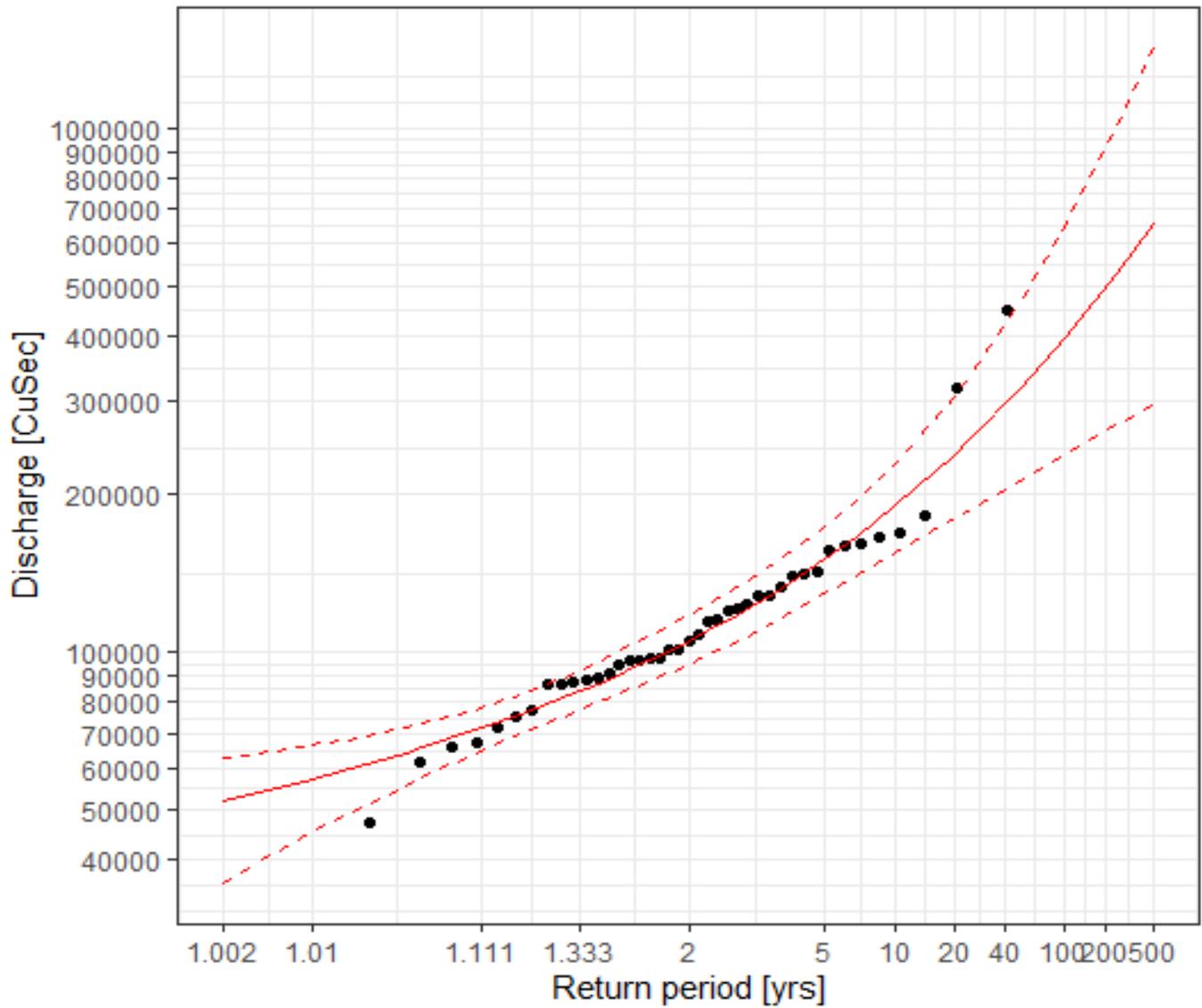
- Raymond Etienne ZINGG; Regional Coordinator, Anticipatory Action; email: raymond.zingg@ifrc.org

In IFRC Geneva:

- Melanie Ogle; FbF Capacity Strengthening Snr Officer; email: melanie.ogle@ifrc.org,

Annexes - "A":

Part A - Flood Frequency Curve of Kabul River (Nowshera) - based on daily flow data from 1982 to 2022



Part B - Flood Threshold Chart – Rivers/Nullahs in Khyber Pakhtunkhwa (17-01-2022)

HYDROLOGY IRRIGATION DIVISION PESHAWAR
FLOOD THRESHOLD CHART- RIVERS / NULLAHS IN KHYBER PAKHTUNKHWA (17-01-2022)

S.No	Name of River/ Khwar /Nullah	Normal Level (cfs)	Low Flood (cfs)	Med Flood (cfs)	High Flood (cfs)	Very High Flood (cfs)	Highest Flood Recorded (cfs)	Highest Flood Date
1	Indus River at Tarbela (Inflow)	≥0<250000	≥250000<375000	≥375000<500000	≥500000<650000	≥650000	650000	30-07-10
2	Indus River at Tarbela (outflow)	≥0<250000	≥250000<375000	≥375000<500000	≥500000<650000	≥650000	650000	30-07-10
3	Indus River at Attock Khairabad	≥0<225000	≥225000<375000	≥375000<500000	≥500000<650000	≥650000	994600	30-07-10
4	Kabul River at Warsak	≥0<40000	≥40000<60000	≥60000<100000	≥100000<150000	≥150000	159000	Jun-05
5	Kabul River at Nowshera	≥0<60000	≥60000<80000	≥80000<100000	≥100000<120000	≥120000	450000	29-07-10
6	Swat River at Munda H/W	≥0<40000	≥40000<60000	≥60000<80000	≥80000<150000	≥150000	355000	29-07-10
7	Swat River at Chakdara	≥0<30000	≥30000<50000	≥50000<75000	≥75000<100000	≥100000	360000	30-07-10
8	Khaili River Charsadda Road	≥0<40000	≥40000<60000	≥60000<80000	≥80000<120000	≥120000	360000	30-07-10
9	Kurram River at Kurram. Ghari H/W	≥0<30000	≥30000<50000	≥50000<80000	≥80000<100000	≥100000	200000	28-07-10
10	Takhta Baig Khwar at Khyber Agency	≥0<7500	≥7500<15000	≥15000<30000	≥30000<80000	≥80000	123000	04-08-08
11	Kabul River at Adezai Bridge	≥0<30000	≥30000<50000	≥50000<70000	≥70000<80000	≥80000	80700	30-07-10
12	Swat River at Khwazakhela	≥0<30000	≥30000<45000	≥45000<60000	≥60000<80000	≥80000	175546	29-07-10
13	Kunhar River at Balakot	≥0<20000	≥20000<40000	≥40000<60000	≥60000<80000	≥80000	92000	Aug-92
14	Kalpani Nullah at Chowki Risalpur	≥0<20000	≥20000<40000	≥40000<50000	≥50000<65000	≥65000	118604	30-7-10
15	Panjkora River (DIR)	≥0<20000	≥20000<30000	≥30000<50000	≥50000<75000	≥75000	130936	24-07-10
16	Kalpani Nullah at Mardan City	≥0<20000	≥20000<30000	≥30000<40000	≥40000<60000	≥60000	67074	7/1/2010
17	Siran River at Daryal	≥0<15000	≥15000<30000	≥30000<40000	≥40000<50000	≥50000	55181	8-1992
18	Badri Nullah at Swabi	≥0<7500	≥7500<15000	≥7500<35000	≥35000<50000	≥50000	44450	30-07-10
19	Dour River at Rajoya	≥0<10000	≥10000<25000	≥10000<35000	≥35000<70000	≥70000	75970	8-1992
20	Haro River at Jabori	≥0<10000	≥10000<20000	≥10000<35000	≥35000<55000	≥55000	82876	8-1992

Annex – “B”:

PRCS CVA Background, Preparedness and Experience:

The people of Pakistan are exposed to diverse natural, health and human induced disasters including floods, earthquakes, droughts, cyclones, conflicts, locusts and COVID - 19. During the last 10 years, approximately 42.6 million people were affected by floods resulting in loss of life and economical damage of 9.5 million USD to the economy of Pakistan. The flood emergency in July-August of 2022 has caused widespread fatalities, killing livestock, damaging and destroying public and private infrastructure across the country.

To address the grave needs in the aftermath of any disaster as its auxiliary role to the government, PRCS have implemented a number of cash-based programs with support of movement partners. The journey with cash-based programs started in 2005.

Pakistan Red Crescent Society is using cash-based programs to substitute or complement various types of in-kind assistance such as food provision and shelter, and to support relief and recovery of affected populations.

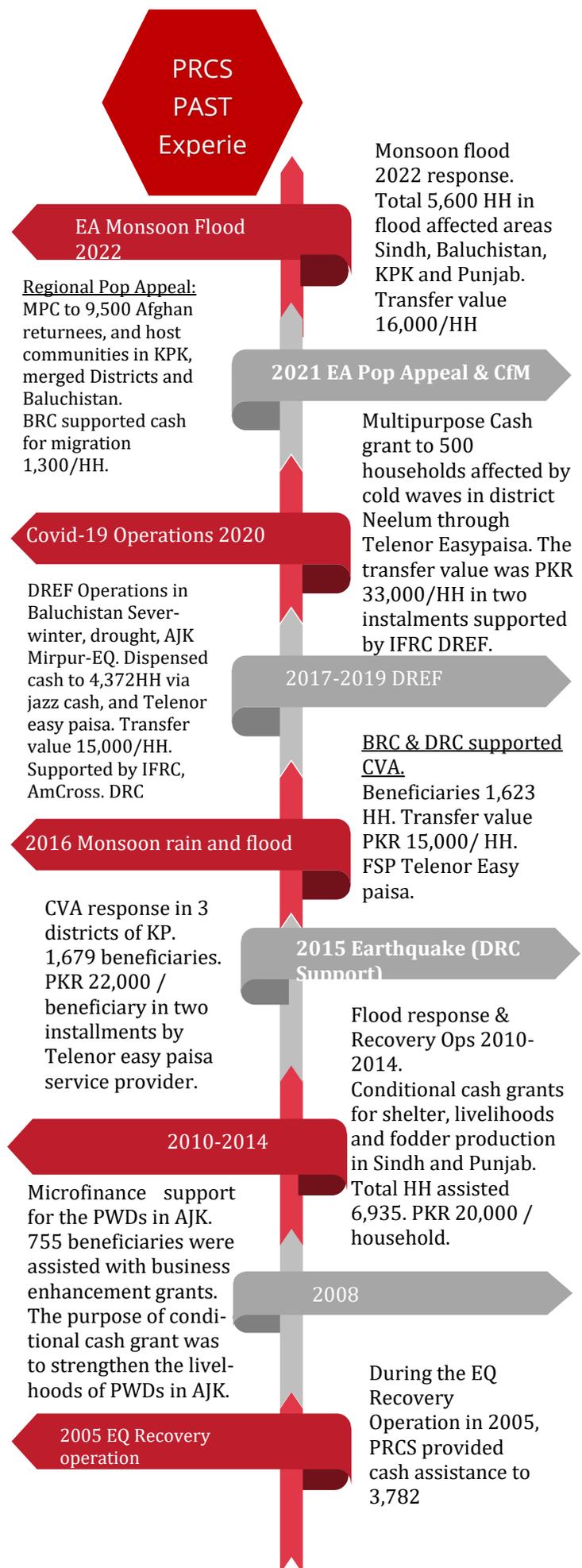
PRCS is planning to work closely with relevant government and non-government stakeholder for the need to prepare for predictable disasters. Therefore, PRCS is planning to pilot CVA as an early response action to provide assistance to households exposed to riverine flooding in the districts Nowshera and Charsadda.

PRCS CVA Objectives:

- To provide timely support and effective response.
- To preserve people’s dignity and provide more flexibility & choice.
- To contribute towards the recovery of markets and revitalization of local economies.

PRCS CVA Capacity and Preparedness:

- Standalone CVA department functional at NHQ
- Active member of the CPWG and national cash working group
- 3 PECT, more than 50 CVA specific NDRTs and pool of trained volunteers on CVA
- Trained CVA and RAM, Red Rose, ODK HR at NHQ and 7 Provincial branches
- Signed service level agreement with 4 Potential FSP
- Signing of framework agreement with 3 FSP in progress
- Developed Cash SoPs and guidelines
- Cash is integral part of the contingency plan and DM policy
- Efficient and quick financial system for cash flow
- Cash amount Rs. 284 million disbursed to 21,752 HH in 2022



Annex – “C”: Cash Feasibility and Overview of Cash Early Action

Cash and Voucher Assistance (CVA) can contribute to meet immediate survival needs and reduce the loss of lives of livestock as owners of these livestock were not encouraged to bring their livestock during evacuation either to government designated evacuation places or to host families. Evacuation places are not far away from the communities on average its 2 -5 km. School buildings and sports complex are designated as evacuation sites by the district government but people with livestock prefer to move to higher ground like motorways, mountains, and neighboring villages. CVA supports them in arranging the food and fodder for households and animals during the evacuation period. CVA also supports the daily wagers in target communities as a compensation for the loss of their daily wage during evacuation and flooding days. The target communities will be able to utilize the cash within 2 days lead time after receiving it from financial service providers (FSPs).

During KII and FDGs it was found, that vulnerable communities (including women, children, and Afghan refugees¹⁷) have received CVA both from government (BISP) and INGOs during recent flooding with the help of FSPs and their network of retailers in Charsadda and Nowshera. The communities have financial literacy to withdraw the cash both from retailers as well as from bank ATM. High-risk villages such as Awan Abad and Agra Payan in Charsadda and Muhib Banda and camp korona in Nowshera can access the retailer/bank within 1-5km radius. Moreover, the market assessment revealed that the essential food, non-food, and transport services required to facilitate evacuation of people, belongings, and livestock, are available in flood prone locations and the communities would have access to different markets close to safer places. However, due to low social economic indicators, people do not have the buying capacity, therefore, the action enables the target population to meet their immediate survival needs.

Target	2,470 most vulnerable households living in low laying areas along the Kabul River basin in Charsadda and Nowshera districts.
Transfer value & duration	<p>The target groups will receive the following unconditional multipurpose cash transfer within 24-48 hours before the flooding event at Kabul River:</p> <ul style="list-style-type: none"> • The head of each household as selected by BISP enrollment methods will receive the unconditional multipurpose cash grant, many of whom will be women due to the targeting criteria below. • Each target population will receive a one-off transfer of PKR 15, 000 (CHF 53 approx.) • The transfer value is meant to cover a period of 15 days. • The MEB is calculated based on the recommendation (Multipurpose Cash Grant) from Cash Working Group. Recommended amount for multipurpose cash grant was approx. PKR 30,000/- for the period of one month, which is adopted to PKR 15,000 for two weeks i.e. average evacuation period (stay at evacuation point/host families before and during flooding) in target areas. • The transfer value is based on the 2023 prices and has been agreed with the Cash Working Group. • 15-day duration covers cost of food and fodder for people and livestock however, the transportation arrangement for people and livestock will be managed by district/provincial disaster management authorities and district administrations. <p>A contingency budget of 5% of the cash transfer amount is reserved to account for inflation. If unspent, this will be used to cover more households.</p>
Who	During the Readiness phase, beneficiary registration and verification will be conducted before every monsoon season based on the BISP National Socio- Economic Registry (NSER) to identify the most vulnerable people in target communities.

¹⁷Afghan Refugees are assisted through Cash Based Intervention. Their Smart Proof of Registration Card has been linked with HBL Connect and they are getting assistance as per their family size.

	<p>Criteria</p> <ul style="list-style-type: none"> - Women, pregnant or lactating women, women headed households, widows - Old aged (60 and above) - People with disabilities and chronic illness - HHs with children - Daily wager with low income residing along Kabul River bank <p>While registration of the beneficiary's priority will be given to the women, elderly people and people with disabilities.</p>
Transfer mechanism	<ul style="list-style-type: none"> - Mobile money transfer via Telenor Easy Paisa (FSP) depending on the coverage of retailers in the target area. - UBL Omni in case Telenor easy paisa has network issues. <p>The mobile wallet will be opened (Readiness Phase) of all selected beneficiaries and amount will be transferred to their mobile wallet (2 days lead time).</p>
When / Trigger	<p>When FFD/PMD issues a forecast a very high-level flooding (>150,000 cusec) at Nowshera station of Kabul River with a lead time of 48 hours. This will trigger the implementation of cash-based intervention.</p>
Where	<p>The target communities will be selected and confirmed together with district disaster authorities once the trigger is confirmed.</p>



**GOVERNMENT OF PAKISTAN
PAKISTAN METEOROLOGICAL DEPARTMENT
FLOOD FORECASTING DIVISION
46-JAIL ROAD LAHORE-54000**



BULLETIN No. C-069/22

Dated: 22nd August, 2022
Time: 11:00 hours (PST)

**SUBJECT: -WEEKLY SIGNIFICANT WEATHER OUTLOOK FOR RIVERS
CATCHMENTS (23rd August, 2022 to 29th August, 2022)**

➤ **RAINFALL OUTLOOK:**

A Fresh Strong Monsoon activity is likely over Sindh, Balochistan & South Punjab along with Peshawar, Kohat, Bannu, DI Khan & Sargodha Divisions along with upper catchments of Rivers Kabul and Indus from 23rd to 26th August, 2022.

➤ **FLOOD SITUATION IN MAJOR RIVERS:**

- **VERY HIGH TO EXCEPTIONALLY HIGH** Level Flooding is likely in the Hill Torrents of DG Khan Division and in Rivers/Nullahs of Eastern Balochistan from 23rd to 26th August, 2022.

Flows from Hill Torrents of DG Khan Division may rise Taunsa flows up to HIGH to VERY HIGH flood level from 23rd to 26th August, 2022. Urban Flooding is also expected in Sindh during the same period.

High to very High-level flooding is expected in River Kabul at Nowshera and Tributaries of Rivers Kabul & Indus.

Note: This forecast is updated on daily basis.

**(SAHIBZAD KHAN)
DIRECTOR GENERAL**

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Annex -"E": Bulletin A



GOVERNMENT OF PAKISTAN
PAKISTAN METEOROLOGICAL DEPARTMENT
FLOOD FORECASTING DIVISION
46-JAIL ROAD LAHORE-54000



BULLETIN No. A-069/22

Dated: 22nd August, 2022
Time: - 11:00 hours (PST)

1. President Secretariat, Islamabad.
2. PM House, Islamabad.
3. Federal Minister for Water Resources, Islamabad.
4. Governor (All Provinces).
5. Chairman NDMA, Islamabad.
6. Chief Minister (All Provinces).
7. PM Secretariat, Islamabad.
8. Secretary, Aviation Division, Islamabad.
9. Secretary, Ministry for Water Resources, Islamabad.
10. Secretary, Ministry of Information, Islamabad.
11. Chairman NHA, Islamabad.
12. Chief Secretary (All Provinces).
13. PDMA'S (D.G'S, All Provinces & AJK).
14. Chairman, Federal Flood Commission, Islamabad.
15. Chairman, Indus River System Authority, Islamabad.
16. Chairman, PCRWR, Islamabad.
17. The Secretary General, Red Crescent, Islamabad.
18. Secretary, Irrigation Department, (All Provinces).
19. D.G. Engineers, Eng. Directorate GHQ, Rawalpindi.
20. Pakistan Commissioner for Indus Waters (PCIW), Islamabad.
21. Chief Engineer, Mangla/Tarbela/Chashma.
22. Chief Engineer, Irrigation (All Provinces).
23. Chief Engineer, (All Barrages).
24. Chief Engineer, C.D.O. (Muzaffarabad).
25. Commissioner for Indus Waters, Lahore.
26. All other concerned.

SUBJECT: RIVERS SITUATION AND QUALITATIVE FLOOD/WEATHER FORECAST

I: HYDROLOGICAL SITUATION (AT 0600 PST):

River Indus at Taunsa & River Kabul at Nowshera are in High flood level. River Indus at Guddu & Sukkur is in Medium Flood Level and at Tarbela, Kalabagh, Chashma & Kotri is in low flood level.

(ALERT)

- **VERY HIGH TO EXCEPTIONALLY HIGH Level Flooding is likely in the Hill Torrents of DG Khan Division and in Rivers/Nullahs of Eastern Balochistan from 23rd to 26th August, 2022.**
- **Flows from Hill Torrents of DG Khan Division may rise Taunsa flows up to HIGH to VERY HIGH flood level from 23rd to 26th August, 2022. Urban Flooding is also expected in Sindh during the same period.**
- **High to very High-level flooding is expected in River Kabul at Nowshera and Tributaries of Rivers Kabul & Indus.**

II: METEOROLOGICAL FEATURES:

- a) Yesterday's Monsoon low-pressure area over Jacobabad today lies over Southeast Sindh.
- b) Yesterday's trough of westerly wave over Northern parts of the country has moved away Eastwards and a fresh trough of westerly wave lies over Northern parts of Iran.
- c) Yesterday's **DEPRESSION** over Northwest Chattisgarh and adjoining Madhya Pradesh moved further West-Northwestwards and today lies over Northern Madhya Pradesh and adjoining areas. It is likely to move further in the same direction.
- d) Seasonal low lies over west Balochistan.
- e) Moderate Moist currents from Arabian Sea are penetrating Sindh, Balochistan & Southern Punjab up to 3000 feet.

III: WEATHER FORECAST FOR NEXT 24-HOURS:

Scattered thunderstorm/rain of moderate intensity with isolated heavy falls is expected over **upper & southeast SINDH, EASTERN BALOCHISTAN** along with upper catchments of Rivers Kabul & Indus and Peshawar, Kohat, Bannu, DI Khan, DG Khan, Multan & Bahawalpur Divisions. Isolated thunderstorm/rain of light to moderate intensity is expected over rest of the country.

IV: WEATHER OUTLOOK:

(ALERT): A Fresh Strong Monsoon activity is likely over Sindh, Balochistan & South Punjab along with Peshawar, Kohat, Bannu, DI Khan & Sargodha Divisions along with upper catchments of Rivers Kabul and Indus from 23rd to 26th August, 2022.

V: RIVERS CATCHMENTS RAINFALL RECORDED (MM) DURING LAST 24 HRS (UPTO 0800 PST):

Indus:	Larkana=157, Khairpur=99, Moin-Jo-Daro=98, Sukkur=67, Rohri=59, DG Khan [Zain Sanghar=56, Fort Munro =26, Airport=18, Marri=01 & Vehova=Trace], Jacobabad=46, Hunza & Padidan=40(each), Barkhan=24, Kalam & Shaheed Benazirabad=20(each), Dir=16, Bagrote=10, Mirkhani=09, Gupis=08, Bhandu Wala & Parachinar=06(each), Malam Jabba, Drosh & Babusar=05(each), Gilgit, Dadu & Sakrand=03(each), Mamad Gut, Lower Dir, Saidu Sharif & Tirah-Khyber=02(each), Mohmand Dam, Pashat-Bajaur & Cherat=01(each), Peshawar (City, Airport & Bacha Khan A/P), Takht Bai, Landi Kotal, Pattan, Ghalanai, Besham, Buner, Mardan, Risalpur, Chitral, Nowshera & Badin=Trace(each).
Jhelum:	Kotli=40, Domel=05, Muzaffarabad (City=02 & Airport=01), Chakothi & Haraman=01(each), Chakwal=Trace.
Chenab:	Kot Addu=17 & Multan (Airport)=01.
Ravi:	-NIL-
Sutlej:	Bahawalpur (City=02 & Airport=Trace).
Others	Quetta (Sheikh Manda=45 & Samungli=19), Kalat=40, Pishin=33, Muslim Bagh & Zhob=24(each), Ziarat=22, Chaman=19, Sibbi=10, Loralai=02, Karachi [Gulshan e Hadeed, Korengi, Saadi Town, Surjani Town, Kemari, Ghulshan e Mymar, Gudap Town, Saddar, Airport, Orange Town, Faisal Base, University Road, Quidabad, Nazimabad, Masroor Base, North Karachi, Jinnah Terminal, DHA=Trace(each)].

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Annex -"F": Bulletin B



**GOVERNMENT OF PAKISTAN
PAKISTAN METEOROLOGICAL DEPARTMENT
FLOOD FORECASTING DIVISION
46-JAIL ROAD LAHORE-54000**



BULLETIN No. B-072/22

Dated: 25th August, 2022
Time: 11:15 hours (PST)

I: RAINFALL FORECAST FOR NEXT 24-HRS:

RIVERS	Upper Catchments (Above Rim Stations)	Lower Catchments (Below Rim Stations)	RESERVOIRS LEVEL (FEET) at (0600 PST)	
INDUS	Scattered to widespread thunderstorm/rain	Scattered thunderstorm/rain (Rawalpindi Division)	TARBELA	
JHELMUM	Scattered thunderstorm/rain	-do- (Sargodha Division)	Current:	1550.00
CHENAB	-do-	-do- (Gujranwala Division)	Max. Conservation:	1550.00
RAVI	-do-	-do- (Lahore Division)	MANGLA	
SUTLEJ	-do-	-do- (Bahawalpur Division)	Current:	1179.30
			Max Conservation:	1242.00

II: QUANTITATIVE FLOOD FORECAST OF GAUGING STATIONS (IN THOUSANDS OF CUSECS)

RIVERS	Stations	Actual Observations at 0600 PST		Quantitative Forecast for Next 24-hrs. (Inflow)	Qualitative Forecasted Flood Level (Inflow)
		Inflow	Outflow		
INDUS	Tarbela	200.0	212.2	200-300	Low
	Kalabagh	258.2	254.2	250-300	-do-
	Chashma	316.1	298.1	320-360	-do-
	Taunsa	470.7	470.7	400-500	Medium to High
	Guddu	517.4	517.4	470-520	-do-
	Sukkur	579.8	579.8	550-580	High
	Kotri	297.2	297.2	300-330	Medium
KABUL	Nowshera	77.7	77.7	110-160	High to Very High
JHELMUM	Mangla	28.0	8.2	30-70	Below Low
	Rasul	7.9	0.0	No significant change	-do-
CHENAB	Marala	88.4	61.1	70-100	Low
	Khanki	58.7	51.4	50-80	Below Low
	Qadirabad	47.3	27.3	50-60	-do-
	Trimmu	74.3	60.4	No significant change	-do-
	Punjnad	70.8	64.7	-do-	-do-
RAVI	Jassar	21.6	21.6	20-35	-do-
	Shahdara	22.3	22.3	No significant change	-do-
	Balloki	40.9	13.5	-do-	-do-
	Sidhnai	20.1	9.8	-do-	-do-
SUTLEJ	G.S.Wala	3.6	3.6	-do-	-do-
	Sulemanki	16.4	4.4	-do-	-do-
	Islam	5.4	4.3	-do-	-do-

R= Rising & F= Falling

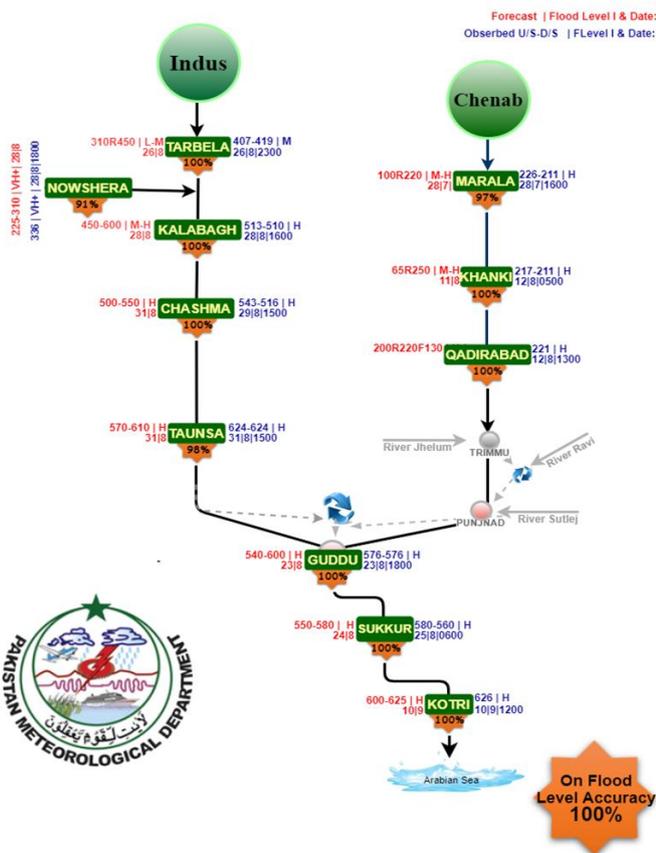
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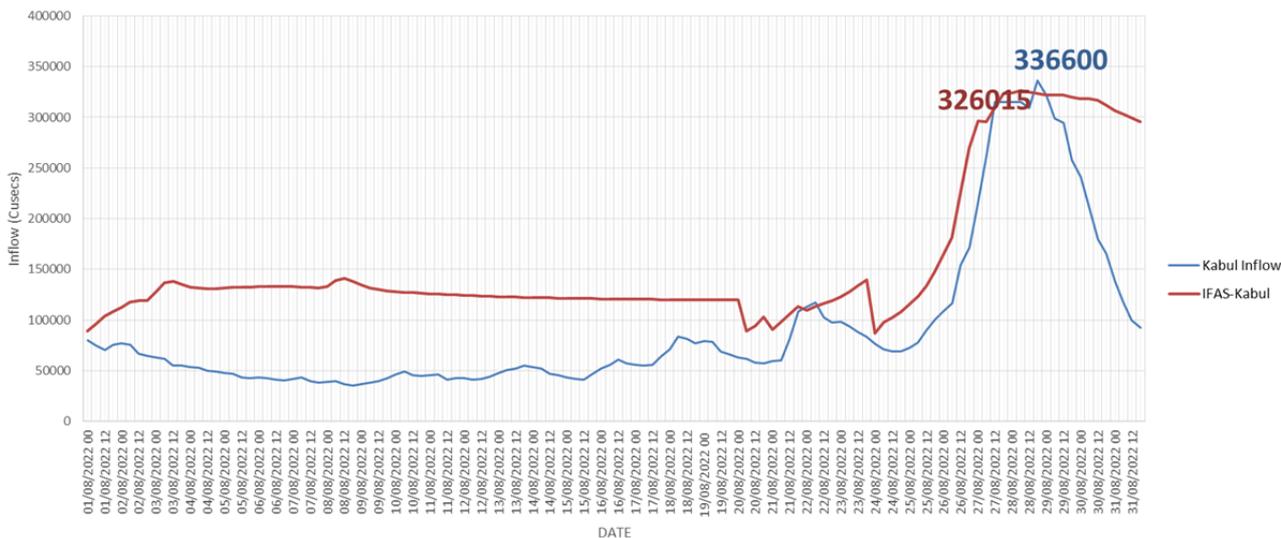
Annex - G Flood Forecast Accuracy for Quantitative Forecast - Evaluation from 2022 Flood

FLOOD FORECAST ACCURACY River Indus & Chenab Significant Flood Event Flood Season 2022

Accuracy on Quantitative Forecast | Flood Bulletin-A



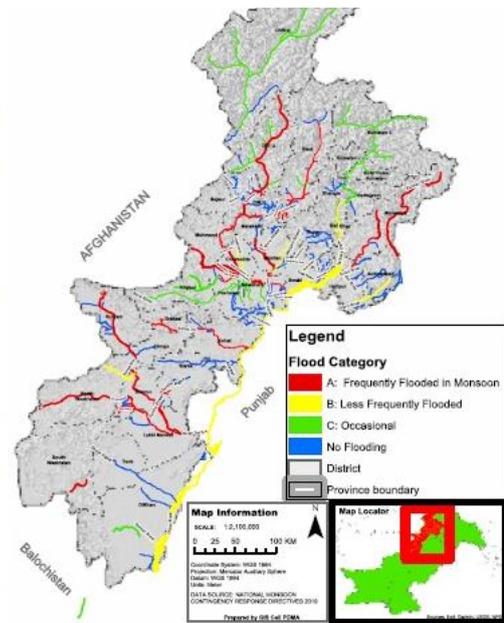
Comparison between IFAS-Model Output and Kabul(Nowshera) Inflow August-2022



Annex - "H": Flood Categorization of the Major Rivers and Nullahs in Monsoon Contingency Plan 2022 by PDMA KP

1.6.1 FLOOD CATEGORIZATION OF THE MAJOR RIVERS AND NULLAHS

Floods usually occur during monsoon season in different river systems of Khyber Pakhtunkhwa. Due to the geography and terrain of the area, all rivers in the province are fed by hill torrents, nullahs and streams in catchment areas of mountainous regions. In order to determine flood levels, historical pattern of monsoon floods in the province has been reviewed and rivers have been categorized in three broad categories. Category A for instance reflects those rivers which receive floods of different magnitude frequently (every year), while category B are those rivers/streams, which receive less frequent floods, while the third category is of rivers/nullahs that experience occasional Flood situation as a result of heavy concentrated rainfall in their catchment areas.



Category A (Frequently Flooded in Monsoon):

Kabul River, Khiali River (Peshawar), Khiali Adezai, Panjkora River, Kunhar River, Naguman (Peshawar), Shah Alam, Kurram River, Budni Nullah (Peshawar), Siran River (Mansehra), Kohat Toi, Tochi River, Kalpani Nullah (Mardan), Jabb Nullah (Abbottabad).

Category B (Less Frequently Flooded):

Jindi River, Gomal Zam, Kaitu River (North Waziristan), Badri Nullah (Swabi), Indus river (right bank), Naranji Nullah (Swabi), Haro River, Dalas Nullah, Mukam Nullah, Local Hill Torrents in Northern Areas of Khyber Pakhtunkhwa.

Category C (Occasional):

Chowdhwan Zam (DI Khan), Sheikh Haider Zam (DI Khan), Chila Nullah (Pabbi), Chinkar Nullah (Pabbi), Gharandi Nullah (Peshawar), Ghari Nullah (Pabbi), Rustam Khawar (Mardan), Khawar at Khyber Agency, Balar Dagi Nullah (Pabbi), Khudrazai Nullah (Pabbi).