Post Disaster Damages and Need Assessment (PDNA)

Needs for Building Back Better Initiative in Chitral after GLOF and Floods Extreme Events
Disclaimer:

This report presents a summary of the Post-Disaster Needs Assessment conducted in Chitral following the devastating floods of July 2023. The assessment was carried out between 22nd July and 27th July 2023. While every effort has been made to ensure the accuracy of the data collected and analyzed, it is important to note that the assessment was conducted within a short timeframe to ensure timely response to the disaster. Due to ongoing floods and limited access to inundated areas and cut-off roads during the data collection period, remotely sourced data was obtained from the District administration and other reliable sources. Given these constraints, the report may not guarantee absolute accuracy of the data presented herein. It offers a comprehensive overview of the floods impact on the population, physical assets, infrastructure, and livelihoods, but it should not be considered a substitute for in-depth sector-specific assessments. For more detailed sectoral analyses, full-fledged activities of need assessment could be undertaken.
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The floods that hit Chitral in July 2023 had a profound impact on our people's lives and livelihoods. Torrential rains, cloud bursts, and glacial lake outburst floods (GLOFs) caused extensive damage to homes, infrastructure, agriculture, and natural resources. During these difficult times, we extend our heartfelt condolences to the affected communities and stand in solidarity with them.

These floods exposed Chitral's vulnerability to climate change, underlining the urgent need for disaster risk reduction and resilience-building efforts. Our mountainous region, known for its beauty and vibrant culture, faced immense challenges due to these extreme climate events. It is essential to address vulnerability factors and rebuild better to protect our people and their livelihoods.

This report for Chitral, compiled with the support of experts and local indigenous knowledge, provides a comprehensive overview of the damages, losses, and needs arising from the floods. It marks a crucial first step in the journey of recovery and reconstruction.

SIF Pakistan is committed to supporting resilient mountain communities. By collaborating with donor agencies, we can rebuild Chitral and enhance its resilience. This report will guide our efforts to uplift the affected communities and safeguard them from future disasters.

Together, we can make the most vulnerable mountain communities more resilient and prosperous.

Sincerely,

Altay Abro

Head of Mission

SIF Pakistan
Executive Summary

The devastating floods in Chitral have had a profound impact on multiple sectors, causing extensive damage to infrastructure, housing, education, transport, communications, water resources, agriculture, fisheries, and protective structures. The floods disrupted livelihoods, left communities vulnerable, and necessitated urgent assistance and support. In the Housing sector, a significant number of houses were fully or partially damaged, leaving families in distress and in need of urgent shelter and essential items for recovery. The Education sector faced considerable challenges as floods damaged critical transportation infrastructure, making it difficult for students to access schools regularly. Partially damaged educational institutes further hindered academic growth, necessitating prompt repair and reconstruction efforts. Transport and Communications infrastructure suffered extensive destruction, isolating communities and hindering the flow of goods and services. Rapid assessments and repairs are essential to restore connectivity and ensure smooth access to affected areas. The Water, Sanitation, and Hygiene (WASH) sector experienced severe disruptions in water supply systems, leaving communities without clean and safe drinking water. The introduction of new fish populations in affected streams and rivers is crucial for restoring the fisheries sector and supporting local livelihoods. The Agriculture and Livestock sectors, crucial to the livelihood, incurred significant damage to crops, lands, orchards, and livestock. Rehabilitation efforts, including fodder supply, climate-smart seeds, and livestock vaccinations, are vital for farmers and livestock owners to recover from losses and adopt resilient practices. Moreover, protective structures, including walls safeguarding settlements and infrastructure, were damaged, rendering communities vulnerable to future flooding events. Reconstruction and reinforcement of these structures are essential for community safety. In light of these challenges, timely and collaborative interventions among stakeholders, government authorities, and humanitarian organizations are imperative to support Chitral's affected communities. The proposed restoration efforts aim to help these communities rebuild their lives, safeguard their livelihoods, and foster a resilient recovery from the catastrophic floods. By uniting our efforts, we can make a lasting difference and bring hope for a brighter future in Chitral.
Introduction to SIF

Founded in 1991, Secours Islamique France (SIF) is an International Non-Governmental Solidarity Organization aimed at social and humanitarian action in the areas of humanitarian assistance and development aid, in France and across the world. SIF Pakistan is working in Pakistan since 2010 and has a country office in Islamabad working under the guidance of its headquarters in Massy, France. SIF is registered with ministry of Interior, Government of Pakistan, which allows it to undertake work for the socio-economic development of Pakistan through the implementation of its projects.

SIF is working in Pakistan since 2010 and has reached 1,399,764 people benefited from SIF projects in Sindh, KP, Former FATA, Punjab, ICT and AJK through its interventions in thematic areas of WASH, Food Security and livelihoods, Child welfare and protection, education, emergency response, disaster and climate change and shelter. The SIF Pakistan mission started in 2010 initially to respond to the flood emergency. Since then, SIF has been implementing different projects in Punjab, AJK, KP, former FATA areas and Sindh provinces. Through its interventions SIF has supported the Afghan refugees, TDPs, floods affected and drought affected communities to provide Food Security, Livelihood, WASH, Shelter and Child Protection. Since 2010, SIF has implemented humanitarian and developmental projects worth 13 million Euros in Pakistan.

The SIF mission in Pakistan ensured expansion through donor funding on cash-based transfers, disaster resilience building and emergency responses. SIF’s projects are aligned with the Sustainable Development Goals (SDGs) as they focus on improving economic conditions through the development of sustainable livelihoods, climate smart agriculture, and decent work for improved Food Security and sustenance of supported communities. Climate-smart water support, improved sanitation, and COVID prevention-focused hygiene interventions also targeted the most vulnerable segments of the country including returnees of Orakzai tribal district and drought-affected communities of Tharparkar, migrant populations, as well as destitute orphan families at Islamabad and Rawalpindi. At the time of writing, SIF Mission Pakistan is implementing its Orphan Sponsorship Project in Islamabad/Rawalpindi, which is focusing on the livelihoods and income generation opportunities for orphan families residing in urban and semi-urban localities in Pakistan.

SIF’s global strategic plan focuses on quality delivery through its interventions, promoting solidarity, fostering innovation, and high impact in its actions. The drivers of its global strategic plans include: Human Development

Approaches adapted to the specific needs of people (for example: refugees, displaced persons, etc.) and cross-analyzes according to gender and age criteria.

Good Living Together

SIF promotes it and participates in a solidarity that transcends differences. In its programs intended for a variety of audiences, SIF ensures that every person has his place and can contribute to the building. SIF multiplies the actions in partnership with various humanitarian and social actors.

Respect for the Environments
SIF takes into account the human impact on the environment and puts in place measures to limit it. SIF takes into account the ecological phenomena in its humanitarian and social programs, with solutions allowing people to adapt to the consequences of climate change.

**Vision:**
A caring world where the basic needs of vulnerable people are met

**Mission:**
Alleviating the sufferings of deprived people in France and around the world

**Principles:**
- Neutrality and Independence
- Respect and Impartiality
- Responsibility and Reliability

SIF’s interventions are aligned with the Government of Pakistan Sustainable Development Goals’ National Framework to enable SIF to reflect its contribution towards achievement of the national SDGs agenda. SIF Mission Pakistan is also the member of different coordination forums e.g. Pakistan Humanitarian Forum (PHF), UN led working groups e.g. Cash Working Group, Food Security and Livelihood Working Group.

➔ Map of locations of intervention and SIF bases
SIF Sectorial Priority

- Education & Child Welfare
- Food Security & Sustainable Livelihood, resilience building, and climate-smart interventions
- Water, Hygiene & Sanitation (WASH) and Disaster Risk Reduction (DRR) as a cross-cutting theme
- Shelter

Context of Chitral

Chitral, located in the north of Pakistan, is a region of captivating beauty and extraordinary geographical diversity. Its landscape ranging from 1,094 meters to the towering 7,726 meters at Tirich Mir, adorned with over 40 peaks soaring above 6,100 meters, Chitral is a picturesque fusion of mountains and glaciers, covering 76% of the area. Bordered by Afghanistan to the west and north, Swat and Dir to the south, and Gilgit Baltistan to the east, Chitral is a place of unique allure.

Home to 523 villages scattered across 34 valleys, and endowed with 542 glaciers, Chitral's geography renders it vulnerable to the impacts of changing climate. The district is divided into Lower and Upper Chitral, encompassing a total area of 14,850 sq KM. According to the 2017 census, the population in the study area was 447,362, with Lower Chitral accounting for 58% and Upper Chitral 48% of the total. Agriculture forms the primary source of income, with maize, wheat, and barley being the staple crops. Fruit and vegetable sales supplement livelihoods, while approximately 40% of the population engages in government, private sector, commerce, or entrepreneurship.
Despite its natural splendor, Chitral confronts significant hazards, including debris flows, flash floods, GLOFs, avalanches, rock falls, and landslides. Over the past nine years, more than 880 disasters have affected the region, causing destruction to roads, public and community buildings, and over 5,000 houses. The education sector, especially schools, has suffered notable damage due to unsafe locations and structural vulnerabilities.

In July 2023, Chitral was ravaged by severe flooding caused by heavy rains, cloud bursts, and GLOFs, overwhelming the region's limited coping mechanisms. The absence of vegetation on mountains further intensified the devastating floods, while a scorching average maximum temperature of 40°C raised concerns about vulnerable spots for riverine floods.

The vulnerability of Chitral to climate change is underscored by the Hindukush region's frequent extreme climatic conditions, encompassing GLOFs, cloud bursts, flash floods, avalanches, and soil erosion. The vast number of glaciers and active glacial lakes accentuate the region's susceptibility to GLOFs, with Upper Chitral particularly at risk.

Urgent measures are essential to bolster the resilience of Chitral's mountain communities, safeguarding lives and livelihoods against future disasters. Comprehensive disaster risk reduction and sustainable development planning are critical to addressing underlying vulnerabilities. Collaborating with national and international partners is imperative to drive effective recovery efforts and forge a climate-resilient future for Chitral.

Despite the challenges posed by climate change, Chitral's enchanting landscape and vibrant communities offer an opportunity to build a brighter and more resilient future. Through strategic planning, resource allocation, and unwavering commitment, we can fortify Chitral against the impacts of an
Brief Summary of Damage, Loss, and Needs

The floods in Chitral have caused extensive damage and loss across various sectors, severely impacting the lives and livelihoods of the local population. Widespread destruction of housing and human settlements has been reported, with a significant number of houses fully or partially damaged, especially in rural areas where katcha houses are more susceptible. The health sector is facing challenges due to damages to roads and bridges, hindering access to essential healthcare services, while the disruption of potable water supply has led to waterborne diseases. The education sector has been severely affected, with damages to school buildings and closures disrupting students' learning. The floods have also resulted in the loss of cultural and heritage assets, impacting the identity and heritage of the local communities. Transport and communication infrastructure have suffered extensive damage, cutting off communities and hindering relief efforts. The energy sector has been impacted, with damages to hydro power systems leading to an acute energy shortage. Agriculture and livestock sectors have faced significant losses, with standing crops, fruit trees, and livestock being severely affected. Fisheries have also suffered, causing a decline in fish populations. The floods have damaged irrigation channels, posing a threat to agricultural livelihoods. The tourism industry has been hit hard, with damages to infrastructure and landscapes affecting tourist attractions. Additionally, damages to shops, vehicles, and protection walls have further compounded the challenges faced by the affected communities. Urgent interventions and support are crucial to address the extensive damages and restore the well-being and prosperity of the people of Chitral.

1. Housing

The devastating floods in 2023 had a profound impact on the housing and human settlements in Chitral. The destruction was widespread, affecting both Upper and Lower Chitral. The floods impact was particularly severe on rural houses, with katcha houses being more vulnerable to damage compared to pucca houses. Given that the majority of houses in Chitral are katcha, the damage had a significant impact on household assets and caused a severe disruption to family life.

The floods resulted in a total of 390 houses being affected in Chitral. In Upper Chitral, 55 houses were fully damaged, and 74 houses were partially damaged. In Lower Chitral, 100 houses were fully damaged, and 161 houses were partially damaged. The loss of housing not only led to a considerable loss of property but also posed serious risks to livelihoods and the health of the affected population.
The destruction of housing has left many families without a safe and stable living environment, making them vulnerable to further hardships. Access to shelter is a fundamental human need, and the loss of homes has had a profound impact on the well-being and resilience of the affected communities.

Addressing the housing needs of the affected population is crucial to facilitate their recovery and ensure their safety and well-being. Urgent efforts are required to rehabilitate damaged houses and provide support for affected families to rebuild their lives.

**List of damages village-wise:**
Proposed Activities for Housing Sector:

To address the urgent shelter needs of the affected communities, there is a critical need to construct shelters for the fully damaged households. These shelters should include essential facilities such as one room, one kitchen, and one washroom to provide a safe and dignified living environment for the affected families.

Moreover, the areas that have been experiencing severe flooding for the past three weeks require immediate attention in terms of food assistance and the implementation of alternative livelihood arrangements. The fully damaged households are in urgent need of non-food items such as shelter tents, hygiene kits, kitchen sets, clean drinking water, and mattresses to support their recovery and well-being during this challenging time.

Addressing the housing needs of the affected communities is of utmost importance to facilitate their recovery and ensure their safety and well-being. Timely intervention and support in providing shelter and essential items will go a long way in helping these communities rebuild their lives and restore a sense of normalcy after the devastating floods.

2. Health

The floods have had a significant impact on the health sector in Chitral, particularly due to damages to roads and bridges, which have severely affected the accessibility to health facilities. In Upper Chitral, patients requiring basic health services are usually referred to Lower Chitral. However, the damages to roads and bridges have resulted in cut-offs and disruptions in transportation, making it difficult for
patients to access essential healthcare services in Lower Chitral. This has created challenges, especially for pregnant women who require timely and specialized medical attention.

Furthermore, the damages to the potable drinking water supply have exacerbated health issues for the affected communities. With the disruption in clean drinking water supply, people are forced to use turbid and contaminated stream water for their daily needs. As a result, waterborne diseases such as diarrhea have become more prevalent, leading to an increase in cases of gastrointestinal illnesses. Additionally, the consumption of contaminated water can also contribute to kidney-related health issues, further straining the already limited healthcare resources in the area.

The health sector in Chitral is facing critical challenges in the aftermath of the floods, and it requires immediate attention and support to address the health needs of the affected population. Restoring access to health facilities, ensuring a steady supply of clean drinking water, and providing necessary medical services are essential to prevent the worsening of health conditions and to protect the well-being of the communities in Chitral.

**Proposed Activities for Health Sector:**

- Emergency Medical Camps: Set up mobile medical camps in the affected areas to provide immediate medical assistance and essential healthcare services to the communities.
- Medicines and Medical Supplies Distribution: Ensure the availability of essential medicines and medical supplies in the health facilities to treat common ailments and prevent the spread of waterborne diseases.
- Safe Drinking Water Supply: Implement water purification and distribution systems to provide safe drinking water to the communities and reduce waterborne illnesses.
- Capacity Building: Provide training and capacity building programs for healthcare workers to enhance their skills and knowledge in handling post-disaster health challenges.

### 3. Education

The floods in Chitral have left a devastating impact on the public education sector, resulting in unprecedented cumulative damage and loss. The floods have affected all aspects of education services in the assessed district, causing disruptions to the education of thousands of children and students. One of the major challenges faced by the education sector is the extensive damage to roads and bridges, which has made it challenging for school-going children to reach their educational institutions.

As a consequence of the damaged transportation infrastructure, many students have been unable to attend classes regularly, leading to a negative impact on their learning outcomes and overall educational progress. Moreover, some areas have experienced partial damages to educational institutes, further exacerbating the situation and making it unsafe for students and teachers to continue their educational activities. This has resulted in the closure of schools in certain locations, posing a serious concern for the continuity of education in the region.
The disruption of education services goes beyond academic setbacks, as it also affects the social and emotional well-being of the students. Education plays a critical role in empowering communities and fostering economic development, making it essential to prioritize the restoration of educational services for the affected population.

In Lower Chitral, two schools have been partially damaged, affecting around 350 students. The floods have also impacted access to schools in both Upper and Lower Chitral, with damaged roads and bridges posing a threat to the safety of students while crossing streams and rivers.

The details of the school damages:

<table>
<thead>
<tr>
<th>Village</th>
<th>School name</th>
<th>Capacity</th>
<th>Damage Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Govt Primary School Power</td>
<td>180</td>
<td>Partially Damaged</td>
</tr>
<tr>
<td>Chumerkhon</td>
<td>Govt Primary School Chumerkhon</td>
<td>300</td>
<td>Partially Damaged</td>
</tr>
</tbody>
</table>

**Proposed Activities for Education Sector:**

- School Rehabilitation: Repair and reconstruct damaged school buildings and facilities to create a safe and conducive learning environment for students.
- Educational Supplies Distribution: Provide students and teachers with essential educational supplies, such as textbooks, stationery, and learning materials.

**4. Culture and Heritage**

The floods in Chitral have not only caused physical damage to infrastructure and human settlements but have also resulted in the loss of cultural and heritage assets that hold immense historical and sentimental value to the local communities.

One significant example of the cultural and heritage loss is the destruction of the Chinar tree in front of the Shahi Fort in Lower Chitral. The Chinar tree, estimated to be around 400 years old, was a symbol of heritage and had a special place in the hearts of the local residents. It served as a living testament to the rich history and traditions of the region.

The Chinar tree, with its majestic presence and historic significance, was not just a part of the landscape but also a cultural landmark. Its loss has left a void in the community, and its absence is deeply felt by the people of Chitral.

The preservation of cultural and heritage assets is vital for maintaining a sense of identity and belonging among the local population. Cultural heritage reflects the history, values, and artistic expressions of a community, passing down the legacy to future generations.
5. Transport and Communications

The floods in Chitral have had far-reaching consequences, severely impacting the transport and communications sector and leading to significant disruptions in the movement of goods, services, and connectivity within the district. The devastating floodwaters have wreaked havoc on the region's infrastructure, cutting off vital transportation links and isolating communities, exacerbating the challenges faced by patients, students, and those experiencing food shortages.

One of the most critical challenges faced by the sector is the disconnection of the main road that connects Upper Chitral with downstream districts. The floods have mercilessly washed away crucial bridges at Koghuzi & Kari, leaving behind a trail of destruction. In addition, the raging river Chitral completely destroyed the road at Nerdit Gol, rendering it impassable. As a result, this critical route has become inaccessible, causing a complete disruption in the flow of people and goods. The lack of a proper transportation corridor has particularly affected the movement of patients seeking medical attention in hospitals and healthcare centers located in other districts. Patients in need of urgent medical care have faced immense difficulties in accessing necessary treatment, leading to potential life-threatening situations.

The floods' aftermath has necessitated the implementation of temporary restoration measures, such as constructing wooden bridges and diversions to facilitate access in damaged sections. Although these emergency interventions have enabled limited traffic to resume, they can only serve as temporary solutions. The situation remains challenging in areas where roads and bridges are still inundated or beyond repair, further isolating communities and hindering their ability to access essential services and supplies.

The widespread damages to approximately 36 kilometers of roads, link roads, and valley roads have compounded the transportation crisis in Chitral. Different regions have experienced varying degrees of destruction, with some areas severely affected and others enduring partial damages. The compromised road networks have made it challenging to transport goods and humanitarian aid to the flood-affected areas, resulting in food shortages and heightened economic strain on the local communities.

Moreover, the loss of 62 pedestrian bridges and seven jeep-able bridges has intensified transportation challenges for the locals. These bridges were crucial lifelines for safe passage across streams and rivers, especially during floods. The absence of these vital connectors has forced people to take hazardous alternative routes, risking their lives and adding to the difficulties faced by patients, students, and others who need to travel for essential purposes.

In particular, the education sector has suffered gravely due to the disruption of roads and bridges. Students have been severely impacted, facing significant obstacles in attending schools regularly. The closure of schools in certain locations, due to unsafe buildings and facilities, has further disrupted academic growth and has deprived students of quality education. The safety of school-going children
has also been compromised as they face the risk of crossing perilous streams and rivers without proper bridges.

The challenges posed by the destruction of the transport and communications infrastructure in Chitral are immense, and immediate action is crucial to alleviate the suffering of the flood-affected communities. A comprehensive assessment is urgently needed to prioritize restoration efforts, focusing on critical transportation routes and bridges to ensure the smooth flow of essential goods, services, and humanitarian aid. Collaborative efforts between relevant stakeholders, government authorities, and humanitarian organizations are paramount to effectively address the transportation crisis and ensure the timely restoration of vital transport and communication services in Chitral.

Only through a united and concerted effort can the communities affected by the floods regain their access to essential services, rebuild their lives, and restore a sense of normalcy after the devastating natural disaster. It is imperative to provide prompt and sustained support to address the immediate challenges while laying the groundwork for resilient infrastructure that can withstand future calamities.

**Road Damages**

![Road Damage Chart](chart.png)
Bridges

Bridges Damages in Upper Chitral

ROAD DAMAGES IN LOWER CHITRAL
Proposed Activities for Restoration of Transport and Communications:

- **Rapid Assessment and Repair:** Conduct a rapid and comprehensive assessment of the damaged roads and bridges to prioritize repairs and restoration efforts. Immediate attention should be given to critical routes that connect human settlements, schools, and healthcare facilities. By promptly addressing the restoration of these routes, connectivity can be reestablished, allowing the smooth flow of people and goods.

- **Emergency Bridge Reconstruction:** Prioritize the immediate reconstruction of pedestrian and jeep-able bridges that play a vital role in facilitating transportation for both the local population and essential goods. The disruption of these bridges has significantly affected the mobility of school-going children and patients who need access to medical facilities. Urgent reconstruction of these bridges will alleviate the hardships faced by the affected communities and ensure the delivery of essential services.

### 6. Energy

In Chitral, most of the population relies on mini hydro power systems for their energy needs. However, the recent floods have caused significant damage to these systems, with 02 hydro power houses being affected, along with the transmission lines. As a result, the community is facing a severe shortage of energy supply, which has disrupted daily activities and essential services.

<table>
<thead>
<tr>
<th>Village</th>
<th>Type</th>
<th>Capacity</th>
<th>Damage Type</th>
<th>No of household affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Wise</td>
<td>RCC Bridges Damages in upper Chitral</td>
<td>Foot Bridges</td>
<td>Suspension bridges</td>
<td>Jeepable bridges</td>
</tr>
</tbody>
</table>
### Proposed Activities for Restoration of Energy:

- Emergency Repairs: Prioritize the immediate repair of the damaged hydro power houses and transmission lines to restore energy supply to the affected communities.
- Solar Panels as an Alternate Energy Source: Considering the significant damage to the mini hydro power systems, an effective and sustainable solution is to provide solar panels as an alternate energy source.

### 7. WASH

The recent floods in Chitral have dealt a severe blow to the Water, Sanitation, and Hygiene (WASH) sector, causing extensive damage to the main supply lines for drinking water in various villages. The relentless floodwaters have eroded the river Chitral and streams, disrupting water supply systems and leaving communities without access to clean and safe drinking water. This has created a dire situation with critical hygiene issues, posing a significant health risk to the affected population.

The villages in Chitral, including Shishiko, Rumbur, Ayun, Chumurkhon, Danin, Bakrabad, Thingshen, Moghlandeh, Khurkashandeh, Uchusht, Orghoch, Golen, Koghuzi, Awi, Brep, Meragram, Power, Chuinj, Chapali, Gazeen, Zhupu, Parkusab, Mastuj, Chinar, Ghoru, and Pasum, have all been impacted by the disruption of water supply schemes. The floodwaters have ravaged the existing infrastructure, leaving these villages vulnerable and struggling to cope with the lack of access to clean drinking water.

Without access to safe drinking water, communities in these villages are facing a host of challenges that jeopardize their health and well-being. Contaminated water sources pose a high risk of waterborne diseases, putting the lives of the residents, especially children and the elderly, in danger. Moreover, the absence of proper sanitation facilities exacerbates the situation, making it difficult for people to maintain proper hygiene practices, further increasing the risk of diseases and infections.

In the wake of the floods, addressing the urgent WASH needs of the affected communities is of utmost importance. Immediate action is required to restore and repair water supply schemes, ensure the availability of clean drinking water, and provide proper sanitation facilities to prevent the outbreak and spread of diseases.
Proposed Activities for Restoration of WASH:

- Constructing New Water Supply Schemes: Build new water supply schemes in the affected areas to provide a reliable and safe source of drinking water for the communities.
- Rehabilitation of Damaged Schemes: The floods have caused significant damage to existing water supply schemes in the region. The rehabilitation of these damaged schemes is crucial to restore a steady supply of clean drinking water to the affected communities.
- Hygiene Promotion and Education: Conduct hygiene promotion and education campaigns to raise awareness about the importance of maintaining good hygiene practices, especially in the context of limited access to clean water. This will help prevent waterborne diseases and improve community health.
8. Agriculture and livestock

The recent floods in Chitral have dealt a severe blow to the agriculture and livestock sectors, which form the backbone of the region's economy and provide livelihoods for the majority of its population. The floods have caused extensive damage to crops, agricultural lands, orchards, and livestock, leading to devastating losses for the communities that heavily rely on these sectors for their sustenance and economic well-being.

In the aftermath of the floods, the impact on agriculture has been nothing short of catastrophic. Standing crops in most of the valleys were completely washed away, leaving farmers with significant financial losses. The erosion caused by the floods has further damaged agricultural lands, exacerbating the situation. The region already faces challenges related to limited arable land, and the additional losses due to floods have intensified the strain on the agricultural sector.

The average damages to cereal crops, cash crops, and fodder production have been substantial in both Upper and Lower Chitral. In Upper Chitral, the damages to cereal crops have been estimated at 22%, cash crops at 15%, and fodder production at 21%, while orchards have suffered damages of 24%. Similarly, in Lower Chitral, cereal crops have faced damages of 28%, cash crops 15%, fodder production 15%, and orchards 13%. These losses have severely impacted farmers' income and ability to support their families.

The livestock sector has also been severely affected by the floods. Livestock, such as cows, goats, sheep, and poultry, have faced significant losses in both Upper and Lower Chitral. In Upper Chitral, the losses include 114 cows, goats, sheep, 76 poultry, and 100 cattle sheds. In Lower Chitral, the losses comprise 27 cows, goats, sheep, 108 poultry, and 85 cattle sheds. As livestock plays a crucial role in supporting the livelihoods of the local population, these losses have further exacerbated the economic hardships faced by the communities.

The floods have not only caused immediate financial losses but also raised concerns about the long-term impact on food security and economic stability in the region. With agriculture and livestock being the primary sources of income for the majority of the population, the floods have left the livelihoods of many families in jeopardy.

Addressing the challenges posed by the floods to the agriculture and livestock sectors in Chitral is of utmost importance. Immediate relief efforts should focus on providing support to affected farmers, including financial assistance, seeds, and livestock replacement. Additionally, measures should be taken to rehabilitate and restore damaged agricultural lands and orchards.

Long-term solutions are equally crucial to build resilience in the agriculture and livestock sectors and minimize the impact of future disasters. Implementing climate-smart agricultural practices, promoting sustainable land management, and investing in flood-resistant infrastructure are some of the key steps that can help the communities of Chitral overcome the challenges posed by the recent floods and safeguard their livelihoods in the face of future uncertainties. Collaborative efforts among government
agencies, non-governmental organizations, and the local community are essential to ensure the successful recovery and rebuilding of the agriculture and livestock sectors in Chitral.

**Agriculture Sector Damages are:**

![Agriculture damages in Upper Chitral chart](chart.png)
Agriculture damages in Upper Chitral

- **Orchards**: 15%
- **Fodder Production**: 15%
- **Cash Crop**: 15%
- **Cereal crops**: 15%

SHISHIKO: 28%
RUMBUR: 30%
AYUN: 22%
CHUMURKHON: 30%
BAKRABAD: 20%
DANIN: 15%
CHUMURKHON: 8%
AYUN: 15%
RUMBUR: 15%
SHISHIKO: 15%
DANIN: 10%
THINGSHEN: 5%
MOGHLANDEH: 12%
KHURKASHANDEH: 5%
ORGHOC: 4%
UCHUSHT: 10%
GOLEN: 10%
KOGHUVI: 15%

0% 10% 20% 30% 40% 50% 60%
Livestock Sector damages are:

![Livestock and Poultry Losses in Upper Chitral](chart_upper_chitral)

![Livestock and Poultry Losses in Lower Chitral](chart_lower_chitral)
Proposed Activities for Agriculture and Livestock Restoration:

- **Urgent Supply of Fodder**: Recognizing the approaching winter season and its potential impact on livestock, one of the immediate priorities is to supply sufficient fodder to the affected farmers. The floods have disrupted grazing lands and pastures, leading to a scarcity of feed for the surviving livestock. Timely provision of fodder will ensure the well-being and survival of the remaining animals, preventing further losses and supporting the livelihoods of the affected farmers.

- **Provision of Climate-Smart Seeds**: To help farmers recover and resume agricultural activities, providing them with climate-smart seeds is essential. These seeds are specifically selected to be resilient to adverse weather conditions, including droughts and floods. By introducing such seeds, farmers can replant and revive their damaged crops, increasing their chances of a successful harvest despite the challenges posed by the recent floods.

- **Vaccination for Livestock**: With many livestock already lost due to the floods, it is crucial to protect the health of the remaining animals. Conducting vaccination and veterinary health camps will help control and prevent the outbreak of diseases among the livestock. Proper healthcare for the animals will improve their overall health and productivity, ensuring that the livestock sector can recover and continue to support the livelihoods of the local communities.

- **Climate-Resilient Farming Practices**: Encouraging and supporting farmers in adopting climate-resilient farming practices is vital for their long-term sustainability. This includes promoting the use of drought-tolerant crop varieties that can withstand erratic weather patterns, introducing agroforestry to enhance soil fertility and water retention, and implementing water conservation techniques. These practices will not only help farmers adapt to the changing climate but also protect the agricultural lands from further erosion and degradation.

- **Rehabilitation of Agricultural Lands**: The floods have caused significant damage to agricultural lands through erosion. To restore the productivity of these lands, efforts should be made to rehabilitate them. Implementing soil conservation measures, such as contour plowing and terracing, will prevent further soil erosion and degradation. Restoring the fertility and stability of the lands will enable farmers to resume agricultural activities and rebuild their livelihoods.

- **Training and Capacity Building**: Providing training sessions for farmers and livestock owners is essential for empowering them with knowledge and skills to adopt modern and resilient farming and livestock management practices. These training programs can cover topics such as climate-smart agriculture, improved animal husbandry techniques, sustainable land management, and disaster preparedness. Equipping the local community with relevant skills will enable them to make informed decisions and better cope with future challenges.
9. Fisheries
The recent flash floods and Glacial Lake Outburst Flood (GLOF) events in Chitral have caused extensive damage to the fisheries, particularly affecting the trout fish population. According to the fishery department's assessment, approximately 50% of the fish in the flood-hit streams and rivers were washed away by the floodwaters. This significant decline in fish populations has had a severe impact on the local communities that rely on fishing as a major source of livelihood and economic activity.

Proposed Activities for Fisheries Restoration:

- Fish Reintroduction Program: Introduce new populations of fish species, especially trout, into the affected water bodies. Collaborate with fish hatcheries and relevant experts to source healthy fingerlings for release, bolstering the depleted fish stocks.
- Habitat Restoration: Implement measures to restore and improve the fish habitats in the flood-affected areas. This may include measures to mitigate erosion, create suitable spawning grounds, and maintain water quality to support the growth and sustainability of the fish populations.

10. Water Resources and Irrigation
The recent floods in Chitral have dealt a severe blow to the region's water resources and irrigation infrastructure, jeopardizing the livelihoods of the farming communities that heavily rely on these channels to sustain their agricultural lands and orchards.

In Lower Chitral, 26 irrigation channels have been partially damaged, while 10 channels have been completely destroyed. In Upper Chitral, the situation is equally distressing, with 35 channels partially damaged and 26 channels fully damaged. These irrigation channels are the lifelines of agriculture in Chitral, playing a critical role in providing a regulated and consistent water supply to support the successful cultivation of crops and fruit trees.
Proposed Activities for Restoration of Water Resources and Irrigation:

- Rehabilitation of Irrigation Channels: The restoration process of the damaged irrigation channels must be initiated promptly. This will involve a comprehensive assessment of the extent of the damage and the formulation of a detailed rehabilitation plan. Clearing debris, repairing breaches, and ensuring the proper flow of water are essential steps in restoring the functionality of these crucial waterways.

- Lining of Channels: As part of the restoration efforts, considering the lining of irrigation channels with suitable materials can be a vital step. Lining the channels will reduce seepage and water loss, improving overall water efficiency and ensuring a more consistent and efficient supply of water to the agricultural areas. This will help optimize water usage and ensure that the limited water resources are used optimally.

- Watershed Management: Implementing watershed management practices can significantly contribute to the restoration and conservation of water resources in Chitral. Watershed management involves protecting and restoring the natural ecosystems that capture and store water, such as forests, wetlands, and catchment areas. By preserving these ecosystems, the overall water availability can be improved, benefiting both agriculture and the local environment.

- Community Involvement: The active involvement of the local farming communities in the restoration efforts is crucial for the success and sustainability of the irrigation infrastructure. Engaging with the farmers, seeking their inputs, and integrating their traditional knowledge can lead to more effective solutions and enhance ownership of the restored water resources.

- Disaster-Resilient Infrastructure: As floods and extreme weather events become more frequent due to climate change, it is essential to incorporate disaster-resilient features into the design and construction of irrigation channels. Implementing measures such as reinforced embankments, diversion structures, and flood control mechanisms can help protect the irrigation infrastructure from future flood events.

- Water Conservation Education: Promoting water conservation education among the local communities is vital for ensuring the responsible use of water resources. Training programs and awareness campaigns can raise awareness about the importance of water conservation practices and encourage farmers to adopt more efficient irrigation techniques.

11. Tourism

Chitral is renowned for its breathtaking natural beauty, picturesque valleys, and majestic mountains, making it a popular destination for tourists from all around the world. However, the recent floods have dealt a severe blow to the tourism industry in Chitral, significantly impacting the livelihoods of those who depend on this sector.

The floods have caused substantial damage to the tourism infrastructure in Chitral. The beautiful valleys and landscapes that once attracted tourists have been marred by the floods, leaving behind a
trail of destruction. Roads, bridges, and trekking trails have been washed away, hindering access to popular tourist spots and disrupting travel plans. Additionally, tourist accommodations, including hotels and guesthouses, have suffered damage, further limiting the capacity to host visitors.

12. Other Damages

The devastating floods in Chitral have caused widespread destruction, extending beyond the sectors mentioned earlier, and resulting in significant losses and damages that have further impacted the lives and livelihoods of the local population.

Protection Walls: The floods have wreaked havoc on the region's protective infrastructure, damaging or washing away 28 crucial protection walls. These walls played a vital role in safeguarding settlements, agricultural lands, and other critical infrastructure from the force of the floods. With the loss of these protective structures, communities are now exposed to increased vulnerability to future flooding events. The absence of protection walls heightens the risk of further damage to homes, farmlands, and important community assets during the occurrence of subsequent floods.

Upper Chitral Specific Damages: In Upper Chitral, the floods have caused extensive damage to various establishments. 33 shops, 33 water mills, and 1 vehicle have been severely impacted by the floods. These damages have severely affected local businesses, hindering economic activities, and reducing access to essential services and goods for the communities. Moreover, the destruction of the water mills, which were crucial for grain processing, has disrupted the traditional milling practices and added to the challenges faced by the local population.

Lower Chitral Specific Damages: In Lower Chitral, the floods have caused considerable damage to several establishments as well. 18 shops, 4 water mills, 1 religious place, 4 vehicles, and 1 hotel have suffered significant losses due to the floods. The destruction of shops and water mills has had adverse effects on the local economy, limiting people's access to goods and services. Additionally, the damage to vehicles has impacted transportation and mobility in the area, making it challenging for the communities to travel and access essential facilities. The loss of a religious place also holds cultural and social significance for the local population.
Urgent Assistance Required

The recent floods in Chitral have left a devastating impact on the affected communities, causing extensive damage to their livelihoods and basic necessities. As we assess the situation, it is evident that urgent assistance is required in the following areas:

- **Food Packages**: The floods have destroyed standing crops, leaving 390 households completely or partially damaged and facing immediate food shortages. To address this critical need, approximately 390 food packages are required to support these families for a month.

- **Shelter for Households**: Winter is approaching, and providing shelter is of utmost importance for families whose houses have been damaged by the floods. Immediate support is needed to provide temporary shelter materials for approximately 390 households until permanent repairs can be made.

- **Water Filtration Equipment**: The floods have contaminated water sources, posing a significant health risk to the communities. Approximately 50 water filtration units are urgently needed to provide safe drinking water to the affected population.

- **Cable Car Bridge**: Access to certain villages is cut off due to the complete damage of bridges, jeopardizing the safety of school-going children and patients. The installation of a cable car bridge is vital to restore connectivity for approximately 10 isolated communities.

- **Medicines**: The increased cases of waterborne diseases and health issues require urgent medical attention. Approximately 1,000 medical kits containing essential medicines are needed to address the immediate health needs of the flood-affected communities.

- **Fodder for Livestock**: The floods have washed away agricultural lands and grazing pastures, leading to fodder shortages for livestock. Approximately 1000 fodder packages are required to sustain the livestock during the winter season.

- **Climate-Resilient Seeds**: As the sowing season approaches, climate-resilient seeds are essential to restore agricultural activities. Approximately 500 pack of climate-resilient seeds for various crops are needed to support the affected farmers.

The situation demands immediate collaboration and support from relevant stakeholders, government agencies, and humanitarian organizations to provide timely assistance to the flood-affected communities in Chitral. Addressing these urgent needs will help the communities recover and rebuild their lives after this natural disaster.

Furthermore, it is essential to initiate full rehabilitation and recovery activities in Chitral once the urgent relief activities are addressed. These rehabilitation efforts will focus on restoring infrastructure, rebuilding homes, revitalizing livelihoods, and providing the necessary support to help the communities regain stability and resilience.

We appeal for continued support and solidarity from all concerned parties to bring hope and healing to the flood-affected communities of Chitral.
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<tr>
<th>Image 1</th>
<th>Image 2</th>
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<tr>
<td>GLOF at Meragram No.2 (Yarkhoon UC) Hit the village and 6 HH were fully damaged</td>
<td>Picture of Miragram no 2 (Yarkhoon UC) where live stock have been washed away by flash Flood</td>
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<th>Image 3</th>
<th>Image 4</th>
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<tr>
<td>Vehicle Jeep have been damaged at Koghuzi by the recent flash Flood</td>
<td>Picture of closed road at Kari where RCC bridge coneccting Upper to Lower chiral have been washed away by flash Flood</td>
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Picture taken at Nerdit Gol where road have been washed away river Chitral. Road Still closed

Picture showing Shahidas Laspur bridge which have been washed away by the flash flood.

Picture showing Rumbor Valley where standing crop have been damaged by the flash flood.

Picture showing Miragram No 2 (Yarkhoon UC) where flash flood have washed away the Orchard and agricultural lands.