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Activation 2024

STRONG in DRM



Nepal Red Cross Society

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September

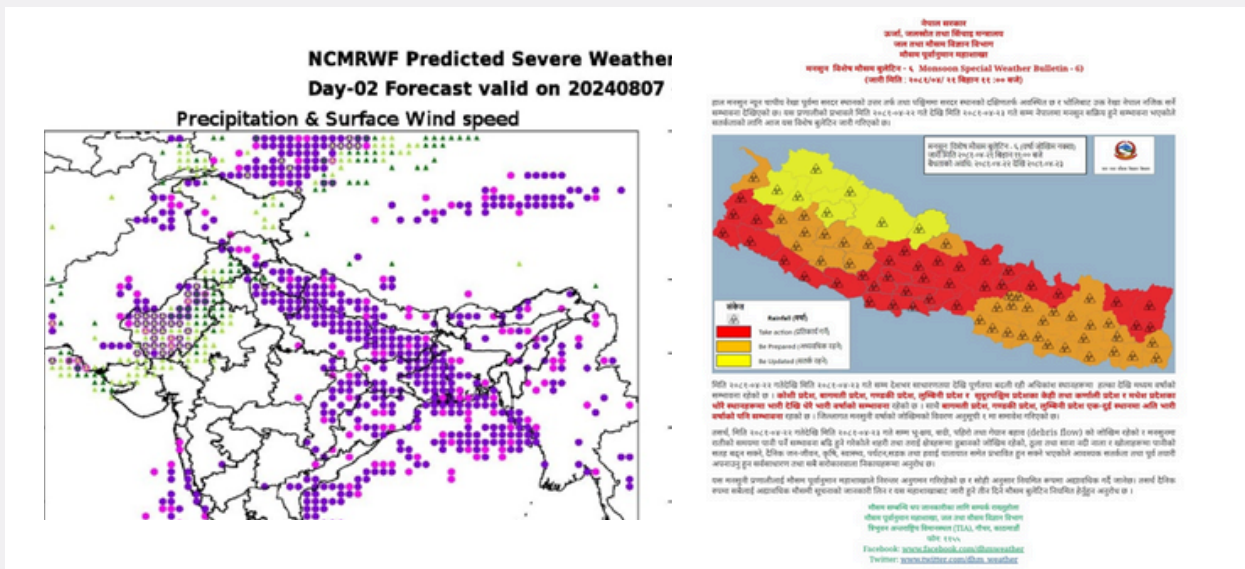
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Readiness Trigger Activation August: Karnali and Babai

5th August: Readiness trigger activated

Forecast:

The Department of Hydrology and Meteorology (DHM) issued its 6th Special weather bulletin on 5th August 2024 indicating active monsoon for 6th and 7th August. A red alert was issued for over three dozen districts including our targeted areas (Kailali and Bardiya) likely to be severely affected and urging for immediate actions to mitigate & minimize the potential impact. The DHM Weather Forecast Division advised on taking precautions against potential landslides, floods, and debris flows. NCMRWF also predicted extreme heavy rainfall over our targeted districts and its surrounding area on 7th August 2024.



Emergency team meeting:

STRONG in DRM team held an emergency meeting to discuss the weather forecast information. River watch level indicates Karnali River level at 6.96 mt. The forecasts from DHM and NCMRWF indicated that the thresholds set for both Karnali and Babai River basins had been met.

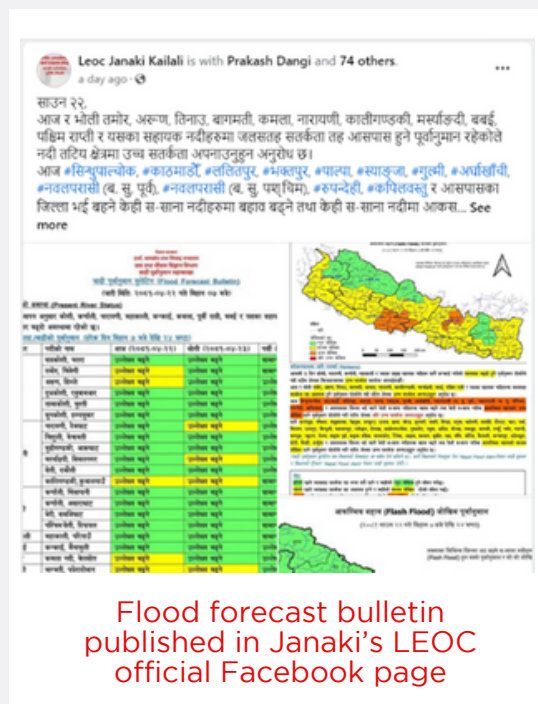
Immediately after the conditions were met, the red cross movement partners including the Sub-chapter and District-chapter team, and the municipal authorities were flagged about the readiness trigger thresholds met by the Sr. FbA Officer, FRC and Er/GIS Officer, NRCS through email, mass SMS and WhatsApp messages. The DRR focal person informed sectoral committee heads about the readiness trigger activation and requested them to be on a standby with a possibility of activation phase trigger within the next 48-24 hours.

6th August

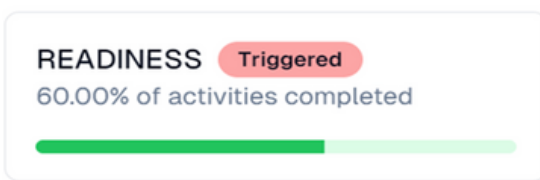
Municipalities published the forecasts through their Facebook page and informed ward and community stakeholders through mass SMS.

Tikapur Municipality forwarded the final list of pre-identified recipients list for Cash in Anticipation to NRCS District Chapter (DC) and NRCS HQ the data for verification. The data was sent to DRC for final verification and standby for cash transfer.

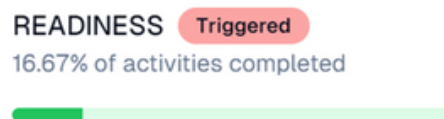
DHM issued the Flood forecast bulletin which indicated that for the next three days (6-8 August) Karnali River Basin at low risk with green highlight while the West Rapti and Babai River Basin were at medium risk of flood.



Flood forecast bulletin published in Janaki's LEOC official Facebook page



Early action completed against planned activities for Tikapur Municipality as of 6th August 2024



Early action completed against planned activities for Janaki Rural Municipality as of 6th August 2024

7th August

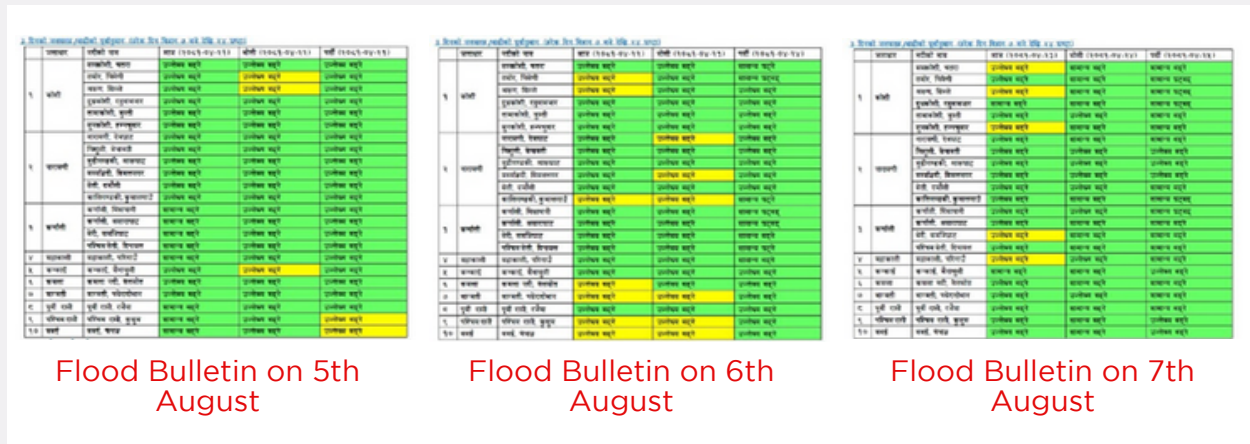
Real time data of from DHM shows Karnali River level at a steady trend at 8.3 mt at 1:50 PM while the surrounding area seems to be no rainfall. Regular monitoring of weather forecast, and real time data is ongoing.

Janaki, Gulariya and Barbardiya Municipalities have forwarded the final list of pre-identified recipients list for Cash in Anticipation to NRCS District Chapter (DC) and NRCS HQ the data for verification, which is still on-going.

Municipalities are continuing to disseminate weather forecast updates through multi-hazard early warning systems in their respective municipalities.

Readiness Trigger Activation: August 2024

At 4:00 PM, the Chisapani station recorded a water level of 8.56 meters, triggering our first stage activation. The water level trend indicated a rise, and DHM Special Bulletin No. 6 forecasted increased monsoon activity in Nepal on August 6 and 7 provided with, a red alert for over three dozen districts, including Kailali, Kanchanpur, and Bardiya. However, an analysis of ground conditions, rainfall patterns, and various forecasts indicated a very low probability of intense rainfall starting today. This indicated reduced risk of severe flooding in downstream communities of Chisapani station.



At 4:45 PM STRONG in DRM team (NRCS HQ, Field team, DRC and FRC) held an emergency meeting to discuss the ground situation and field observations. We provided briefing on the current weather forecast and an analysis of future weather patterns. Based on this information, the project team has decided not to activate the first stage activation trigger for the Karnali River Basin, even though the criteria for the first stage activation had been met.

Regular monitoring of the DHM flood bulletin predicted a normalization of water levels from August 5 to 7. On August 5, the Babai River Basin was highlighted in yellow, indicating moderate risk for August 7. The bulletin on August 6 continued to highlight the Babai Basin in yellow for both August 6 and 7. However, the bulletin on August 7 predicted that the Babai River would return to normal levels highlighted by Green. Meanwhile, the Karnali River maintained normal levels (green) throughout this period. Despite the red alert, an analysis of ground conditions, rainfall patterns, and forecasts from various sources indicated a very low probability of intense rainfall starting from August 7, 2024. This suggests a reduced risk of severe flooding in the downstream communities of Chisapani station.

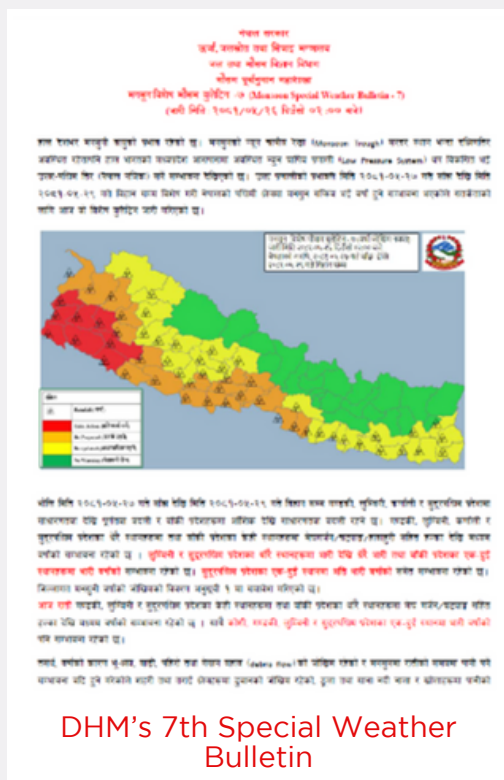
Early Action Framework (EAF) Activation September: Karnali and Babai

11th September: Readiness trigger activated

Forecast:

On September 11, 2024, the Department of Hydrology and Meteorology (DHM) issued its 7th Special Weather Bulletin, forecasting heavy rainfall from the evening of September 12 to the morning of September 14. A red alert was declared for Sudurpaschim Province, while Lumbini and Karnali Provinces were placed under a dark yellow alert. Areas targeted by the STRONG in DRM project – Kailali, Kanchanpur, and Bardiya –

was labelled red alert zone requiring immediate action. The bulletin emphasized the potential for severe impacts in these regions and urged prompt preparedness measures.



The activation of readiness stage was flagged to the Red Cross movement partners and the municipal authorities. Weather forecast, its pattern and ground observation were continuously monitored while accessing real-time data to gage the evolving risk.

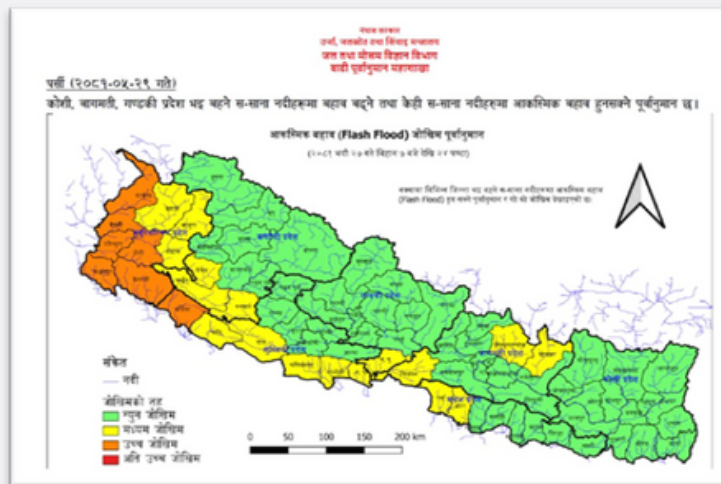
The Municipal authorities through the Local Emergency Operation Center (LECOs) alert the relevant stakeholders and communities regarding the weather forecast information.

12th September: Readiness stage

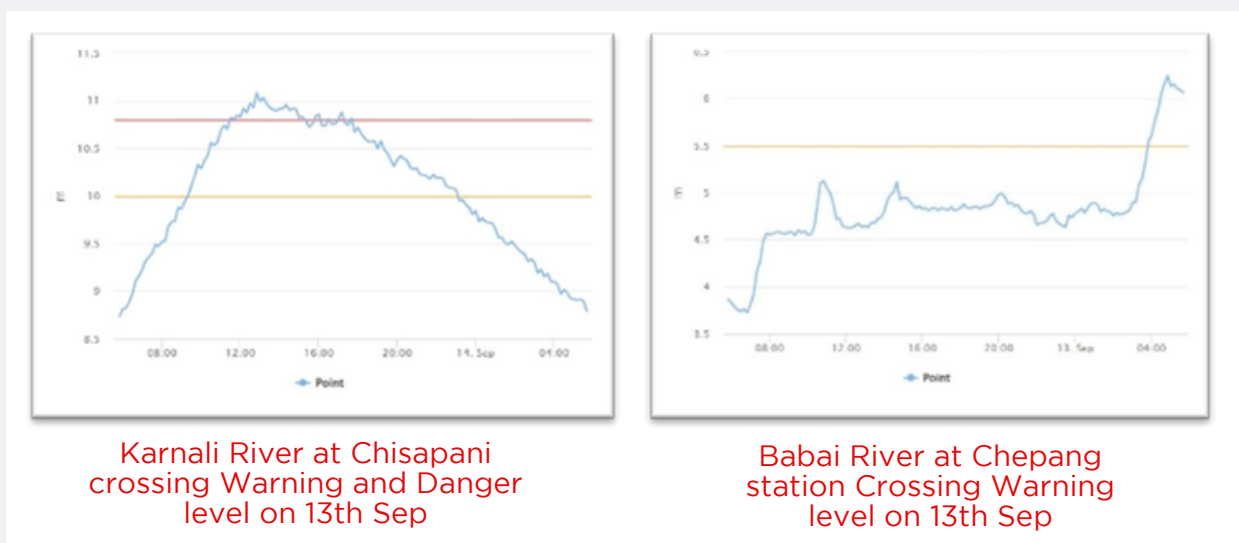
The DHM's Flood Forecast Bulletin on September 12th did not specifically highlighted the Karnali and Babai River Basins with any color code but indicated a possible significant rise in water levels and a risk of flash floods.

The DHM's Flash Flood Risk Prediction System highlighted the targeted districts with orange color, indicating a high risk of flash flood over the next 24 hours.

an increasing flood risk. Based on the forecast analysis and ground data observations, the risk of flooding and its impact on downstream areas of the Babai River Basin is higher compared to the Karnali River Basin. Historical data and evidence suggest that the Karnali River Basin, despite crossing danger levels, has experienced less significant impacts.



The Flash Flood Prediction System of the Department of Hydrology and Meteorology (DHM) has forecasted a high risk of flash floods in the target areas of Kailali, Kanchanpur, and Bardiya, highlighting these areas in orange for September 12 and 13. This indicates a significant risk of flash flooding, prompting continued early actions based on the agreed Framework (EAF).



Activation stage

9:20 AM: The Karnali River level surpassed the warning level, while the Babai River at the Chepang station had crossed the warning level earlier at 3:50 AM. These conditions triggered activation of the first stage as outlined in the trigger statement.

10:00 AM: An emergency meeting comprising Danish Red Cross (DRC), NRCS, Finnish Red Cross (FRC), IFRC and the Red Cross Climate Centre validated that the thresholds for activation stage had been met. A detailed

Early Action Framework Activation: September 2024

analysis of the forecast was shared, incorporating real-time data from ground observations and various forecasting sources. While most forecasts indicated a decreasing trend in rainfall from September 13 onward, real-time observations revealed a rising water level in the Babai River Basin, which had surpassed the danger level. This critical evidence triggered the second stage of activation, as per the Trigger Statement, which mandates activation when the Babai River exceeds the danger level and shows a rising trend, as monitored by DHM's River Watch system. During the meeting, the team reached out to DHM for further insights on weather conditions and downstream impacts, which suggested potential loss and damage in affected downstream areas.

11:00 AM: The Local Disaster Management Committee (LDMC) holds an emergency meeting where NRCS updates them about the weather forecasts and the ground situation. They continue to disseminate early warning messages through multiple mediums including multi-hazard early warning sirens, official Facebook pages, mass sms, IVR, email etc. The municipalities also issued formal letters asking stakeholders and the community to take early actions.

2:30 PM: DRC receives the request letter from the Gulariya and Barbardiya municipalities via NRCS to release the Multi-Purpose Cash (MPC) assistance as an early action to the 776 pre-identified households that have family members living with a disability. The pre-identification had been done in consultation with the municipalities at the preparedness phase using Social Security Allowance (SSA) registry.

3:00 PM: First lot of cash transferred to 100 households. By 4:00, majority of the cash had been transferred to the recipient's accounts.

5:00 PM: Recipients had informed about the cash transfer in two stages. First, they were informed about their selection to receive the MPC in anticipation of a flood before the cash had been transferred. By 5:00 PM, the recipients had been informed that the cash



Letter from Barbardiya municipality requesting the Red Cross to release the MPC to preidentified recipients.

Early Action Framework Activation: September 2024

had been deposited into their SSA bank accounts and the potential use of the MPC to take preventive measures. Within an hour, few beneficiaries had already encashed the MPC.

14th September

Based on ground observation, there was no impact at the communities. This had been a false alarm activation.

15th September

1:20 PM: Early warning message given to the MPC recipients to utilize the cash to take preventive measures as the monsoon is still ongoing, as it had been a false alarm.

16th September

Orientation to volunteers to conduct household visit to give message on the false alarm and the utilization of cash under such circumstance.

Volunteer mobilization for door-to-door messaging.

Recipients informed about the complaint and feedback mechanism. The mechanism is continuously being monitored; however, no complaints have been registered yet.

Reason for False alarm (No impact)

On 13th September, the Babai River at the Chepang station had crossed the warning level earlier at 3:50 AM. These conditions triggered activation of the first stage as outlined in the trigger statement. At 10 AM, an emergency meeting comprising Danish Red Cross (DRC), NRCS, Finnish Red Cross (FRC), IFRC and the Red Cross Climate Centre validated that the thresholds for activation stage had been met. A detailed analysis of the forecast was shared, incorporating real-time data from ground observations and various forecasting sources.

While most forecasts indicated a decreasing trend in rainfall from September 13 onward, real-time observations revealed a rising water level in the Babai River Basin, which had surpassed the danger level. This triggered the second stage of activation, as per the Trigger Statement, which mandates activation when the Babai River exceeds the danger level and shows a rising trend, as monitored by DHM's River Watch system. During the meeting, the team reached out to DHM for further insights on weather conditions and downstream impacts, which suggested potential loss and damage in downstream areas of Babai River basin due to the rainfall that had already occurred at the upstream area.

The decision to activate was based on two reasons. First, the predetermined thresholds had been crossed. Second, although the rainfall forecast showed declining trend the assumption was that the rainfall already occurred upstream of Babai would impact downstream communities. However, two major reasons were identified by the municipal authorities and the Red Cross partners for the no impact. First, the preparedness measures taken by the Municipalities and the Local Disaster Management Committees for monsoon such as clearing of the canals, reinforced weak infrastructures by placing sandbags, gabion walls etc. strengthened the previously assessed weak spots. Hence the risk assessment must be a dynamic process that needs to consider minute changes periodically at the communities.

Second, although the thresholds set by the DHM for Babai River Basin were revised in 2022/2023, it still is a very broad indicator of danger level based on which different municipalities or villages cannot assess the risk.

Lessons from the activation

The action took the activation decision based on the predetermined threshold and risk assessment. The Nepal Red Cross Society and the Municipalities already established this agreement by signing a Memorandum of Understanding. Therefore, on a retrospect the decision to activate had to be taken relying on the no regret approach to anticipatory action.

Early action assistance should focus on low hanging fruits and target those at the most risk to ensure that communities and government don't lose trust. The action approached the government and communities to conclude that persons with disabilities could be targeted for cash assistance in anticipation while other vulnerable groups could be targeted for other remaining early actions. This ensured that although there was no impact, communities were not dissatisfied by the assistance. Rather it helped build trust towards the government as they were assured that the government would support them in need. This enforces the no regret approach to anticipatory action.

The local government does not have the technical capacity to activate (analyze the generic forecast based on risk assessment to take the decision). The municipality has only one DRR focal person who is tasked with responsibilities other than related to disaster. Hence, the municipalities might not be able to activate the Early Action Framework without the support of the action supported technical team. There is a need to simplify the process by using technology (a dashboard that overlays forecasts and risk assessment to support the decision-making process), increase investment in technical capacities at the local level and improve DHM weather forecasts.

Implications of the false alarm on AA

Though Bardiya district (particularly Gulariya and Barbardiya municipalities) were not impacted by the September 2024 heavy rainfall, other parts of the country experienced unprecedented rainfall that led to severe flooding and landslides claiming 249 lives, with 18 missing and 177 injured. A Preliminary Loss and Damage Assessment of Flood and Landslide from September 2024 conducted by Ministry of Home Affairs estimated total loss of NPR 46 billion with the agriculture and livestock sector losses exceeding NPR 6 billion. The Department of Hydro-Met had provided timely weather forecast and advisories. Despite being generic and broad, these bulletins had been widely disseminated by various news agencies and humanitarian organisations. The

Reason for False alarm (No impact)

rise in unprecedented disasters and its resulting impact has led the Government of Nepal to reiterate the need to strengthen early warning systems, enhance effective risk communication and enhance disaster preparedness, anticipatory action and response across the country as per the Loss and Damage Assessment recommendation. The field monitoring report in Kanchanpur (Mahakali River basin) done by the DHM validates that municipalities such as Bhimdatta and Dodhara Chandani were able to disseminate early warnings and forecasts, including impact-based weather forecasts through various communication platforms, which helped raise awareness and initiate preparedness and early action, effectively reducing the impact of the extreme rainfall. At important platforms such as the National Conference on DRR, cases of local government such as Dodhara in Kanchanpur were highlighted who were able to minimise the impact by taking proactive measures based on the available weather forecast information. Hence, the need to strengthen early warning systems and disaster preparedness and anticipatory action has been reinforced by the monsoon 2024 case.

The Post Distribution Monitoring (PDM) report conducted by the action after the distribution of cash in anticipation shows that 79% of the respondents agreed that Multi-Purpose Cash (MPC) would have been instrumental in preventing or reducing the impact of floods had it occurred. The relevance of the MPC was also justified by the socioeconomic status of the respondents as majority of them were either smallholder farmers or daily wage earners. The PDM also showed that other than senior citizens, disability target selection criteria were accepted by majority of the stakeholders and the communities. Due to the acceptance of the targeting criteria by the communities and stakeholders, the MPC assistance improved social cohesion and no conflicts amongst the community members were reported. Even though there is no impact in the community as forecasted, the MPC assistance was positively received by the communities and they reported that it increased their confidence level to prepare for the forecasted disaster, increased trust in the early warning messages and increased trust towards the local government and the Nepal Red Cross Society. 83% of the respondents indicated that the assistance had positively influenced their relationship with family members. 25% of the respondents used the cash to purchase medicines or for health treatments while 20% used it to purchase food items followed by 18% used it for transportation cost for early evacuations.



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