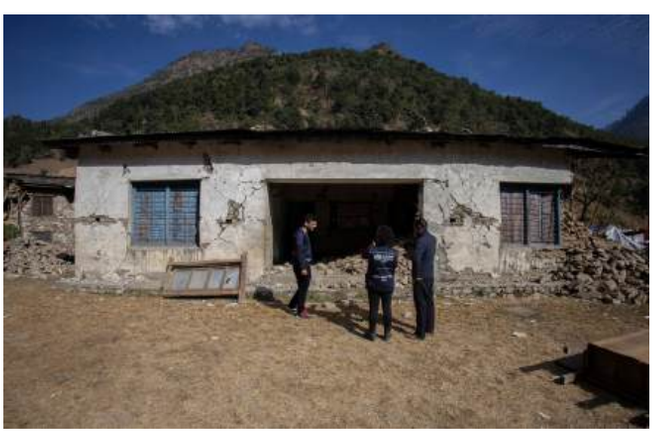
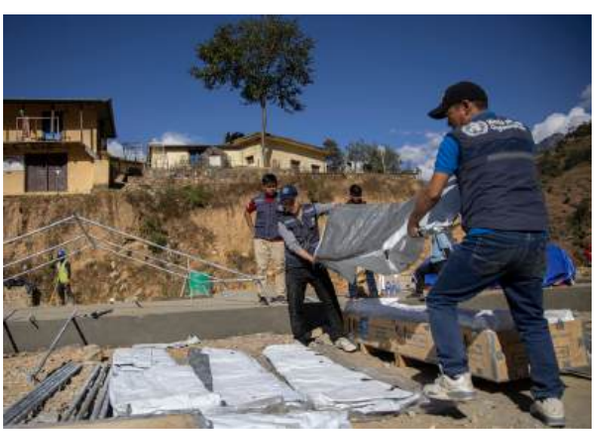
JOINT OPERATIONAL REVIEW

JAJARKOT EARTHQUAKE RESPONSE





Government of Nepal
Ministry of Health and Population

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Supported by:

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MESSAGE

A 6.4 magnitude earthquake had struck Jajarkot district of Karnali Province on the early hours of 3rd November 2023 trailed by more than three hundred aftershocks killing one hundred fifty-four personnel's, injuring approximately thousand people, displacing over ten thousand population, and damage exceeding sixty-two thousand households. Although the magnitude of the earthquake was relatively low, weak infrastructure and early hours of the day led to damage of thousands of households and injuries. The earthquake tested the resilience of communities and the capacity of our healthcare systems.

The ensuing humanitarian crisis demanded immediate attention to mitigate health-related risks and ensure the well-being of affected populations. In response, dedicated teams from the Ministry, alongside provincial and local authorities, mobilized swiftly to mitigate the crisis and provide essential healthcare services to those affected. The federal and provincial government proactively established health partner coordination mechanism and almost all operations at the field were guided by the provincial level in coordination with the federal level. Karnali Province effectively activated the provincial incident command system and conducted timely disease surveillance, communicated on good hygiene and sanitation to the displaced communities and prevented further fatalities and potential outbreaks.

The Ministry of Health and Population has undertaken a critical attempt to examine the response efforts by conducting this Joint Operational Review which is aimed to scrutinize every aspect of our response from leadership and coordination to emergency operations, surveillance, and continuity of health services. Through this review we have identified accomplishments as well as challenges and identified the underlying influences that shaped our actions. The successes we recognized were rapid deployment of response teams in close coordination with the provincial and federal government and the resilience of the healthcare workers in the face of adversity while the short comings were logistical hurdles, gaps in communications and strain on resources.

This review not only assisted us retrospectively but additionally it helped us in identifying areas of action the Ministry of Health and Population needs to work on. These key recommendations collectively discussed in the two-days program from participants plan the course for future preparedness and resilience-building.

We extend our gratitude to all stakeholders, including government agencies, humanitarian partners, and local authorities, for their unwavering dedication throughout the earthquake response. It is through collective action and a commitment to continuous improvement that we can mitigate the impact of disasters and safeguard the health and well-being of our citizens.

Dr Roshan Pokhrel
Secretary

World Health Organization
Nepal

MESSAGE

The World Health Organization (WHO) Country Office for Nepal extends its congratulations to stakeholders at the local, provincial, and federal levels for their exemplary collaboration in effectively responding to the earthquake that struck Nepal's Karnali Province in November 2023.

WHO also commends the Ministry of Health and Population (MoHP) for its leadership in uniting relevant stakeholders across all levels of government in addressing the health needs of the emergency response and for spearheading the Joint Operational Review. The latter is aligned with conducting after action reviews which is one of the voluntary components of the International Health Regulations Monitoring and Evaluation Framework. As a result of this crucial exercise, best practices have been identified, challenges acknowledged, and a clear set of recommendations forward has been established to strengthen Nepal's preparedness, readiness and response capacities.

The achievements in the emergency response are a testament to the strategic foresight and unwavering dedication of all involved. This report stands as a reflection of these attributes, providing a reflective examination of the leadership, coordination, planning, information management, operations, surveillance, vaccination, risk communication and community engagement, and continuity of health services during the response. The document highlights these aspects as best practices while also thoughtfully considering areas requiring improvement, accompanied by actionable recommendations.

WHO sincerely appreciates the active participation of all stakeholders who candidly shared their experiences, challenges, and lessons learned from the response. The dedication shown in developing immediate, mid-term, and long-term action plans across various themes is highly commendable. I am confident that the recommendations outlined in this document will significantly bolster Nepal’s preparedness and response capabilities and contribute to building a more resilient health system.

WHO remains steadfast in its commitment to supporting the MoHP in implementing these action plans, including not only the recovery and reconstruction efforts in Karnali Province but also towards enhanced health sector preparedness and readiness for future disasters and public health emergencies in Nepal.

Dr Rajesh Sambhajirao Pandav
WHO Representative to Nepal
26 August 2024

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Background

A 6.4 magnitude earthquake struck Karnali Province at 11.47 p.m. local time (UTC 6.02 p.m.), followed by several aftershocks. The epicenter was in Ramidanda in Jajarkot District, 65 kilometers northeast of Surkhet, the capital city of Karnali province. This is the largest earthquake to impact Nepal since the 7.3 magnitude earthquake in 2015.

Total Death	Total Injured	Total Rescued	Under Treatment
154	934	96	0

Status of Damaged Health facilities and HH			
District	Damage Health Facility	House Hold Status	
		Fully Damaged	Partially Damaged
Jajarkot	39	9,794	24,707
Rukum West	31	9,468	13,428
Salyan	6	151	988
Surkhet	0	4	32
Dailekh	0	1	5
Kalikot	0	0	93
Jumla	0	5	116
Grand Total	76	19,423	39,369

The earthquake and its aftershocks severely impacted the Jajarkot, Rukum and Salyan districts, resulting in 154 deaths. The death toll in the Jajarkot district was 101 and 53 in the Rukum West district.[1] The fully damaged households are 19423 and 39,369 are partially damaged. The earthquake and subsequent aftershocks damaged 76 health facilities, of which 13 were structurally non-functional, and need upgrading/or retrofitting in Jajarkot, Rukum West, and Salyan districts. In damaged health facilities, services have been provided via adjacent temporary installations.

Following the earthquake, as is typical in any disaster, the initial responders were the local populations. The seismic event rattled every household during the midnight hours, emphasizing the significance of assistance from neighbors. As dawn broke the next day, prompt measures were initiated by all three tiers of government (Local, Provincial, and National) to address the crisis, placing rescue operations as the foremost priority, followed by the provision of relief material. In the subsequent phases, all collaborative partners in development joined together to contribute to the ongoing response efforts for this catastrophic event.

This narrative report has documented major decisions and initiatives taken by the government that occurred from 03 November 2023 to 31 January 2024.

[1] Situation Report #41 is published by the Health Service Directorate of Karnali Province.

Federal-level Decisions

On 4 November, the Prime Minister visited the earthquake-affected districts and gave instructions for effective search and rescue including the distribution of relief.

While in Kathmandu, under the leadership of the Deputy Prime Minister and Home Minister held a meeting regarding effective disaster response in Jajarkot Earthquake. In addition to on-site observation by the Prime Minister, he instructed all government mechanisms to be involved in rescue and response proactively. All stakeholders were mobilized, specifically security agencies, local governments, and administration in search, rescue, and treatment.

On 04 November, a meeting on the Jajarkot earthquake was organized under the chair of the Deputy Prime Minister paying tribute to the citizens who died due to the earthquake and wishing for the recovery of the injured. The meeting made the following decisions:[2]

- Conduct search and rescue measures in earthquake-affected districts along with treatment of injured persons as the priority. Urgent medical equipment and expert medical personnel are to be mobilized immediately by fast-track means and injured victims are to be treated in Surkhet, Nepalgunj, and Kathmandu. Necessary support of ambulances and helicopters will be kept ready and managed by the Ministry of Health and Population.
- Relief management, temporary housing (Tents, Tarpaulin, Blankets, Mattresses, sleeping bags, etc.) from humanitarian warehouse storage in Surkhet, Nepalgunj and Kathmandu to be mobilized immediately based on the needs of earthquake-affected districts.
- 5 million rupees to be immediately sent from the NDRRMA to the District Disaster Management Fund of Jajarkot and Rukum West which will be spent for the instant relief activities according to the approved standards for immediate relief fund.
- A trained team from the APF Nepal for rescue and management will be deployed with the necessary materials for disaster rescue from the security forces.
- Nepal Red Cross Society (NRCS) will deploy trained human resources in coordination with the District Disaster Management Committee for the Initial Rapid Assessment.
- Designate Surkhet as the main center and Nepalgunj as a subsidiary center for rescue and treatment including the coordination and mobilization of resources as required.

[2]Nepal Earthquake Response: Jajarkot Situation Report (as of 4 November 2023)/NDRRMA

- Express sincere thanks for the assistance proposals received from international partners, and delegations for search, rescue, and assistance, on the required basis as of the additional details and damage request for assistance will be done.
- The road department will make necessary arrangements to immediately open the blocked roads.
- To adopt a one-door system through the District Disaster Management Committee for search, rescue, and relief, and arrange for all the supporting persons and agencies to coordinate and support through the same mechanism.

The government deployed an initial Rapid Response and Emergency Medical teams, including security forces and healthcare professionals, to affected areas. They were actively engaged in search and rescue operations, with representatives from the province, districts, local levels, and the community. Emergency healthcare facilities were established at provincial and district health centers, and various development partners allocated resources to assist the affected population with search, rescue, and urgent emergency needs.

On 5 November 2023, the National Council for Disaster Risk Reduction and Management (NCDRM) held a meeting for discussion on the Jajarkot earthquake and the Prime Minister provided instructions for carrying out immediate relief need assessment for effective relief distribution and rehabilitation of the affected population.[3]

The government deployed the medical teams and provided supplies in fast-track mode following the Jajarkot earthquake, with additional resources on standby at Surkhet, Nepalgunj, and Kathmandu. Free treatment to injured patient was provided. Search and rescue operations were completed, with the Ministry of Home Affairs coordinating support and relief efforts from government agencies, development partners, and private sectors. The Federal government released 50 million Nepali Rupees to the District Disaster Management Fund of Jajarkot and Rukum West districts, with NRS 200,000 each provided to families of dead individuals. Additional funds were managed to address relief support and temporary settlements in affected districts.

The NCDRM meeting made following major decisions:

- Comprehensive evaluation of the impact and damage caused by the Jajarkot earthquake to be carried out to identify the specific needs;
- Three levels of government (federal, provincial, and local) collaborate on interventions for relief, reconstruction, and rehabilitation.
- To formulate housing designs and standards, focusing on local characteristics, socio-cultural significance, and the utilization of local skills, technology, and resources.

[3]Nepal Earthquake Response: Jajarkot Situation Report #2 (as of 5 November 2023)/NDRRMA

On the response part, security personnel and local government representatives were actively involved in search and rescue operations in affected areas. Emergency health-care facilities have been established at provincial and district health centers. Development partners have allocated resources to assist the population with search, rescue, and urgent emergency needs. The government delegated the Nepal Red Cross Society with the Initial Rapid Assessment (IRA) process.

On 6 November, the government declared that rescue operations were completed, and relief operations began. The government decided to distribute relief through a "one door" system, with relief being distributed in Jajarkot and Rukum West districts.[4] Another 5.8 M earthquake aftershock struck the areas, however, no human casualties occurred.

On 7 November, the President visited the Jajarkot district and met with the injured earthquake survivors. The survivors requested adequate medical care, food, and shelter. President assured that needs would be met and promised to discuss the issue with the government.[5]

On 09 November, a meeting was held at the Ministry of Finance with the representatives of development partners, aid agencies, and international financial institutions in Nepal regarding the state of damage and loss caused by the Jajarkot earthquake and the future direction of reconstruction. The Chief Executive Officer of the National Disaster Risk Reduction and Management Authority (NDRRMA) presented a detailed report on the damage and loss caused by the earthquake and the resources needed for reconstruction.[6]

On 12 November, the 19th Executive Committee meeting of NDRRMA held which made 10 important decisions; of which last decision was particularly facilitating the health emergency response which has been indicated as "requesting the concerned local level and concerned agencies to immediately deliver basic facilities related to drinking water, toilets, and sanitation in the earthquake affected areas and related agencies will help in this activity" (see all in Annex 1).[7]

On 26 November, the 20th Executive Committee meeting of NDRRMA made four major decisions of which, **decision No. 3** outlined those adverse effects were seen in various service sectors by the Jajarkot earthquake and because of collapse and partial damage to the public infrastructures that were meant to provide services to the citizens in terms of schools, health centers, birthing centers, government/ non-governmental services, road transport, and water supply networks. These services were not in a condition to resume the general services regularly, therefore, it was decided to coordinate with all concerned Ministries/Departments/Line Agencies to ensure the necessary resources to resume and continue the services through the temporary infrastructures as best as possible. To execute this decision, it was discussed to make necessary amendments to the existing laws and policies by the concerned Ministry for which necessary coordination shall be done by the Ministry of Home Affairs (MoHA) and NDRRMA.8

[4]Nepal Earthquake Response: Jajarkot Situation Report #3 (as of 6 November 2023)/NDRRMA
[5]Nepal Earthquake Response: Jajarkot Situation Report #4 (as of 7 November 2023)/NDRRMA
[6]Nepal Earthquake Response: Jajarkot Situation Report #5 (as of 9 November 2023)/NDRRMA
[7]Nepal Earthquake Response: Jajarkot Situation Report #6 (as of 12 November 2023)/NDRRMA
[8]Nepal Earthquake Response: Jajarkot Situation Report #7 (as of 4 December 2023)/NDRRMA

Health Emergency Response at the National Level

Role of Health Emergency Operation Center and Health Cluster Coordination at national level

Health Emergency Operation Centre (HEOC) participated in important coordination meetings at NDRRMA, meetings at MoHA chaired by the Deputy Prime Minister and Minister of Home Affairs, meetings at the National Emergency Operation Center (NEOC) and provided health sector inputs, all that occurred on 04 November and meeting with health cluster lead and co-lead on 06 November. At the logistics part, HEOC coordinated for health logistics support to be sent to the Jajarkot and Rukum West districts and coordinated with the health partners to send their relief support along with the logistics support being sent by DoHS. Likewise, Health Partners responding to this emergency was also mapped. Further, HEOC developed its plan stating to receive daily updates from the PHEOC of Karnali province, regular coordination with deployed EMTs, hospitals, health offices, and PHEOC for health sector response including strengthening support from the partners at the federal level to respond to health needs arising from Jajarkot province.

On 07 November, a meeting was convened at EDCD and decided to carry out the plan that involved daily reporting of IPD and OPD cases at Early Warning, Alert and Response System (EWARS) sentinel sites, active syndromic surveillance targeting municipalities, case definition and reporting for priority diseases, stockpiling essential medical and diagnostic kits, assigning treatment sites at nearest hospitals, and deploying human resources from EDCD and WHO for municipality surveillance of communicable diseases. It also proposed the plan for the RRT committee to be activated for surveillance and response to communicable diseases and a roster of officials to be developed for deployment.

On 08 November, the first national-level Health Cluster Coordination (HCC) meeting was organized by the HEOC under the Ministry of Health and Population (MoHP) as Lead and WHO Nepal as Co-lead. The agenda of the first meeting was to receive updates from the Karnali province, where Dr Rabin Khadka, Provincial Health and nutrition cluster lead, Director, Health Service Directorate (HSD) updated on the health response activities and its status. Provincial cluster lead provided the status of the affected, injured, deaths, and people undergoing the treatment, and the details on the non-functional health facilities in the affected areas. Preparedness for Reproductive Health and Vaccination; Hospital preparedness and case management for events following the disasters were also discussed.[9]

[9] #1st HCC Meeting Minute_08-11-2023/HEOC

During the Cluster Coordination meeting, HEOC requested support from partners to assist at the provincial health needs for better management of the health-related response activities in the province and affected areas including information management, coordination and mobilization of surge capacities, assessment of affected health facilities (functional and non-functional) and other health facilities, continued surveillance for timely detection of any possible infectious disease outbreaks, re-initiation and continuation of essential health services especially for a high-risk vulnerable population, targeted surveillance at temporary shelters and Internally Displaced Populations, disability and rehabilitation; and mental health/psychosocial issues.

Action plans including assessments and information management along with the response activities at the provincial level were prepared and listed the way forward for short-term plans such as following the one-door policy through provincial authority before mobilization of any surge capacities (EMT/RRT), temporary health desk /field hospitals focusing on affected areas for addressing health needs of affected areas, dedicated human resources for continued surveillance of affected communities; SRH, MHPSS including psychosocial first aid in affected areas. In the medium- term it planned for targeted rehabilitation/physiotherapy services, structural safety assessment of health facilities, medical logistics preposition, and capacity building on disaster management, and regular drills and simulation exercises.

An update from the Department of Health Service (DoHS), Family Welfare Division provided the status of the immunization program at the affected districts and informed that there were no major issues regarding immunization, vaccines and related stocks, and cold chain mechanism. National Immunization Advisory Committee meeting also convened and issued the action points. Status on vaccination and vaccine-preventable diseases was updated then planned for monitoring and continuation of routine immunization services. Two Epidemiology and Disease Control Division (EDCD) health personnel were deployed immediately to Jajarkot to assess and respond to probable communicable disease outbreaks.

The Curative Service Division provided the details of the health facilities in Karnali Province and the status of the health facilities post-earthquake. The referral mechanism of the injured from the affected areas and the types of cases being managed. Put in priority of being prepared for management of potential disease outbreaks and rehabilitative services at the health facilities. Lists of items for rehabilitative needs and other essential items along with the available documents for case management are also provided.

The MoHP coordinated with stakeholders at the national level, including MoHA, NDRRMA, and NEOC, and at the provincial level specifically with HSD and PHEOC. MoHP called meetings with the Department of Health Services and cluster co-leads to alert humanitarian health partners and identify ways forward. Health Cluster meetings were held twice a week in November for two weeks to share updates and identify needs.

Health Emergency Response at the Provincial Level

Provincial Health Emergency Operation Center and Health & Nutrition Cluster Coordination at the Provincial Level

Under the leadership of the Ministry of Social Development (MoSD), Health Service Directorate (HSD), Karnali province took the pivotal role in emergency health response which has efficiently mobilized the Province Health Emergency Operation Center (PHEOC). HSD convened the meeting the next day of earthquake on 4 November, early in the morning and decided to activate the Incident Command System and implementation of the provincial Health Response plan.11 A team of four medical teams comprised of consultants and paramedics was deployed to Jajarkot within 12 hours of the earthquake, and an information hub was established at PHEOC. Ambulance were mobilized, and further six ambulances were kept on standby at Surkhet Airport; subsequently, an additional 75 human resources were deployed for earthquake response. On the same day, the Health and Nutrition Cluster was activated and organized two meetings where health partners were present and committed to immediate health response in earthquake-hit areas. Emergency healthcare facilities have been established at health centers, and development partners have allocated resources to assist the affected population with urgent emergency needs.

The immediate plan involved a one-door policy for the health response, the immediate mobilization of surge capacities, temporary health desks and hospitals set up, dedicated human resources for continued surveillance, and mental health and psychosocial first aid/ counseling in affected areas, with the provincial authority approving these measures immediately; and establishing regular communication channels between local and district levels. For active syndromic surveillance targeting the local levels in earthquake-affected areas, the province was actively involved in surveillance where EDCD provided support.

As of 31 January 2024, a total of 26 Emergency Medical Teams- including doctors, nurses, and paramedics, were also mobilized. Likewise, 33 meetings of the Health and Nutrition cluster are organized at the provincial level.

[11] See on Annex 2

Provincial-Level Decisions and Immediate Response

On 04 November at 6 am, an urgent meeting of the Provincial Disaster Management Council was called under the leadership of the Chief Minister of Karnali Province. The meeting prioritized the immediate rescue and relief along with command post establishment, and human resources mobilization and requested government agencies and partner organizations, political parties, and Civil Society Organizations to join hands in extending humanitarian support. From the early hours of the 4 November, government, UN agencies, and humanitarian partners engaged in mobilizing immediate relief support from the humanitarian staging area in Surkhet.

In response to the earthquake's impact, Nepali Army personnel were deployed for rescue and relief work in the earthquake-affected areas of Jajarkot and Rukum West. A team of 67-Armed Police Force (APF) personnel from the Ashram Battalion in Jajarkot deployed for search and rescue operation of the earthquake survivors and successfully set up temporary shelter camps across earthquake-affected areas, specifically in Nalagad Municipaltiy and Bheri Municipalities. In Nalagad, three temporary camps with 20 beds each were set up, while in Bheri, five camps with a combined capacity of 100 beds were made operational to provide temporary relief for earthquake-affected individuals for a projected duration of about 5-6 months. The camps are equipped with essential amenities, including electricity, water, and toilet facilities. Additionally, the APF established similar facilities in two other locations based on local needs and demands.[10]

Likewise, on 5 November, Ministry of Internal Affairs and Law (MoIAL) in Karnali Province circulated a data collection template to District Emergency Operation Centers (DEOCs) for the collection of the latest updates on human casualties, public and private infrastructure damage, and Food and Non-Food Items need assessment.

[10]Nepal Earthquake Response: Jajarkot Situation Report #1 (as of 4 November 2023)/NDRRMA

Sub-Committee and Response Plan

The Provincial health and nutrition cluster led to the realization of the need for systemic and coordinated approach to response identifying seven sub-committees and defined their area of work, roles and responsibilities.

Hospital Preparedness and Case Management

Majority of cases following earthquakes resulted soft tissue injuries, fractures, and head injuries. The hub and satellite hospital network of the province were involved in coordination and management of the cases. There were 31 referrals to Province Hospital Surkhet, of which 50 % of cases were soft tissue injuries. Out of 53 referrals received in Bheri Hospital, Nepalgunj one required treatment in the Intensive Care Unit, and 10 cases required surgical intervention (18% of total cases received). Health Service Directorate of Karnali province stated that the health facilities in Jajarkot and Rukum West have adequate human resources to manage the cases. Definitive treatment of trauma cases was delivered at assigned hub hospitals of the region. Further, Nine cases were referred to Kathmandu for required specialized treatment, with eight in Tribhuwan University Teaching Hospital and one in the National Trauma Center/Bir Hospital.

Surveillance

As there was increasing risk of Acute Respiratory Illnesses (ARI), Acute Water Diarrhea (AWD), and other infectious disease with outbreak potential in the affected municipalities, a plan was made for daily reporting of In-Patient and Out-Patient cases at Early Warning and Reporting System (EWARS) sentinel sites, initiating active syndromic surveillance in targeted municipalities, developing case definitions and reporting for priority diseases, stockpiling essential medical kits, assigning treatment sites at nearest hospitals, deploying human resources from EDCD and WHO for Community Based surveillance, developing a roster of required human resources for outbreak response, and activating an Rapid Response Team committee for surveillance and response to communicable diseases.

Preparedness for Vaccination

The National Immunization Advisory Committee meeting emphasized the continuation of routine immunization and hygiene promotion, including missed vaccination schedules for up to 5 years, additional vaccinations for measles-rubella, Typhoid Conjugate Vaccine, and Oral Cholera Vaccine (OCV), and ensuring adequate vaccine stock. The vaccine stores in Jajarkot and Rukum West districts were not damaged, but the Ice Lined Refrigerator (ILR) in Primary Hospital, Limsa, Barekot Rural Municipality was not maintained due to Structural damage to the hospitals' building and electricity cut-off. Vaccine carriers were adequate and functional, and Routine Immunization (RI) vaccines and syringes were in stock at both districts. RI sessions were completed in October in both districts and recommended for active Vaccine Preventable Disease (VPD) surveillance to contain outbreaks such as measles, rotavirus, and increased influenza cases.

Following the earthquake, Provincial Health Logistics Management Center sent 300 vials of the Tetanus Toxoid vaccine to Jajarkot and Rukum West for prophylaxis of tetanus for personnel involved in search and resuce. The plan was made to monitor and continue routine immunization services given the earthquake situation and recommended for strengthening RI vaccination for missed children up to 5 years of age.

Sexual and Reproductive Health Preparedness

In regard to Sexual and Reproductive Health Preparedness, Interagency Reproductive Health (IARH) Kits and Health Test Kits were distributed to Jajarkot and Rukum-West for earthquake response at various health offices, hospitals, and health posts. Tents were also provided at Primary Hospital, Dalli, Nalgadh and Health Post in Barikot Rural Municipality. Midwives had continued to provide reproductive health services in hospitals, birthing centers and temporary facilities including tents at places where permanent structures were affected by earthquake. There was rising need for support of maternity waiting house to protect pregnant women and lactating mothers.

Mental Health and Psycho-social Support Preparedness

Through various partners and supporting agencies, Psychosocial First Aid (PFA) was provided, and counselors were mobilized in affected areas.

Protection Preparedness

Protection, menstruation hygiene, and shelter supplies were delivered immediately after the earthquake in Jajarkot and Rukum West districts including Dignity Kits, Adolescent Girl Kits, Tarpaulins, Solar Lamps, and Winter Kits, etc. The distribution was coordinated with the provincial government, District Disaster Management Committees, and municipalities/rural municipalities.

Joint Operational Review on Jajarkot Earthquake Response

As outlined, the timely response from the governments at all three levels (Federal, Provincial and Local) addressed the immediate Health needs of the earthquake-affected population. Specifically, health emergency interventions made a crucial impact on stabilizing the overall health situation and containing the probable disease outbreaks in earthquake-affected districts. There were learnings about health emergency response including limiting factors that constrained the response activities as desired.

In this regard, the Ministry of Health and Population (MoHP) organized the two Joint Operational Review Program with participation from three tiers of government and WHO involved in earthquake response on 20-21 February 2024.

The Joint Operational Review had the following objectives:

- **Collaborate with stakeholders to identify challenges and best practices in responding to the Jajarkot earthquake.**
- **Identify and sustain successful best practices to prevent future mistakes.**
- **Collect lessons learned from multiple stakeholders during the response.**

Participants in the Joint Operational Review program were identified as their involvement in the earthquake response with MOHP leading health response at federal level with support from various division of DoHS, Health Service Directorate, Karnali Province leading the health response at provincial level with guidance of Ministry of Social Development and active support from Provincial Health Logistics Management center and Provincial Public Health Laboratory, directors and representatives of Hub and satellite hospital network, health coordinator of most affected seven local levels and members of Incident Management Team of WHO Nepal. The program focused on the leadership and coordination of the response, collaborative surveillance and immunization, case management, and the continuity of essential health services.

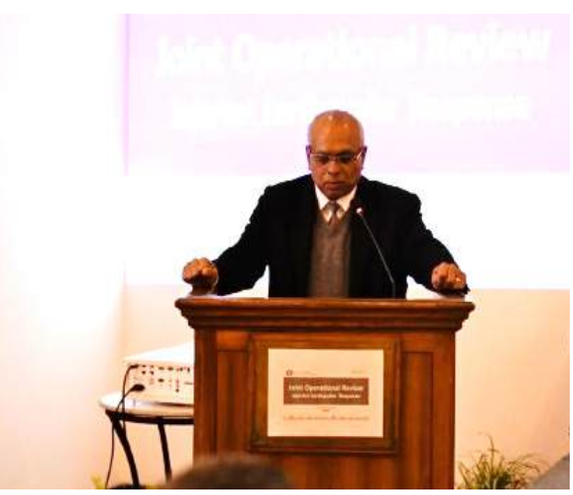
To maximize the outputs, the Joint Operational Review program followed principles such as participatory, open, and honest spirit, space for experience sharing, and analysis of the health emergency response. The review program was focused on identifying strengths and challenges and identifying contributing factors and root causes. This involved recognizing the strengths, impacts, and challenges of the response, as well as understanding the factors that contribute to these issues. It also focused on identifying the best practices, and enabling factors, as well as the challenges and limiting factors.

Opening Ceremony

The Opening ceremony of the program was chaired by Dr Prakash Budhathoky, Spokesperson, MoHP / Chief Health Emergency Operation Center, in presence of Dr Bikash Devkota, Additional Secretary, MoHP, Dr Dipendra Raman Singh, Additional Secretary, MoHP (Virtual Presence), Dr Bhoj Raj Sharma Kafle, Secretary, Ministry of Social Development, Karnali Province, Dr Rudra Marasini, Acting Director General, Department of Health Services, Dr Rajesh S Pandav, WHO Representative to Nepal, Directors of various divisions of MoHP and DoHS, Directors of hub hospitals, Director Health Service Directorate, Karnali Province, Director, Provincial Health Logistics Management Center, and representatives from relevant federal, provincial authorities, and health coordinators of seven most affect local levels along with WHO Incident Management TeaMs. The summary of remarks delivered by delegates are summarized below:

Dr Rajesh Sambhajirao Pandav

WHO Representative to Nepal



Dr Rajesh Sambhajirao Pandav, WHO Representative (WR) to Nepal commends the local government and district authorities' leadership and coordination of an effective health response to the Jajarkot earthquake. Additionally, he acknowledges the federal government for their efforts and given during the emergency response.

He mentioned that Nepal has responded to the health needs arising from the November 2023 earthquake with coordinated efforts from three tiers of government and support from humanitarian and development partners. He recalled the memories of the Gorkha 2015 earthquake, which resulted in over 9,000 fatalities, had taught Nepal lessons and provided recommendations for strengthening critical preparedness activities. Following which, Ministry of Health and Population laid foundation for effective coordination and information management, through establishment of network of Health Emergency Operations Centers and hub and satellite hospital networks, and enhancing emergency care frameworks in pre-hospital, hospital, and post-hospital service care for life-saving case management and patient referral services.

WR stated that WHO Nepal is committed to strengthening the Ministry of Health and Population's capacity to prepare for health needs arising from disasters and public health emergencies.

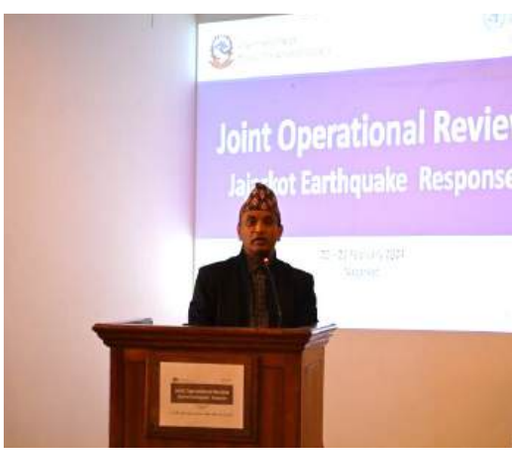
Dr Rudra Marasini,

Acting Director General, Department of Health Services
Director, Epidemiology and Disease Control Division, DoHS

Dr Rudra Marasini stated that the Jajarkot earthquake provided valuable lessons for emergency response, and lessons learned from the 2015 earthquakes were also applied in this case. The Health Service Directorate, Karnali province played a significant role in the efficient response. Dr Marasini recommended for organizing a provincial-level comprehensive review, involving all sectors, including civil society and political parties, focusing on "Beyond the Health Response" to reflect on gaps and reforms for future disasters. According to him, Local Governments played a significant role during the emergency response period. Effective emergency response plans, efficient coordination, and a one-door policy on health response added value to the swift response. Coordination among federal, provincial, and local governments is crucial for a successful disaster response in the future.

Dr Bhoj Raj Sharma Kafle

Secretary, Ministry of Social Development, Karnali Province



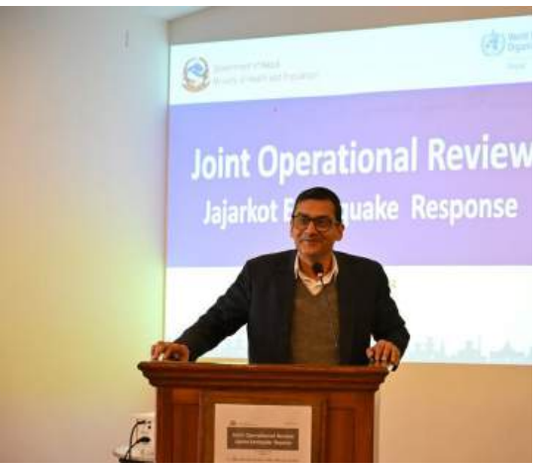
Dr Bhoj Raj Sharma Kafle stated that four distinct entities were highly involved during the Jajarkot earthquake response: federal, provincial, and local governments, as well as reputable organizations such as the World Health Organization. Each of them has a certain specialization and area of expertise. While reviewing the Jajarkot earthquake response actions, we frequently hear that thing went well.

While attending this Joint Operational Review program, he also felt that the federal government was fully engaged and expressed his appreciation to the Ministry of Social Development at the provincial level and the MoHP at the center.

Dr Kafle stated that the local governments had their limitations and were evolving. The Provincial Ministerial Council had a 20-million-rupee emergency fund, which was used during this situation. He stated that there were also concerns about disease outbreaks and severe cold weather impact, but these difficult phases have now passed.
The Secretary appreciated the MCKs' establishment in affected areas to continue the health services with WHO support.

Dr Bikash Devkota

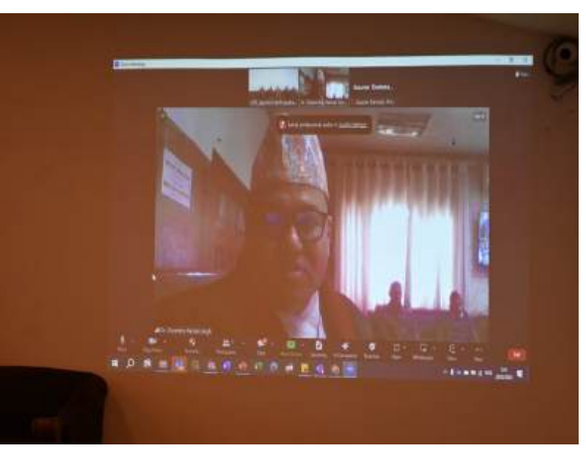
Additional Secretary, MoHP



Dr Bikash Devkota stated that he was here to learn about the experiences from the Jajarkot earthquake response. He stated that this Jajarkot earthquake response is an example for the province and local governments on how to manage the disaster. The health response to the Jajarkot earthquake demonstrated that the provincial and local governments can add substantially to disaster management. He mentioned that people are still living in temporary shelters, and a lack of basic requirements has a significant impact on health. He also emphasized the need for a multi-sector review "beyond the health sector" to be organized by the provincial government, and the WHO is requested to support the health sector. Dr Devkota also urged HEOC to communicate the outcomes of this collaborative operational review program with everyone in MoHP. Finally, Dr Devkota appreciated the WHO's contribution to the Jajarkot earthquake response, from the beginning.

Dr Dipendra Raman Singh

Additional Secretary, MOHP

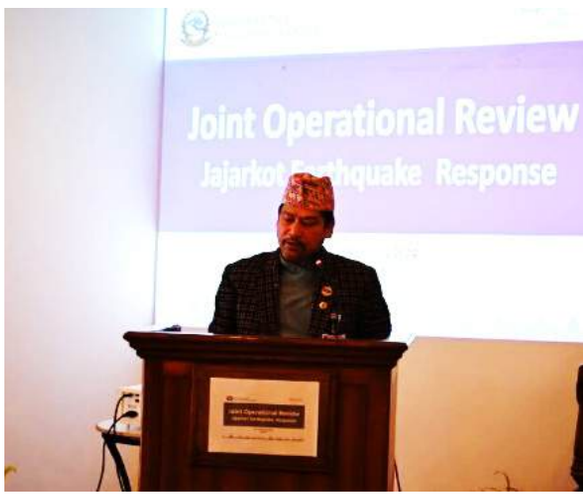


Dr Dipendra Raman Singh, Additional Secretary of the MoHP addressed this Joint Operational Review program virtually.

He thanked all who participated from the MoHP, provincial, and local governments. Dr Singh notably praised HEOC for conducting this joint operational review program, as well as EDCD, DoHS, and Management Division, including WHO for its support. He also praised the role of local governments in responding to this emergency and stated that the Jajarkot Earthquake response was a remarkable effort that was skillfully implemented and emphasized the need for resilience throughout time. He praised the mobilization of healthcare components and their inclusion, as well as the ability to set standards and reach out to affected people through possible responsibilities and responses. Dr Singh emphasized the need for health system resilience and the necessity for operational procedures that encompass WASH, infrastructure, and other sectors at the same time. He praised the MoHP team and urged them to actively engage in this joint operational review program, together with the relevant stakeholders and encouraged them to be prepared for potential future emergencies

Dr Prakash Budhathoky

Spokesperson, MOHP / Chief, HEOC



Dr Prakash Budhathoky, the Chairman of the Joint Operational Review Program, highlighted that Nepal lies in disaster-prone area and its earthquake fault line, with the 2015 earthquake having the most significant health, socio-economic, and development impact. He mentioned that the Western part of the country was also at risk, with the largest earthquake hitting on November 3, 2023.

According to him, the Health Emergency Operations Center (HEOC) and the provincial government played crucial roles in response, with the Health Service Directorate and Ministry of Social Development of Karnali province providing extensive coordinating roles. He highlighted Security agencies' role in search and rescue and that healthcare workers' performance was outstanding in those difficult times. He appreciated the local governments' significant role during the search, rescue, and response period. He stated that the review program aims to share lessons learned and shortcomings, which will be used in future disasters. The chair urged active participation from participants.

Technical Session

Federal Response to the Jajarkot Earthquake

Dr Prakash Budhathoky

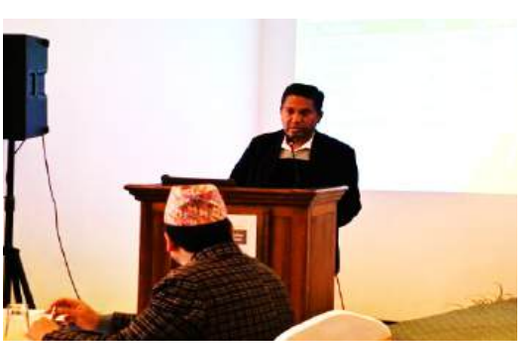
Spokesperson, MoHP and Chief, HEOC

Dr Prakash Budhathoky emphasized the role of the Health Emergency Operation Center (HEOC) when he took charge of it just two weeks before the Jajarkot earthquake. The earthquake occurred on November 3, 2023, at midnight in Ramidanda, Barekot Municipality, Jajarkot district and while the rescue operation was efficient, the health response was sensitive and challenging. However, the response went well due to the joint effort of all three levels of government - Federal, Provincial, and Local - and each played a significant role. Dr Budhathoky shared insight of the emergency response mentioning that the earthquake occurred at midnight, and communication with the concerned authorities was established within a few hours. He explained that past disaster preparedness efforts were utilized, which enabled to respond and the first EMT was deployed to the Jajarkot Earthquake from Kathmandu by early morning the next day.

He also mentioned that the hospital referral system was efficient and injured patients were brought into provincial hospitals, district hospitals and to the hub and satellite hospitals, which mitigated the need for cases to be brought to Kathmandu. According to him, this was possible because hospitals networks had been strengthened prior to the earthquake. Dr Budhathoky also shared about activating Incident Command System (ICS); however, since it was a localized emergency, MoHP remained as backup support to Karnali province, who activated ICS at the provincial level. Support from the Management Division, EDCD, and Family Welfare Division proved very crucial. Also, MoHP decided to activate the Health Cluster, regularize its meetings mapping resources and support from health partners, and mobilize it. He stated that support received from the health development partners, specifically the WHO support was crucial, which is mandated to provide technical support to the government.

Dr Shrawan Kumar Thapa

Director, Management Division of Department of Health Services, MoHP



Dr Shrawan Kumar Thapa stated that he was in Bir Hospital working as Deputy Director when the earthquake happened. At the time, and in consultation with the Vice Chancellor of the National Academy of Medical Sciences, a Rapid Response Team (RRT) for the Jajarkot earthquake response was formed. He stated that there was no separate budget allocated for the emergency and no buffer stocks of medical items, which could have delayed the response, and mentioned this situation may arise in the future and recommended addressing these sorts of shortcomings to enable prompt response.

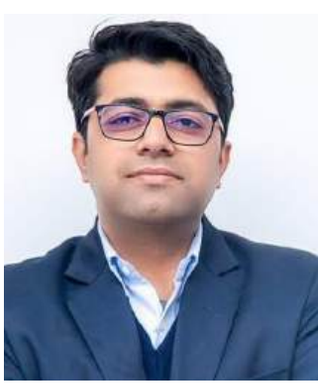
Dr Thapa also presented a list of medical commodities sent for the Jajarkot earthquake response from the management division, purchased through emergency procurement. As reflected in HOPE training, he suggested budget planning to ensure preparedness for future emergencies.

Mr Kaushal Subedi,
Public Health Expert, Epidemiology and Disease Control Division

Mr Kaushal Subedi made a presentation on the established post-earthquake surveillance system. He highlighted that the focus was on identifying unusual disease patterns promptly and responding by prioritizing resources for strong surveillance systems, which is crucial for maintaining safety and security after a natural disaster. He said that the provincial government initiated the process and provided temporary access to EWARS in local health facilities. The objectives were to assess the accuracy of data collected through syndromic surveillance, identifying gaps in data collection and reporting, and predict probable outbreaks.

He appreciated that the municipality provided strong support to the hospital, ensuring smooth health services in the temporary setup, and lab services were fully functional; however, the weakness lies in the lack of timely data reporting, poor hospital waste management, and community reluctance to water purification. Data discrepancies, incomplete recording, lack of assigned HR for syndromic cases, confusion in case definition, technical glitches in software like EWARS, and decoding issues were the identified gaps. He stated that during the three weeks of surveillance, the occurrence of syndromic cases has not significantly increased; however, concerns about potential water-borne diseases due to poor waste and drinking water management persisted.

Dr Abhiyan Gautam
Child Health Division and Immunization



Dr Abhiyan Gautam virtually presented the vaccination program in affected areas and its status, stating that immunization, vaccines, supplies, and cold chain processes were intact. According to him, the National Immunization Advisory Committee provided recommendations for further action, updating vaccination status and vaccine-preventable diseases. He stated that the lessons from the 2015 earthquake were implemented during the Jajarkot earthquake, including shifting immunization campaigns earlier to prevent outbreaks. MR Vaccine and TCV were administered, meeting targets in the Jajarkot and Rukum West districts.

Dr Prasanna Napit

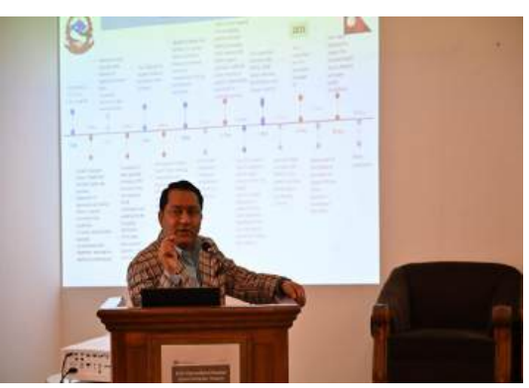
EDCD, Leprosy Section and Disability Management Division

Dr Prasanna Napit stated that the needs assessment of the disabled population was conducted and provided necessary health commodities and assistive devices and mentioned that rehabilitation camps were conducted in affected areas and formed an emergency rehabilitation team. According to him, assistive devices including basic physiotherapy equipment were also provided, and 297 items of assistive devices to the health facilities of Jajarkot and West Rukum. Likewise, three physiotherapists were deployed to provide physiotherapy services to earthquake-injured individuals; and outreach camps and home visits were conducted. Dr Napit recommended integrating rehabilitation at the primary healthcare level, implementing skill transfer training for primary healthcare workers, and developing a cross-referral mechanism.

Provincial Response to the Jajarkot Earthquake

Dr Rabin Khadka,

Director, Health Service Directorate, Karnali Province



Dr Rabin Khadka mentioned that the activation of the Incident Command System and the Health and Nutrition Cluster led to the implementation of the Provincial Multi-Hazard Contingency Plan. Ambulance drivers were mobilized, the health facility status was assessed, and seven field mobilization teams were formed for daily need assessments, coordinating first aid treatment, and providing psychosocial first aid (PFA); and backup teams were formed under HSD leadership. Stating the various response activities carried out in the earthquake-affected areas such as Water Quality Surveillance, Disease Surveillance, Syndromic management, First Aid, and Medicine distribution; the orientation on Preventing and Responding to Sexual Misconduct (PRSM) organized for the members of the Health and Nutrition Cluster and government officials. MR and TCV vaccines were provided to the high-risk population to prevent pneumonia. Decisions were made to ensure daily services like disease control, nutrition, child health, family health, and other services are utilized, organized, and regulated.

Various sub-clusters such as SRH, MHPSS, Child Health, Nutrition, Rehabilitation, and Disease Control were formed, and their activities were outlined and disseminated. The Health Cluster determined 105 action points, out of which 83 have been completed, 18 are ongoing, and four have not been initiated yet.

Dr Khadka summarized the gaps and challenges as follows:

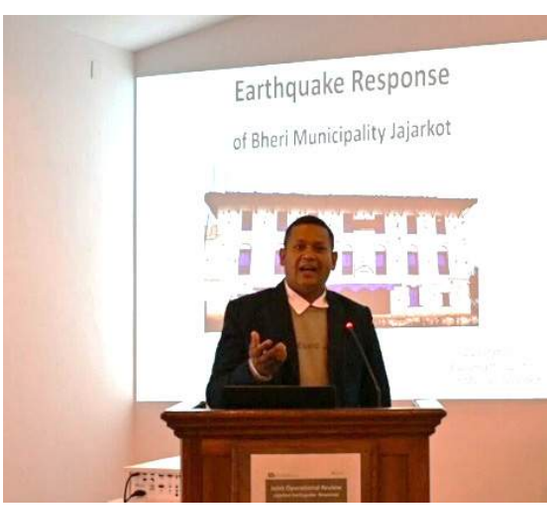
- Difficulties in providing effective and timely responses in geographically challenging areas.
- Delay in recording data related to deaths, injuries, affected population, and health facilities.
- Delay in deploying human resources to affected areas.
- Managing the necessary human resources during an emergency.
- Conducting assessments of health facilities, including structural, non-structural, and
- functional aspects.
- Reconstruction of damaged Health Facilities, and repair and Maintenance of damaged equipment.

Dr Khadka has suggested several measures for improving disaster management and response. These include creating and reactivating local-level RRT, conducting regular drills and simulations, preparing medical logistics, and building capacity for disaster management.

Experience Sharing

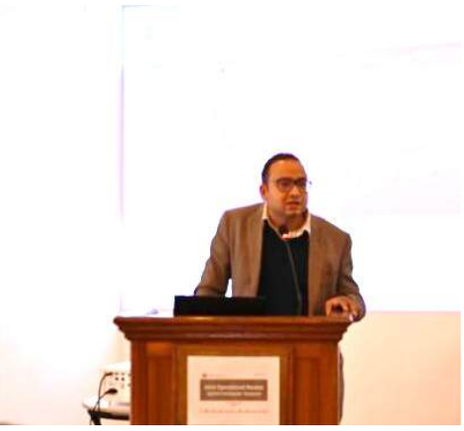
Mr Dip Bahadur Oli

Public Health Inspector, Bheri Municipality, Jajarkot District



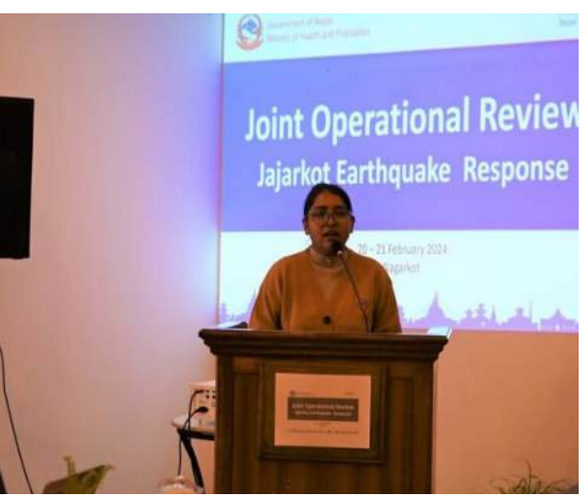
Mr Dip Bahadur Oli expressed his gratitude to the organizers of the Joint Operational Review program which included representation from the local government level. He provided an overview of the situation after the earth-quake, where a total of 109 individuals lost their lives and over 400 people were injured in this municipality. He stated that immediately after the earthquake, search and rescue was carried out effectively. The first day was chaotic but triage was implemented to categorize the level of injuries, and those who were injured were referred to a provincial hospital in Surkhet. There was also good support for Psychological First Aid. The nutrition assessment (MUAC screening) on 2200 cases showed surprising data, revealing 6 cases of Severe Acute Malnutrition (SAM) and 64 cases with NAM. These cases were followed up and brought into the system. Additionally, assistance was received in the form of near-to-expiry medicines and food items WHO supported syndromic surveillance, and a medical tent was set up in Bahunthana to continue providing essential health services.

Dr Shakti Prasad Subedi
Director, PHLMC, Surkhet, Karnali Province



Dr Shakti Prasad Subedi stated that the Incident Command System (ICS) was activated immediately after the earthquake. The next day the first meeting was organized at 6 am, and within 2 hours an immediate response plan was acted upon accordingly, including the delivery of medicines and medical commodities first to affected districts and later to local governments. A procedure was adopted to receive requests for medicine from local governments via the districts and then supply it accordingly. The majority of the local governments also had provisions such as purchasing medicines or a "One-door policy", which helped to implement response activities. He mentioned that there is no budget for buffer stock at the provincial level and this should be placed in priority, to supply in case of other disasters in the future. He stated that there was good support from development partners. He stressed on importance of inter-cluster coordination, specifically with WASH. He stated that the collective approach along with the Management Division, EDCD, and Family Welfare Division succeeded in coordination with three levels of government.

Dr Pratikshya Bharati,
Manager, Health Service Office, Jajarkot



Dr Pratikshya Bharati stated that she was deployed to the earthquake-affected area four months before the occurrence of the earthquake. According to her experience, many EMTs arrived, some of whom had coordinated with the province, while others came without coordination. It was difficult to decide where to deploy them, and they were reluctant to go to remote areas, preferring to stay in the district headquarters. Instead, healthcare personnel, who were already present in the area before the earthquake, were mobilized to remote and accessible areas. Despite difficulties in providing food, accommodation, and transportation support, was able to manage the situation. She suggested that in future emergencies, the deployment of EMTs should be done with greater attention to such issues and they should be fully prepared.

Dr Bharati added that the buffer stocks of medicine and medical commodities were sufficient, but many were near expiry, which caused challenges in their safe disposal. However, the health response went smoothly, with a focus on patient categorization through triage. She expressed equal gratitude to all levels of government and stakeholders who collaborated in the earthquake response.

Dr Sushil Pokhrel

Manager, Health Service Office, Rukum West Hospital

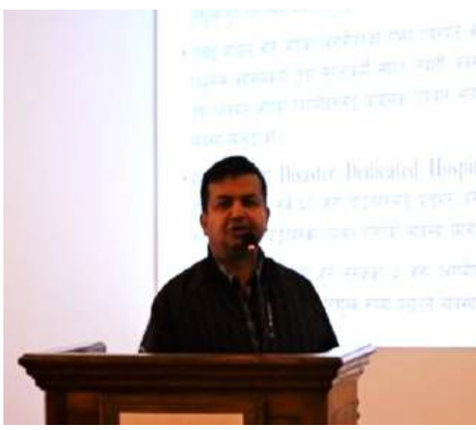
Dr Sushil Pokhrel stated that a District Disaster Management Committee meeting was organized and identified the most affected areas and started providing health services. Three medical Officers from the districts were deployed to affected areas initially for a week. On 4 Nov, at 5:30 am, a medical team was deployed to Athbiskot municipality. In the initial days, communication was not so effective; however, on the part of logistics support it was good.

He mentioned that there was no clear guidance on mobilizing for the response from the center, so specific guideline is needed to proceedfor any disaster that occurs in the future. He advised that have provision of LOCUM has to be in the province. At any disaster, provision/guideline should be made to do a post-mortem on the spot immediately.

During the meeting with security agencies and administration, felt the pressure that we are responsible for generating demand from the Center on Health Response. There were no significant activities on WASH in Rukum West district; except for some activities from a few of the development partners. Coordination among local government, provincial, and federal needs to be well established.

Dr Pawan Jung Rayamajhi

Senior Medical Superintendent, Bheri Hospital, Lumbini Province



Dr Pawan Jung Rayamajhi shared about handling referred injured patients from the Jajarkot and Rukum West districts and how they were handled by the Bheri Hospital in Nepalganj of Banke district in Lumbini province. Bheri hospital had already developed a Hospital Disaster Preparedness and Response Plan (HDPRP), which proved useful during this emergency for effective response. The injured victims of the Jajarkot earthquakes were treated with utmost priority.

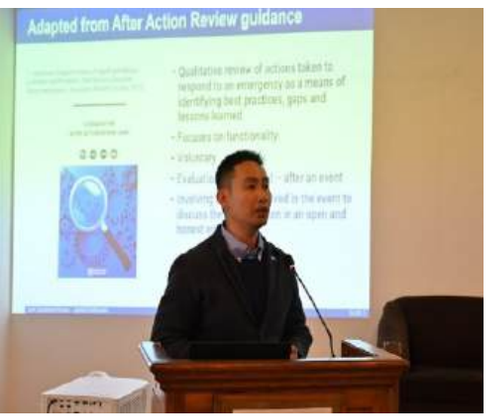
The hospital treated 60 injured people who arrived here from 4 November to 14 November. The first case was arrived at 9 am on 4 November, and another case was brought who had already died. Additional patients were brought including two pregnant women; of which one was for a full 9 months and had to have a termination. Psychosocial First Aid was provided through psychologists and counselors. Likewise, physiotherapy services are also conducted simultaneously.

According to him, healthcare personnel from all health facilities of the district demonstrated to provide health service and there was full support from district administration, security agencies, local governments of Banke districts, and local charity organizations. There were no shortages of food, clothes, drinking water, and other essential items.

Methodology of Operational Review

Dr Allison Gocotano

Team Lead of WHO Health Emergencies Programme (WHE)



Dr Allison Gocotano presented the context and methodology of Operational Review and explained on how the operation review will be conducted and its expected objectives. For operational review to achieve the desired output, all participants were divided into four groups. Each group had to address three questions: what went well, what didn't, and how to move forward. Some of these have already been documented in the previous presentations and experiences shared, which helped to identify areas for improvement. He explained that the workshop's output will be a list of prioritized, actionable recommendations for improving preparedness and response readiness to disasters and public health emergencies, ensuring a comprehensive and effective approach to disaster management.

Dr Allison emphasized that the review workshop would focus on identifying the best practices, challenges, and enabling factors, as well as the challenges and limiting factors. After identifying the best practices and challenges, it is essential to prioritize actions that can be done. This involves listing the priority actions with deadline, focal point, required support and resources, and indicators. The workshop aims to merge these actions into a comprehensive technical report with an action plan to improve our collective health preparedness and response to earthquake hazards.

1. What went well and What did not go well and WHY?

Based on the presentations from the federal and provincial level, and drawing on the group experience, the groups will dig deeper into what went well and what did not well against the set objectives.

Based on the overview of the ongoing response, the discussion will start to identify and analyse what worked, what did not work so well and why. Participants will collectively analyse actions undertaken during the response to date, to identify the best practices and challenges encountered, their impact on the response and why they occurred (the enabling/limiting factors).

The focus is not on identifying who is responsible for what happened but more on what happened and why.

Best Practices	Impact(s)	Enabling Factors
Challenges	**Impact(s)**	**Limiting Factors**

2. Identification and prioritization of recommendations

No.	Action	Who?	When?	Who needs to be told?	Action completed?
1.					
2.					

CHALLENGE : job, duty, or situation that was difficult during the earthquake response, as you had to use a lot of effort, determination, and skill to be successful.

EXAMPLE : an identified challenge may be that laboratory results were not processed rapidly enough. Limiting factors (the why's) initially might be identified as samples did not arrive early enough or that logistics systems were not in place. By applying the "five why's" method, the facilitator may discover that in fact, the root cause of the issue was that there was no fuel for the vehicles used to deliver the samples to the laboratory.

BEST PRACTICE : Something that was done during the earthquake response that improved performance or had a positive impact.

EXAMPLE : a best practice may be merging health task force meetings with Health Cluster meetings. The impact of this best practice was ensuring effective early coordination with all health partners through a Ministry-led process. The enabling factor was the early invitation of all relevant stakeholders to the health task force meeting, which created a sense of the importance of the contribution of NGOs and the willingness of the Ministry and partners to participate in the coordination process.

Group Division

All participants were divided into four groups and assigned with specific pillar with in WHO IMT and MoHP ICS pillars.

- **Group 1: Leadership and Coordination:**
- Assigned Pillars: Leadership, Partner Coordination, Health Information, Planning and Documentation

- **Group 2: Emergency operations**
- Assigned Pillars: Emergency Operations and Operation Support and Logistics

- **Group 3: Collaborative surveillance,**
- Assigned Pillars: Surveillance, Laboratory, Vaccination, Risk Communication, And Community Engagement.

- **Group 4: Continuity of health services,**
- Assigned Pillars: Case Management and IPC, Essential Health Services

Each participated actively during group discussion and presented their ideas and feedbacks.

Presentation and Findings of Group Discussion

Group 1 : Leadership and Coordination

What went well and What did not go well and WHY?

Best Practices	Impact(s)	Enabling Factors
Immediate activation of ICS	Rapid and Coordinated response Need identification Strategic Response Planning	Endorsement of a multi-hazard contingency plan Focal agency for information collection (PHEOC) Dedicated focal points and team
Daily conduction of Health and Nutrition Cluster meetings at the provincial level and health cluster meetings on a need basis at the federal level	Timely need and gap analysis Support in planning and response Health needs advocated at multisectoral platforms	Partners on the ground Regular coordination with partners during non-emergency settings Updated contact list of health partners
Participation of the province in national health cluster coordination meetings and vice versa	Improved coordination and communication among province and federal government which assisted in timely resource mobilization to address gaps	Conduction of health cluster meetings at the federal and provincial level Lead of ICS trained in Health cluster coordination training provided by WHO
Daily communication with the district and local level through PHEOC	Improved vertical coordination of province with district and local level Availability of timely and correct information Ability to identify gaps at the ground level	Availability of updated contact list A dedicated person deployed for PHEOC Critical Role of PHEOC during COVID-19
One-door policy for resource and HR mobilization	Minimization of duplication of resources Optimal use of resources	ToR of Provincial Health and Nutrition Cluster Lesson learned from previous disaster and health emergency response
Invitation of different clusters as per requirement (WASH, shelter)	Coordinated response Able to communicate action to be conducted by other partners that directly affect health outcomes	Active cluster partners and focal persons are known.

Formation of the subcommittee at the provincial level	Targeted mobilization and response	The presence of heath partners with different components for the support
Regular mapping of partners' support	Pooling and sharing of resources Minimization of duplication of support Monitoring of partners' presence and support	Ready-to-use tools Partners are accustomed to the process for reporting and recording.
Daily standard Situation report	Public dissemination of information Documentation of response activities	Health Cluster coordination training. Lesson learned from previous disasters. Dedicated human resources PHEOC as the information hub. Availability of information collection tools.

Challenges	Impact(s)	Limiting Factors
High volume/ Contradicting information from different sources	Hampered planning and decision-making. Difficulty in reporting	Lack of standardized mechanism for information sharing
No conduction of Health needs assessment	Difficulty in planning for response Lack of Authentic information on needs and gaps	Lack of standard approach, tools, and expertise for health needs assessment
Information on structural, non-structural, and functional aspects of the health facilities was not available	Affected planning for continuing health care service provision	No formal and standardized system for periodical assessment of health facilities
Some local levels are unable to respond proactively.	Delayed response Increased morbidity	Lack of emergency funds at the local level
Administrative hurdles within the development partners	Could not allocate the funds from the donors for earthquake response	No formal declaration of health emergency by the government

ACTION PLANS/ WAY FORWARD

- Finalization of the national guidance document for health partners with standard tools and templates
- Development of SoP for health information and data collection and sharing during emergencies within the health cluster
- Development of standard tools for health needs assessment
- Simulation exercises on coordination (Simex or TTX or Drill)
- Leadership or health cluster coordination training
- Develop hazard-specific annexes for health to multi-hazard response plan
- Regular coordination meetings with health partners for preparedness.

Group 2: Emergency Operations

What went well and What did not go well and WHY?

Best Practices	Impact(s)	Enabling Factors
Mobilization of local-level resources (human, financial, and logistics).	Immediate and timely response (search and rescue, primary case management, triage, ambulance mobilization, and referral).	Availability of Local level Disaster Risk Reduction and Management Act (Chaurjhari). Prepositioning of search and rescue equipment and medical logistics. Regular meeting of Local disaster management committee. Allocation of Disaster Management fund.
Early restoration of basic health service delivery.	timely health service delivery ensured.	Availability of Local level of Health Service Act (Chaurjhari). Service delivery from temporary setups. Delivery of health awareness campaign through FCHV. Dedicated health workers.

Rapid response for mass casualty management.	Reduction in mortality and morbidity.	Available disaster-resistant infrastructure with adequate space for case management. Available Hospital Disaster Preparedness and Response Plan. Available In-hospital buffer stocks for emergency/ disaster management. Adequate Human Resources. Timely communication with referral hospitals.
Early Referral Policy	Timely definitive case management.	Deployment of trained / skilled HR for on-site triage. Multi-sectoral coordination for Airlifting Deployment of Trained ambulance drivers for care transfer.
Deployment of HR / Logistics	Surge support for case management at the local level.	Timely provincial support with required logistics and HR.
Activation of Provincial Incident Command System	Coordinated resource mobilization for earthquake response	Endorsement of Multi-Hazard Contingency Plan. Leadership of Secretary, MosD, and Director, HSD.
Deployment of EMTs	Effective and efficient acute mass casualty management.	Formation of EMTS Rooster in hub and satellite hospital networks. Hub and satellite hospital coordination meeting. National Workshop on EMTs Maintenance of updated contact details of all hospitals in PHEOC
Deployment of Integrated Provincial team to affected sites.	Real-time data and information collection.	The leadership of HSD. Regular health and nutrition cluster meetings.
Emergency recruitment of Medical Officers.	Surge support at district and local levels to strengthen case management.	Leadership MoSD. Allocation of Emergency Disaster fund at the provincial level at MoSD.
Deployment of provincial teams surveillance and water testing.	Timely detection of any event with outbreak potential.	Leadership HSD. Regular Health and Nutrition Cluster meeting. Support from Federal and EDPs.

Regular and continued deployment of emergency and essential medical logistics to the district and local levels.	Continued basic and emergency health service delivery.	Leadership PHLMC. Allocation of Emergency funds for procurement of disaster management. Availability of buffer stocks for disaster management. Support from MD, MoHP Available Draft Guideline on Supply Chain Management. Regular Health and Nutrition Cluster coordination meeting.
Activation Hospital Incident Command System	Effective Mass casualty management	Development of Hospital Disaster Preparedness and Response Plan. Conduction of Regular drills on developed HDPRP. Preparation of disaster preparedness checklist. Buffer stocking of emergency medical logistics. (Monthly updated)
Deployment of EMTs	Effective and efficient acute mass casualty management.	Over 80% BEC Trained Emergency HR. Regular conduction of CMEs on disaster preparedness in the hospitals. Formation and development of Rooster in the EMT.
Definitive case management at the provincial level.	Reduced morbidity and mortality	Leadership of Director, Province hospital. Availability of modern and state-of-the-art technology including modular OTs and ICUs. Multi-disciplinary Specialist Workforce.

Challenges	Impact(s)	Limiting Factors
Lack of available trained human resources	Reduced mobilization of human resources.	Inadequate sanctioned post at BHSC/ BHs. Frequent transfer of healthcare workers. Inadequate implementation of federalism (Weak governance of local-level government). Inadequate coordination between three tiers of government. Insufficient financial
Weak prioritization of the health sector.		Federalism- leading to Health at the Local level beyond the jurisdiction of MoHP
Financial and logistic resources allocation for management of deployed surge human resources.	- Early return of Deployed Surge force.	Unavailability of emergency funds at the Local level/hospital level. Uunavailability of Emergency medical logistics Warehouses (EMLWs) Unavailability of Personnel deployment kits/logistics at each level.

Unavailability of specialist doctors.	Referral of cases for definite care.	Not Allotment of the sanctioned post. Lack of motivation to be deployed in rural/remote areas. lack of medical equipment and support staff.
Conduction of emergency post-disaster on-site autopsy.	Unmanaged and haphazard/ forced conduction of autopsy without any privacy.	Lack of guidelines for conduction of post-disaster mass casualty autopsy. Unavailability of post-mortem and mortuary services at all health facilities. Unavailability of mortuary Van at district and local level.
Difficulty in Implementation of one-door policy.	Resource deployment duplication	Lack of plan, policy, and guidelines. Geographic difficulties especially hard-to-reach areas. Inadequate coordination by different stakeholders including partners at the provincial / district / local level. Lack of SoP of EMT deployment.
Difficulty in management of locum / Volunteer health workforce especially specialist and other required health force.	Health service delivery in disaster-affected areas.	Lack of locum budget and policy.
Difficulty in the immediate assessment of affected health facilities.	Delayed / difficulty in revitalization of affected health facilities.	Lack of coordination with other relevant ministries as conduction of structural assessment is beyond health facilities. Inadequate coordination among three tiers of government. Implementation of HeRAMS and Hospital Safety Index in major hospitals.
Addressing increased demand for medical equipment.	Basic Health service delivery at local and district level.	Inadequate access and delivery of health needs in the Pre-disaster period. Inadequate emergency fund for procurement of demanded medical equipment.
Assurance of continued essential medicine at the local level.	Delayed basic health service delivery.	Inability to procure medicine on time at the local level. Unavailability of allotted sanctioned position – Chief Administrative Officer. Increased dependence of local level to provincial government.

Lack of Proper documentation of primary management of cases before referral.	Misutilization of available resources at the referral center.	Development, pre-positioning, and implementation of Triage cards at each level of health facilities. Communication between attending Health care workers and referral sites. Coordination meeting between the hub and satellite hospital networks. Conduction of hub and satellite hospital network simulation exercise (TTX and Drills)
Insufficient operation of the Provincial Dispatch Center (102).	Difficulty in mobilization and monitoring of health care workers.	Lack of Directive / Guideline / SoP of Dispatch Center. Lack of graded ambulances and Lack of Trained BEMTs in the ambulance.

ACTION PLANS/ WAY FORWARD

- Develop a guidance document for coordination among humanitarian health partners,
- Establish a local-level disaster management act, establish an emergency logistics warehouse,
- Develop the HDPRP of satellite hospitals, and conduct joint simulation exercises.
- Develop a sop for EMT deployment, allocate emergency funds for disaster management, endorse guidelines on supply chain management, and conduct an ONM survey for sanctioned posts.
- Develop a legal framework for PHOEC,
- Fulfill sanctioned posts at health facilities,
- Develop guidelines for post-disaster mass casualty autopsies,
- Procure mortuary vans,
- Formulate a locum policy, and
- Implement the hospital safety index/HeRAMS
- Develop uniform triage and patient referral forms for disaster management and
- Capacitate healthcare workers at the local and district level through hope training.
- Upgrade available ambulances to a/b grade and conduct training to strengthen pre-hospital service care.

Group 3: Collaborative Surveillance

What went well and What did not go well and WHY?

Best Practices	Impact(s)	Enabling Factors
Initiation of syndromic surveillance activities within 72 hours of cluster decision to enhance detection of outbreak diseases	Enhanced and extended surveillance to prioritize disease detection. Support in preparedness for outbreak-prone diseases	International guiding documents showing the importance of syndromic disease reporting during disaster
Forms and Google spreadsheets reached all municipal health workers to report cases.	Daily 24-hour recording of data and reporting to the provincial level	Use of simple form, aggregate reporting, and existing network in the social media group
Syndromic data collection was simple, easy, and quick to collect	Aggregate numbers were reported.	
Good coordination among municipal health coordinators with local health facilities and the province	Daily reporting of syndromic data as well as health signals through other informal challenges	Existing network of local health workers
Improved reporting over time on syndromic data Improved reporting of health signals and health events	Syndromic cases of AGE, ILI and Fever with rash were reported and notified	Training initiation for syndromic diseases at Municipalities during FCHV orientation
Use of established call center reporting mechanism at the national level (1115)		The existing call center hotline number was established during the COVID-19 pandemic.
Use of EIOS tool and media monitoring for media scanning and risk categorization	Reported news and information were relayed and verified and action was taken.	Existing EIOS mechanism (technical support from WHO)
Timely identification of laboratory capacity	Timely detection and diagnosis	Human resource for surveillance carried out mapping of facilities pots- EQ
Diagnostics kits mapping for field testing	Diseases like COVID-19, Dengue, Scrub, and positive Cholera were identified at the community level.	Diseases like COVID-19, Dengue, Scrub, and positive Cholera were identified at the community level.

Ruling out of Cholera outbreak	Avoided public concern and Cholera specific response-saving logistics(Cholera Kit)	Health and nutrition cluster meeting that coordinated Municipal hospitals with Provincial labs and national lab Availability of RDT kits and culture capacity at Surkhet Hospital
Water sample are tested periodically on-site reporting AGE	A high-risk area was identified that supported risk assessment	Regular water testing capacity and practice
Quick initiation of the vaccination campaign		
Timely rollout of emergency MR campaign	Good MR coverage	A strong network of health workers and history of vaccination in Nepal
RCCE orientation at the Municipal level	Health post-in-charge and FCHVs were trained	Existing RCCE training as the national program
Rumor captured from the community by mobilized health workers and the district RRT focal person	Health rumors were investigated for possible intervention	Provincial and municipal level training orientation post-earthquake Existing media monitoring mechanism
Radio jingles are created and disseminated based on communities' surveillance and rumors	Minimal misinformation and info-demic reported	Existing dissemination media tools

Challenges	Impact(s)	Limiting Factors
Delay in timely reporting	No timely data reported through the reporting mechanism up to PHEOC, HSD	The issue with Internet connection due to topographical remoteness
Poor uptake of case definition at the municipality level		No prior training in syndromic diseases
Human resource over-burden	Multiple tasks were assigned due to multiple responsibilities	Limited technical HR capacities
Sustainability of syndromic surveillance mechanism	Data reporting has reduced over time	No continuous follow-up or lack of active engagement Lack of formalized mechanism in the system

Poor data quality	Over or under-reporting of data leading to data discrepancy during federal-level monitoring	Awareness of the importance of routine indicator data Lack of motivating factors
Co-ordination up to the national level	Syndromic data not integrated into existing national surveillance system	Two sentinel sites (EWARS) in EQ affected area failed to report real time data when EQ struck
Real-time data-based decision making	Municipality was unable to view regularly analyzed data trend	Real-time data analysis tool with Bi-directional information flow Connectivity issue, No digital tool with offline capability and portable hardware
Sample transportation to confirm an outbreak of disease	Very few samples were tested. The majority of syndromes are confirmed as a disease and Notifiable diseases least reported Local labs and PPHL lack field surveillance samples	No adequate budget at the Municipal level for sample collection and transportation Outbreak disease confirmation does not fall under the priority at the municipal level Lack of training among lab personnel who are RRT members
No regular testing of notifiable infectious diseases or outbreak-prone disease	Diseases of outbreak potential and infectious diseases of public health importance not getting detected to verify an outbreak and support alert and response mechanism	No link between Epi surveillance and with laboratory Mostly curative and diagnostic-driven Issues with efficient management (supply and demand) of lab logistics (kits, media, microbiology)
Coverage of TCV vaccine	High-risk clusters and groups remain vulnerable	Target age group Vaccinators occupied with relief operations
RCCE unit at the sub-national level	Inadequate capacity of RCCE focal units at the district level	Lack of implementation of RCCE guideline at the sub-national level
No structured RCCE learning package	Orientation modality varied across several training sessions	Technical LRP experts within the country
Rumor collection, management, and message content development (ad-hoc and with experts from the federal level)	No systematic response mechanism leading to delays in RCCE activities including coordination	Lack of SOPs at national and sub-national levels e.g SOP for Call centers, media monitoring, media mobilization for public health events

ACTION PLANS/ WAY FORWARD

Immediate	Mid-Long Term
• The plan involves integrating syndromic surveillance into RRT training, • Ensuring weekly aggregate reporting of syndromic data from municipalities, • Strengthening event-based reporting systems, and • Providing municipal-level orientation on community-based surveillance and syndromic surveillance implementation.	• The plan involves improving environmental sample surveillance capacity for outbreak detection, • Strengthening community engagement, • Building sops for RCCE focal points, • Strengthening HR capacity at the municipal level for RRT response, • Maintaining expert rosters, and • Enhancing outbreak sample transportation training and • Budget allocation to improve disease testing and notification mechanisms at PPHL and NPHL levels.

GROUP 4: Continuity of health services,

What went well and What did not go well and WHY?

Best Practices	Impact(s)	Enabling Factors
Effective triage system at all EQ-affected healthcare facilities in Karnali Province	Proper categorization of patients and timely interventions Reduced mortality and morbidity	Hospital Disaster Preparedness and Response Plan Availability of trained and fit-for-purpose health workforce
Rapid designation of tertiary referral hospitals for critical cases	Cost-effective Timely management of cases	Hub and satellite network of hospitals Immediate support from the Army, APF, etc. Effective Civ-Mil coordination
Temporary health facilities were set up at affected health facilities (e.g. MCK, birthing centers, rehabilitation centers, etc.)	Continuation of emergency and essential health services. Improved access to health services	Immediate assessment of needs Partner engagement Prepositions of emergency health logistics Functioning procurement system for essential medicines Coordination between three levels of government and relevant partners

Strengthening of birthing centers and operationalization (Electricity, bed, baby warmers, etc.)	Safe delivery Proper child and mother care Prevention of hypothermia Reduction of neonatal mortality	Rapid needs assessment of affected areas Partner support provided logistic support HSD, Mesu, the Health Service Manager, and local government representatives were leading. Coordination between three levels of government and relevant partners
Developed and endorsed the case management guidance (one page) for Acute Watery Diarrhea (AWD), Influenza, Measles, Scrub Typhus, and Tetanus.	Trained Healthcare workers from 10 districts Training modality (virtual/in-person)	Partner support Advocacy from leadership for rapid finalization Availability of national and international guidance for rapid endorsement
Mobilization of EMTs and Medical officers to affected areas	Timely response, clinical management, and referral Service delivery at the site	Leadership to advocate for placement Better communication and coordination Health partner mapping including sub-clusters Tracking of deployment sites to avoid duplication in EMTs Trained roster of health workers rapidly available
Temporary rehab center was set up at the municipal level	Rehabilitation efforts were rapidly scaled up Follow-up rehab service at the municipal level	Formed an emergency rehab team Conducted a situation assessment to understand the needs Provided assistive devices (297) to district health facilities Support from health partners Outreach camps and home visits were conducted
Prioritization of Mental Health Services	Immediate psychosocial counseling (on-site) Mental Health camps organized	Partner support Trained psychosocial health workers for rapid deployment (Lesson learned from EQ 2015) Leadership advocated for HR placement Coordination between the three levels of government and health partners

Challenges	Impact(s)	Limiting Factors
Budget constraints for emergency response	Service delivery affected. Increased referral pathway.	Limited awareness of the budget planners No allocation
Supply and demand issues (Eg, Lack of medical equipment and diagnostics, HR, etc.)	Service delivery affected. Delay in the deployment of human resources to the affected areas.	Lack of proper SoPs for emergencies. Poor communication. Lack of maintenance program and SOPs and inventories related to medical equipment
Weak coordination and information sharing while organizing health camps in the affected areas	Duplication of health camp services Improper distribution of medical services	Poor reporting Multiple reporting channels\ not using one-door information reporting or documentation.
Inadequate availability/ functionality of biomedical equipment	Health service delivery impacted Broken and non-working equipment	Lack of maintenance program and SOPs and inventories related to medical equipment No or unstable electricity supply Limited HR placement
Procurement and usage of diagnostic testing kits	Service delivery affected. Delay in diagnosis and treatment of patients	Lack of proper SoPs for emergencies. Poor communication. Limited HR and training on appropriate use of testing kits.
Waste management (Incineration without segregation, suggested to disinfect before)	Risk of HAIs. Risk of outbreak disease in community and animals.	Lack of equipment, consumables of staff safety, etc. Lack of SoPs for waste segregation and disposal. Lack of maintenance service

ACTION PLANS/ WAY FORWARD

Immediate	Mid-Long Term
• The training of healthcare workers in disaster management, including primary trauma care, disease outbreak management, clinical case management, IPC, HOPE, and HDPRP, is being integrated to ensure continued service and • The revision of O and M surveys.	• The plan involves the reconstruction of damaged health facilities, • Inclusion of disability in the healthcare curriculum, and • Budget allocation for disaster management at hospitals, as well as the development of emerging diseases and outbreaks.

Discussion

Dr Rabin Khadka

Director, HSD, Karnali Province

Dr Rabin Khadka stated that he found it useful inviting health section chiefs from local governments to discuss Joint Operational Review program. He suggested to conduct such program at provincial level by inviting the that elected representatives of local governments and chiefs of health sections. Additionally, he noted that the province currently lacks a provision for declaring an emergency at the sub-national level. However, he recommended exploring the possibility of creating such a provision and bringing it to the attention of the NDRRMA. If feasible, the provincial government could invest in it. Dr Khadka emphasized the importance of preparing local governments for crisis circumstances, which was a common concern expressed throughout the review program. If they are not adequately prepared, chaotic conditions will persist. Finally, he stressed the need to further strengthen the relationship between the province and the local government level.

Mr Shyam Acharya

PHEOC Focal Person, HSD, Karnali Province

Mr Shyam Sharma emphasized the importance of strengthening local government capacity to prevent disease outbreaks. He stressed that strategically establishing buffer stocks in strategic locations is essential, and further emphasized the need for training and HR. Mr Sharma suggested integrating WASH activities within a larger health framework. He also stated that building a roster of experts for disaster preparedness and response is critical. He further suggested prioritizing the identification of local government needs and providing provincial support where it is needed.

Dr Allison Gocotano

Team Lead of WHO Health Emergencies Programme (WHE)

Dr Allsion Gocotano stated about the option to create a hazard-sepcific preparedness plan, which might be included as an annex and will add value to the multi-hazard documents. For example, in the event of an earthquake, there may be crush injuries necessitating the use of a dialysis centers or burn injury patients in the event of a fire incident necessitating identifying health facilities with the capacity to manage burn injuries. Hence, having a multi-hazard plan with hazard-specific annexes is of value. However, because there are so many hazards to consider, then there is a need to prioritize, and this is where a strategic assessment of risk (STAR) workshop would be useful in prioritizing hazards within a specific province.

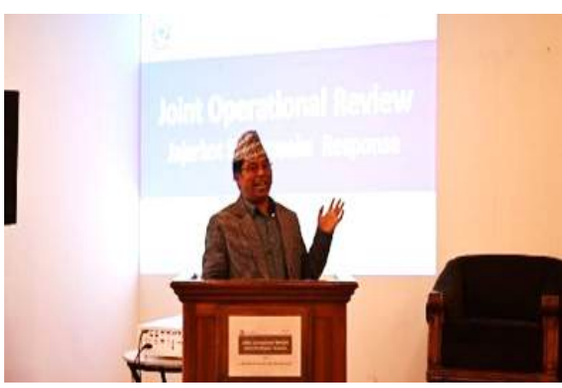
He mentioned that there are common themes that emerged among the different groups. These include shared budget lines for disaster preparedness activities, improving the emergency supply chain, which begins with anticipating purchase, transportation, warehousing, and ending with distribution and utilization monitoring. Similarly, to dead body management was identified as a priority, in terms of reviewing legal provisions and other elements connected to an enhanced body management simulation exercise. He advised to establish capacity for equipment and biomedical item maintenance, as well as waste management.

Closing Ceremony

The closing ceremony was conducted at the end of second day in chair of Dr Prakash Budathoky, Chair, HEOC and in presence of Dr Rajesh S Pandav, WHO Representative to Nepal, Dr Rabin Khadka, Director, HSD, Dr Shakti Subedi, Director, PHLMC among others representatives from MoHP, DoHS, provincial authorities, Local Level and WHO Nepal. The summary of remarks delivered in the closing ceremony is presented below.

Mr Brish Bahadur Shahi,

Senior Public Health Expert, Ministry of Social Development, Karnali Province



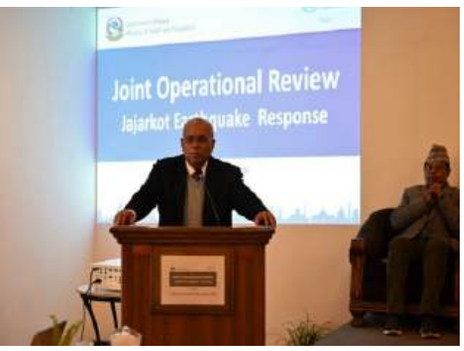
Mr Brish Bahadur Shahi expressed that the joint Operational Review Program proved to be very helpful for everyone involved. He stated that the important lessons were shared and these learnings should be utilized for future emergency response by strengthening various mechanisms including RRT, Health Cluster, etc.

He mentioned that apart from COVID-19, the Jajarkot Earthquake was the first instance of localized emergency response management after the implementation of the federal system in the country. According to him, though multiple stakeholders were engaged, there were pros and cons to the response, but it demonstrated that the level of coordination and collaboration needs to be strengthened to respond and detect to disasters or outbreaks. He advised to follow the cycle of disaster response, and in the case of the Jajarkot Earthquake response, current situation have now reached to the recovery phase.

Mr Shahi mentioned that the MoSD has various responsibilities, and will initiate coordination with local governments to address specific local needs and disaster mitigation measures, as these are the places that are still at risk. Finally, he appreciated HEOC for organizing this Joint Operational Review Program on the Jajarkot Earthquake and for WHO's continuous support.

Dr Rajesh Sambhajirao Pandav

WHO Representative to Nepal

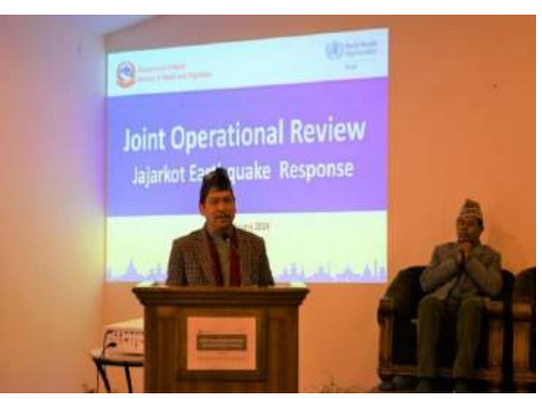


Dr Rajesh Sambhajirao Pandav, WHO Representative (WR) to Nepal stated that the purpose of this Joint Operational Review Program was to speak frankly about what went well what did not go well; why it did well and what is the way forward. He mentioned that the presentations that were made were clear, brought out all the issues, and brought clarity and added that his Jajarkot earthquake is of manageable scale, and there are many lessons to be learned from this; and it would be lessons for other provinces and municipalities to learn from.

WR mentioned that WHO will continue to support and work closely with all levels of the government to ensure that we provide the necessary support, and as discussed during this review program that a provincial-level, multi-sector review should be organized, and where WHO will support the health part. Adding that, WR stated sharing this Jajrkot Earthquake experience with other provinces as part of a simulation and tabletop exercise is also important because practical experience from this response and first-hand experience would be useful.

Dr Prakash Budhathoky

Spokesperson, MOHP / Chief, HEOC



Dr Prakash Budhathoky emphasized the need for continuous preparedness for emergencies and the need for external support and highlighted the need to develop short- mid- and long-term plans and implement them, considering the capacity within the country to handle most of the response. Dr Budhathoky informed that the EMT SOP will be finalized in the coming week and a Public Health Disaster Regulation is in the process of drafting and believed that it will help to maintain linkages at three levels of government.

During the Joint Operational Review Program on Jajarkot Earthquake Response, Dr Budhathoky mentioned that it provided valuable insights and lessons for future emergencies emphasizing the importance of better coordination, collaboration, and the need for improved preparedness and monitoring of actions and emphasized the need for continuous learning and improvement in emergency response.

Annex

Annex 1: Decisions of the 19th Executive Committee NDRRMA

Decision No.1: Extend the deepest and most sincere condolences to the individuals who lost their lives in the tragic Jajarkot earthquake on the 17th of Kartik 2080, as well as to their grieving families. earnestly wish them a speedy and complete recovery from the aftermath of the earthquake and its subsequent aftershocks to those who were injured.

Decision no. 2: Disaster Risk Reduction and Management Act to organize the use of grant money to be provided for the construction of temporary housing as Deem necessity to provide and manage immediate temporary housing to the affected families were seen whose private residences have been completely or partially damaged due to the earthquake and who are currently residing in temporary shelters and are living a difficult life due to cold, snow and rain. Contextually, as per the rights given by Section 48 of Disaster Risk Reduction and Management Act 2074, approval provided to release the "Temporary Housing Construction Grant Procedure for Earthquake Affected Households 2080". This is deemed essential to promptly address the urgent need for managing and providing immediate temporary housing to families affected by the earthquake. These affected families currently find themselves in a challenging situation, residing in temporary shelters due to the complete or partial damage of their private houses, extreme cold weather conditions, snow, and rain, further exacerbate their difficulties. In line with the provisions outlined in Section 48 of the Disaster Risk Reduction and Management Act of 2074, approval has been granted for the release of the "Temporary Housing Construction Grant Procedure for Earthquake Affected Households 2080." This procedural framework aims to facilitate the efficient utilization of funds for the construction of temporary housing, ensuring a speedy and effective response to the pressing needs of those household who were affected by the earthquake.

Decision No.3: A provision has been endorsed to provide grant support of Rs. 50,000, in two installments (Rs. 25,000 each), for the construction of temporary housing to individuals affected by the earthquake who have not received financial assistance from provincial, local, or other organizational levels. This provision is sanctioned as per outlined in the 3(f) amendment of the Disaster Relief and Rescue (Seventh Amendment) Standard, 2077.The allocated grant amount will be released from the District Disaster Management Committee (DDMC) Fund to the Local disaster management committee (LDMC). Subsequently, it is the responsibility of the respective DDMCs to oversee the disbursement of the grant funds. Local bodies are entrusted with the task of providing funds directly to the identified beneficiaries, ensuring a streamlined and efficient process for supporting the construction of temporary housing.

Decision No.4: Request additional fund from the Nepal government in the Disaster Management Fund which is not sufficient for construction of temporary housing to the earthquake affected families as well as for other disaster management related works Decision No.5: To approve the decision dated 2080/06/29 by Honorable Deputy Prime Minister/ Minster of Home and Affairs related to the providing funds of Rs 50/50 thousand to earthquake affected families of Jajarkot earthquake for construction of temporary housing.

Decision No.6: Request to private sectors to assist the required support in construction of temporary housing in easy and accessible way, beside this request political parties, private foundations, social/ volunteer organizations and related government agencies to assist in the construction process.

Decision No.7: According to the Disaster Management Fund Operational Procedures 2079, Sub-section (2) of Section 20, necessary expenses for the transportation for rescue works after disaster, communication, storage, packing etc, can be spend from the Fund within the limits and procedures specified by the executive committee. Regarding this, the respective Chief District Officer shall give approval to spend the amount from the Disaster Management Fund within the following limits in accordance with the prevailing procurement laws and regulations and the district rate.

A. **In case of Jajarkot and Rukum West districts**

- To proceed protection of life and wellbeing of the people in possible vulnerable stage, a maximum of Rs 10 lakh can be spent in relation to immediate response activities.
- To proceed spending of maximum Rs 5 lakh to remove the debris created by the disaster and management of carcass of dead animals.
- To proceed spending of maximum Rs 25 lakh in the management of necessary rescue and relief works, storage of relief materials for disaster preparedness, its packaging and transportation.

A. **In case of Salyan district**

- To proceed spending maximum of Rs 5 lakh in immediate response activities in order to protect life and wellbing of the potentially vulnerable people.
- To proceed spending maximum of Rs 3 lakh to remove the debris created by the disaster and to manage carcass of dead animals.
- To proceed spending of maximum Rs 10 lakh in the management of necessary rescue and relief works, storage of relief materials for disaster preparedness, its packaging and transportation.

Decision No.8: To aprove the decision of releasing Rs 5/5 crore to DDMCs of Jajarkot and Rukum West, done by the Exeuctive Head level on 2080/07/23 to provide relief to the people affected by the Jajarkot earthquake.

Decision No.9: NDRRMA will coordinate and collaborate with Ministry of Urban Development (MoUD) for conducting appropriate detailed damage assessment and evaluation and to manage appropriate human resources to plan the retrofitting, reconstruction and rehabilitation of private housing and public buildings and structures damaged due to the earthquake.

Decision No.10: Requesting the concerned local level and concerned agencies to immediately deliver basic facilities related to drinking water, toilets and sanitation in the earthquake affected areas and related agencies will help in this activity.

Annex 2: Health and Nutrition Response Plan of Jajarkot Earthquake

Issued by Health Service Directorate, Ministry of Social Development, Karnali Province on 05 November 2023

S. N		Detail Activities	Lead Agency	When doing?	Source of Information	Status
1	**Initial Assessment**	Stakeholders (RRT, PCMC/DCMC, Health and Nutrition Cluster, ICS) meeting organized and mobilization of team	MoSD, Health Service Directorate	As per need	Decisions of the meeting	
		Collecting, analyzing, and preparing the report by using the information collection template and submit to MoIAL	Health Service Directorate	06 November	Local Governments/ District Hospitals	Checklist provided
		Health and Nutrition Cluster to prepare plan as per initial assessment	Health Service Directorate	06 November	Health Service Directorate	Initial data collected
2	**Providing emergency and essential health needs and Nutrition Service**	Provide emergency services based on TRIAGE	Province/District Hospitals/ Local Health Institutions	Continuous	Related Hospital, Local Government	continuation
		Manage treatment as per the hospital disaster preparedness plan	Province/District Hospitals/ Local Health Institutions	Continuous	Related Hospital, Local Government	Continuation
		EMT Mobilization/Provide primary health and nutrition service	Hospital and Health Institutions, RRT Committees/Teams	Immediate	PHEOC, Hub Hospital, Satellite Hospital	continuation
		MCH, Child Health and nutrition, Epidemic/Outbreak control, chronic disease management, MHPSS, and Minimum Primary Service Package mobilization	RRT Committees/ Teams and Local Governments	Immediate	PHEOC, Health Offices and Local Governments	

3.	**Emergency Health Service Delivery**	Continuity of MCH, Child Health and Nutrition Service: ANC/PNC. Nutrition Service, Immunization Service, Delivery from skilled Health workers, CB-IMNCI services	Basic Health Facility Services Units, Health Posts, PHCs/ Basic Hospitals/ and Hospitals	After 3 days of earthquake	Updated record and HMIS Report	
4.	**Pregnant and Maternity Service**	- Provide pregnant/maternity health checkup services in camps and provide kits as required, - Manage required Kits, Stretcher, and Ambulance to operate pregnancy services at birthing centers - Provide sanitary pads and alternative materials and distribution of IEC materials for Menstrual Hygiene.	Basic Health Facility Services Unit, Health Posts, PHCs/Basic Hospitals/ and Hospitals District and Provincial Health Logistics Management Center	3 days after the earthquake	Updated record and HMIS Report	
5.	**Continuity of Basic Health and Nutrition Services**	-Ensure Clean/Safe Water Management for Epidemic disease/Outbreak control -Continuation medicine to patients with chronic diseases - Management of Distribution of IEC materials, counseling, and treatment related to MHPSS - Mobilization of minimum essential service packages -IEC for health promotion	Basic Health Facility Services Unit, Health Posts, PHCs/Basic Hospitals/ and Hospitals District and Provincial Health Logistics Management Center	3 days after the earthquake	Updated record and HMIS Report	
6.	**Continuity of Basic Health and Nutrition Services**	-Management of set up tents for Adolescent friendly corner Adolescent SRH Health Services, managing medical equipment and mobilizing trained healthcare workers	Basic Health Facility Services Unit, Health Posts, PHCs/Basic Hospitals/ and Hospitals District and Provincial Health Logistics Management Center	3 days after the earthquake	Updated record and HMIS Report	

7.	**Continuity of Basic Health and Nutrition Services**	Family Planning: supply and distribution of Family Planning items, Prevention, and Treatment of STIs, HIV/AIDS prevention and treatment (PMTCT); address of GBV, treatment and management	Hospitals and Health Institutions, RRT Committee; and Health and Nutrition Cluster	Daily/ Regular	Health Information System, PHEOC, and RRT Reports	
8.	**Continuity of Basic Health and Nutrition Services**	Nutrition: Auditing of Nutrition -Vitamin A and Worm medicine provided to under 5 children, pregnant and lactating women -Substitution and additional food availability and counseling -Breastfeeding support- counseling, protection, and promotion -Micronutrients distribution to children between 6-23 months -Distribution of Iron Folic Acid tablets to pregnant women and adolescent girls -Treatment through RUTF of identified malnourished children, -Monitoring of items replacing breastfeeding and stopping distribution and timely infirming the concerned authority; and Food Security	Health Institutions (OTC, NRC)	Daily/ Regular	HR and Logistics	
9	**Continuity of Basic Health and Nutrition Services**	-Immunization as per schedule -Immunization Campaign as required, -Vaccine supply and Cold Chain -Quality monitoring of Vaccine -Surveillance of vaccine-preventable diseases		3 days after the earthquake	Monitoring Report and Health Information System	Continuation of service

10	**Continuity of Basic Health and Nutrition Services**	TB Control: active patient identification; TB control as per quality treatment / guidelines	DOTS center	From the day of earthquake occurrence and continuity of services	Monitoring Report and Health Information System	Continuation of service
11	**Mental Health**	Mental Health Services: Psychological primary treatment, psychosocial support; and counseling and therapy.	Hospitals and concerned stakeholders	Daily/ Regular	Monitoring Report and Health Information System	Continuation of service
12	**Health Rehabilitation**	Health Rehabilitation Services: identify disabled and injured patients through assessment and management services including providing assistive devices; prepare lists of assistive devices that are required during an emergency and ensure managing its stocks; and create a roster of development partners supporting rehabilitation and appeal for their assistance during emergency.	Hospitals and concerned stakeholders	Daily/ Regular	Monitoring Report and Health Information System	Continuation of service
13	**Prevention of Infectious Diseases and Control**	Prevention of Infectious disease: -appropriate management in viewing the probable outbreaks, - soap, Pius (water purifier), water filters, -environmental hygiene and germs purifier, respiratory etiquette, isolation procedures; and follow-up and monitoring	Hospitals and concerned stakeholders	Immediate	Assessment/Initial Report	Continuation service

14	**Oxygen Management**	Assessment of Oxygen Need: transportation system, monitoring, oxygen safety, training and education based on Oxygen Plant Management; and oxygen system maintenance	Hospitals	Immediate	Initial Report/ Hospitals Report	Available from Logistics Centre
15	**Blood Management**	Need Assessment: Production list management of blood, transportation, blood production administration, tracking, and management of blood production-induced waste.	Blood Bank	Immediate		Managed at the local level and emergency patients referred
16	**Ambulance Management**	Availability and Mobilization of Ambulance, transportation safety, and security, communication, and coordination	Health institution and Hospital integrated Ambulance mobilization network	Immediate	Ministry of Social Development	
17	**Dead bodies Management**	-Postmortem management, coordination, and collaboration for dead bodies management; and -Coordination for management of dead animal management.	Hospital and Health Institutions.	Immediate	Hospitals Security Agency	
18	**Health-induced waste management**	-Classification, transportation, treatment, and disposal of health-induced waste and PPEs as per guidelines. -Follow-up and Monitoring	Hospital and Health Institutions.	Daily/ Regular	Follow Report	
19	**Laboratory Management**	Sample collection, rapid diagnosis and referral management, and timely report	Laboratory	Regular	Daily Report	

20	**Health and Nutrition Supply Management**	Buffer stocks of medicines in Hub/ Satellite Hospitals, RUTF, BalVita, Vitamin A, Worm medicines, Iron, supply of vaccines, Sanitary pads and hygiene kits Management of Lab and other required items	Health Logistics Management Center, Health Institutions and Hospitals	Continuous	Stock Register, e-LMIS	
21	**Health Education, Information & Communication**	Risk Communication and Community Engagement: conduct activities identifying the community at risk, mobilization of media, making, and identifying and mobilization of social/ community leaders.	Health Institutions, Media	3 days after the earthquake	Information dissemination	Initiated

Annex 3: Agenda of the Joint Operational Review Meeting on Jajarkot Earthquake Response

Joint Operation Review – Jajarkot Earthquake Response

Agenda

Date: 20-21 February 2024

Venue: Nagarkot

Day 1: 20 February 2024

Time	Activities	Remarks/Responsibility
08:00-09:00	**Breakfast**	
09:00-10:00	Opening Ceremony: • Welcome and Objectives • Opening Remarks: ✓ WR ✓ Secretary, MoSD, Karnali ✓ DG, DoHS ✓ Additional Secretary ✓ Secretary ✓ HEOC Chief (chair)	HEOC/WHO
10:00-11:00	Federal response to Jajarkot earthquake	HEOC/WHO
11:00-12:00	Provincial response to Jajarkot earthquake	HSD/WHO field team
12:00-12:30	Methodology of Operational Review	HEOC/WHO
12:30-13:30	**Lunch**	
13:30-15:30	Group Discussion • What went well and What did not go well and WHY?	All groups
15:30 – 17:30	• Group Discussion (with working tea) Identification and prioritization of recommendations	All groups

Day 2: 21 February 2024

Time	Activities	Remarks/Responsibility
06:30-07:30	Walk the talk	
08:00-09:00	**Breakfast**	
09:00-11:00	Group Presentations and discussion	All groups
11:00-11:30	Discussion • Summary of group discussion • Q&A	MoHP/WHO
12:00-13:00	Closing ceremony ✓WR ✓Secretary, MoSD ✓DG, DoHS ✓Additional Secretary ✓Secretary ✓HEOC Chief (chair)	MoHP/WHO
13:00-14:00	**Lunch and return**	

Annex 4: Participants Name List

FEDERAL GOVERNMENT			
S.No.	**Name**	**Organization**	**Designation**
1	Dr Dipendra Raman Singh	Ministry of Health and Population (MoHP)	Additional Secretary
2	Dr Bikash Devkota	Ministry of Health and Population	Additional Secretary
3	Dr Prakash Budhathoky	Ministry of Health and Population	Spokesperson, Chief, HEOC
4	Dr Rudra Marasini	Epidemiology and Disease Control Division Department of Health Services	Acting Director General Director EDCD
5	Dr Shrawan Kumar Thapa	Management Division, Department of Health Services	Director
6	Dr Abhiyan Gautam	Family Welfare Division, Department of Health Services	
7	Dr Prasanna Napit	Epidemiology and Disease Control Division Department of Health Services	Senior Consultant
8	Koshal Subedi	Epidemiology and Disease Control Division Department of Health Services	Public Health Inspector
9	Mr Komal Ranabhat	Health Emergency Operation Center Ministry of Health and Population	Officer
10	Dr Guna Nidhi Shah	Epidemiology and Disease Control Division Department of Health Services	Senior Public Health Administrator
11	Dr Navaraj Jaishi	Health Emergency Operation Center Ministry of Health and Population	Medical Officer
12	Mr Raj Kumar Subedi	Health Emergency Operation Center Ministry of Health and Population	Admin Officer
13	Dr Sunidha Tiwari	National Public Health Laboratory	
PROVINCIAL GOVERNMENT			
14	Mr Bhojraj Kafle	Ministry of Social Development, Karnali Province	Secretary
15	Dr Pawan Jung Rayamajhi	Bheri Hospital, Nepalgunj	Chief Medical Superintendent
16	Dr Rabin Khadka	Health Service Directorate, Karnali Province	Director
17	Dr Shakti Bahadur Subedi	Provincial Health Logistic Management Center, Karnali Province	Director

18	Mr Brish Shahi	Ministry of Social Development, Karnali Province	Senior Public Health Administrator / Chief, Health Division
19	Dr Sushil Pokhrel	Health Service Office, Rukum West	Manager
20	Dr Pratikshya Bharati	Health Service Office, Jajarkot	Ac. Manager
21	Dr Sonai Chaudhary Giri	Province Hospital, Surkhet	Focal Person
22	Mr Shyam Lal Acharya	Provincial HEOC, Karnali Province	Chief, ED
23	Mr Ganesh Gautam	Provincial Public Health Laboratory, Karnali Province	BMLT
LOCAL GOVERNMENT			
24	Mr Shankar Bahadur Oli	Chaurjhari Municipality, Rukum West	Sr. Auxillay Health Worker
25	Mr Dip Bahadur Oli	Bheri Municipality, Jajarkot	Public Health Inspector
26	Mr Amarjung Shah	Kushe Rural Municipality, Jajarkot	Auxillary Health Worker
27	Mr Tapta Bahadur Chanara	Nalgad Municipality, Jajarkot	Public Health Inspector
28	Mr Aom Prakash Rokaya	Aathbiskot Municipality, Rukum West	Public Health Inspector
29	Mr Bijay Kumar Oli	Sanibheri Rural Municipality, Rukum West	Health Assistant
30	Mr Ram Bahadur Rokaya	Barekot Rural Municipality	Public Health Inspector
WORLD HEALTH ORGANIZATION NEPAL			
1	Dr Rajesh S Pandav	World Health Organization	WHO Representative to Nepal
2	Dr Allison Gocotano	World Health Organization	Team Leader- Health Emergencies Programme
3	Ms Melissa Bingham	World Health Organization	Technical officer - IPC and Case Management
4	Dr Dipendra Gautam	World Health Organization	NPO - International Health Regulation
5	Dr Subash Neupane	World Health Organization	NPO - Project and Partnerships Management
6	Mr Samriddha Rana	World Health Organization	NPO - Biotechnology
7	Dr Bhoj Raj Bam	World Health Organization	FMO - Karnali Province
8	Dr Bigyan Prajapati	World Health Organization	HEO

9	Dr Shital Adhikari	World Health Organization	Clincial Specialist
10	Mr Sudhan Gnawali	World Health Organization	Communication and Liaison Officer
11	Dr Arun Kumar Govinda Karnavar	World Health Organization	TO- Public Health Laboratory
12	Mr Pradeep Adhikari	World Health Organization	PHO, Karnali Province
13	Mr Sujan Govinda Amatya	World Health Organization	Communication
14	Mr Manish Gautam	World Health Organization	Reporting Analyst
15	Dr Anant Nepal	World Health Organization	HEO
16	Dr Gaurav Devkota	World Health Organization	FMO
17	Dr Amarnath	World Health Organization	TO - Health Information Management
18	Mr Ajit Das Maharjan	World Health Organization	IMA
19	Dr Nishant Thakur	World Health Organization	FMO
20	Mr Sovit Shrestha	World Health Organization	IMA, Karnali Province
21	Ms Chhirring Y. Sherpa	World Health Organization	
22	Mr Deepesh Sthapit	World Health Organization	NPO- Health Information Management and Analytics
23	Dr Saugat Shrestha	World Health Organization	NPO- Infectious Hazard Management
24	Mr Prahlad Dahal	World Health Organization	NPO- Health Emergency Operations and Logistics
25	Mr Kamaraj Devapitchai	World Health Organization	TO- RDIS

Design Support: Shreya Shreya, WHO Nepal