



DISASTER PROTECTION WHITE 2024 BOOK 2024

ULAANBAATAR 2025

DISASTER PROTECTION WHITE BOOK – 2024

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National Emergency Management Agency

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Chapter 1.5. Emergency manage- ment organization capacity	Department of Administration, Law and Human Resources, Policy Planning Department, Emergency operations Department, Firefighting Department, State Reserve Department, Finance and Logistics Department, Emergency Management Department of the Capital City, and National Rescue Brigade
Chapter 1.6. Disaster protection research, study and innovations	Risk Management Department, National Institute for Disaster Research, Emergency management school of the University of Internal Affairs, Unit 121
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PART I.

DISASTER MANAGEMENT AND COORDINATION

CHAPTER 1.1. DISASTER PROTECTION LEGAL REFORM

In 2024, as part of efforts to strengthen the legal framework for disaster protection, a total of 21 official documents were approved, including a Presidential Decree; two Government Regulations; a national strategy, program, and methodology; a policy document; a plan and a regulation issued by the Deputy Prime Minister; additional regulations, instructions, and checklists; and two standards, one of which was approved by the Chief of the National Emergency Management Agency and one was approved by order of the Director of the Standards and Metrology Agency.

1.1.1. An official document approved by the Presidential Decree

In accordance with the mandate of the President of Mongolia and Commander-in-Chief of the Armed Forces, military uniform designs were developed and updated in collaboration with state military organizations. Subsequently, the 'Names and Numbers of Uniforms, Ranks, and Insignia of State Military Organization Service Personnel' were officially approved by Presidential Decree No. 141, dated September 9, 2024.

Following the approval of the Presidential Decree, the 'Rules for Wearing Military Uniforms' were revised and approved by Order A/777 of 2024, issued by the Chief of the General Staff of the Mongolian Armed Forces, in collaboration with the designated working group.



1.1.2. Documents approved by the Resolution of the Government of Mongolia

Government Resolution No. 182, dated May 1, 2024, revised the 'Procedures for Mobilizing Force in Times of Disasters,' originally approved as Annex 1 to Government Resolution No. 340 of November 30, 2011, and reapproved the updated procedures under the same resolution.

1.1.3. Documents approved by order of the Deputy Prime Minister of Mongolia

The document titled "Standard Development Strategy of Emergency Manage-

ment Organizations–2030" was approved by Order No. MN/05 of the Deputy Prime Minister of Mongolia, dated May 3, 2024.

In response to the growing need to enhance national resilience and capacity to withstand and recover from disasters, the strategy outlines a comprehensive set of actions to be implemented, including:

1. Development of a disaster risk management standard system;

2. Expansion of an integrated disaster early warning system, incorporating advancements in communication, information technology, and innovation;

3. Enhancement of urban search and rescue capabilities;

4. Strengthening of air search and rescue unit capabilities;

5. Improvement of disaster response capacity through the establishment of new firefighting, rescue units, and search and rescue sub-units;

6. Upgrading of equipment, machinery, and clothing for emergency response personnel;

7. Establishment of a training and development center for emergency staff;

8. Implementation of measures to improve the infrastructure, facilities, and equipment of state reserve warehouses.

The "Housing Program for Emergency Management Service Personnel" (2024–2028) was approved by Order No. 129 of the Deputy Prime Minister of Mongolia on December 18, 2024.

This program is designed to improve the housing and living conditions of emergency management service personnel by ensuring their broader inclusion in state-implemented housing policies and projects, offering financial support and preferential terms. Key actions under the program include:

1. Providing assistance and support for purchasing housing and improving living conditions;

2. Cooperating with local administrations, territorial unit management, and relevant organizations in both the capital and rural areas to facilitate housing access;

3. Implementing 11 specific measures under three main objectives, including the construction of a dedicated housing town for service personnel, which is expected to improve the living conditions of 900 emergency service personnel at central and local levels.

Amendments to the "Fire Fighting Rules" were made and approved by Order No. 24 of the Deputy Prime Minister of Mongolia, dated April 18, 2024.

Additionally, the "Integrated Dzud Response Plan" was approved by Order No. 10 of the Deputy Prime Minister, dated January 10, 2024.

1.1.4. Documents approved by Orders of the Chief of NEMA

Pursuant to the order of the the Chief of NEMA, the following documents were approved to enhance regulatory oversight and operational preparedness: the List of Documents to be Maintained by Search and Rescue Units; the Checklist for Inspecting Enterprises Handling Toxic and Hazardous Chemicals; the Preparedness and Response Plan for Zoonotic Diseases; the Checklist for State Supervision of Disaster Prevention in Enterprises and Organizations Engaged in Industrial Explosives and Blasting Operations; and the Procedures for the Use of Checklists in State Supervision of Disaster and Fire Prevention.

In addition, in 2024, several key documents were revised and approved by the Chief of the NEMA to improve coordination, communication, and infrastructure in emergency management operations. These include:

• The "Procedures for the Evaluation of Construction Design and Commissioning of Construction Facilities", revised by Order No. A/47 dated February 28, 2024;

• The "Temporary Instructions for Organizing Radio Communications in Disasters, Natural Phenomena, and Accidents", approved by Order No. A/53 dated February 29, 2024;

• The "Instructions for Organizing Radio Communications in Disasters, Natural Phenomena, and Accidents", approved by Order No. A/430 dated December 4, 2024;

• The "Procedures for Organizing Emergency Operations", approved by Order No. A/147 dated April 30, 2024;

• The organizational standard "General Requirements for Communication Equipment of Branch Units of Emergency Management Organizations", revised by Order No. A/147 dated April 30, 2024, and officially approved by Presidential Order No. A/429 on December 4, 2024.

The "Child Protection Policy for Emergency Management Service Personnel" was approved by Order No. A/108 of the Chief of the NEMA on April 5, 2024. This policy aims to implement child protection measures for emergency management service personnel by ensuring the safety and well-being of children within families and society, preventing and protecting children from violence and risk, and fostering a child-friendly environment.

The "Methodology for Organizing Internal Monitoring and Evaluation of the Activities of Branches and Units of the Emergency Management Organization" was approved by Order No. A/111 of the Chief of the NEMA, dated April 8, 2024.

This methodology is intended to strengthen internal oversight by monitoring and evaluating the implementation of state policies, decisions, laws, and both long-term and short-term development strategies. It aims to assess the effectiveness of planning documents and actions carried out by the NEMA and its subordinate structures, evaluate the quality and impact of services and measures undertaken, and monitor employee performance with the goal of enhancing organizational efficiency, accountability, and overall productivity.

The "Professional Unit Regulations" were approved by Order No. A/379 of the Chief of the NEMA, dated November 1, 2024.

These regulations govern the operations of professional units tasked with disaster prevention, search and rescue operations, disaster impact mitigation, the provision of medical and humanitarian aid, and support for recovery efforts. The regulations define the roles, structure, training, preparedness, and operational readiness of professional units. They apply to units established under disaster protection departments, administrations, territorial units, state and local administrative organizations, and legal entities involved in supporting disaster protection activities.

CHAPTER 1.2. DISASTER PROTECTION POLICY AND PROGRAM IMPLEMENTATION

In accordance with the "Common Procedures for Monitoring, Analyzing, and Evaluating the Implementation of Policy Documents and the Activities of Administrative Organizations," as approved by Government Resolution No. 206 (2020) of Mongolia, the following policy documents and project/program activities implemented by the NEMA have been monitored, analyzed, and evaluated.

The implementation of the "National Programme on Community Participatory Disaster Risk Reduction," approved by Government Resolution No. 303 of 2015, along with its corresponding Action Plan endorsed by Order No. 50 of the Deputy Prime Minister in 2016, was assessed at 93.0 percent in 2024.

Under the "Five-year Development Direction of Mongolia and National Investment Program (2021–2025)," approved by Resolution No. 23 of the State Great Khural in 2020, the NEMA was responsible for implementing three measures under section 7.3.3 (2021–2024), one measure under section 7.3.4 (2022–2024), and one measure under section 8.1.4 (2022–2025). As of 2024, the implementation of these tasks stood at 53.3 percent.

In line with the "Vision-2050" Long-Term Development Policy of Mongolia, approved by State Great Khural Resolution No. 52 of 2020, the NEMA evaluated the implementation of nine measures related to creating a peaceful and safe society. These include measures 7.3.14, 7.3.15, 7.3.16, 7.3.20, 7.3.21, 7.3.22, 7.3.23, 7.3.25, and 7.5.20, which are scheduled for implementation between 2021 and 2030. The cumulative implementation of these measures was assessed at 51.1 percent in 2024.

Within the framework of Goal 7.2 of the "Mongolian Development Plan 2024," titled "Improve State Productivity," the NEMA is responsible for implementing Measure 7.2.5.1, which aims to increase national capacity for conducting independent aerial search and rescue operations.

In the context of the 2024 Annual Development Plan of Mongolia, the Agency served as the lead implementing agency for one specific task and measure, which was successfully completed and assessed at 100 percent implementation.

According to the "Action Plan for the Implementation of the Government of Mongolia's 2020–2024 Program," approved by Government Resolution No. 203 of 2020, the NEMA was assigned five policy measures. These include four governance policy measures (4.3.11.1, 4.3.14.1, 4.3.14.2, and 4.3.15.1) and one green development policy measure (5.1.2.1). As of the end of 2024, two of these measures were deemed "effective," having fully met their targets and achieved 100 percent implementation. The remaining three were classified as "needing intensification,"

with preparatory and development work underway, and an implementation rate of 30 percent. The overall implementation rate for all five measures was assessed at 58 percent.

In addition, NEMA monitored three projects implemented with foreign loans in 2024. All three projects were evaluated as having achieved 100 percent implementation.

1.2.1. Implementation of legislation, presidential decrees, and government decisions in 2024

As of the end of 2024, the Emergency Management Organization monitored the implementation of 70 provisions across 52 official decisions. These included 8 provisions from 1 law of Mongolia; 13 provisions from 7 resolutions of the State Great Khural; 4 provisions from 3 resolutions of the Standing Committee of the State Great Khural; 5 provisions from 5 decrees issued by the President of Mongolia; 1 provision from a recommendation of the National Security Council; 20 provisions from 19 government resolutions; 18 provisions from 15 sets of minutes of Government meetings; and 1 provision from an official assignment.

Of the total provisions monitored, 61 were fully implemented, 2 were in the process of implementation with approximately 70 percent completion, and 1 was assessed as insufficiently implemented at around 30 percent completion. In addition, implementation could not be evaluated for 6 provisions either due to a lack of sufficient data or because they did not fall under the mandate of the Emergency Management Organization. Overall, the implementation rate of the monitored decisions was assessed at 97.9 percent.

1.2.2. Implementation of the Sendai Framework for Disaster Risk Reduction in Mongolia

The Sendai Framework for Disaster Risk Reduction 2015–2030, adopted at the Third United Nations World Conference on Disaster Risk Reduction in 2015, has been actively implemented in Mongolia. Under this framework, significant progress was made across its four priority areas:

• Under the priority area of deepening public understanding and providing knowledge on disaster risk reduction, 2 targets and 16 tasks were implemented, achieving a 95 percent completion rate.

• Under the priority area of increasing investment in disaster risk reduction activities, 2 targets and 9 tasks reached an 82.5 percent implementation rate.

• In the area of strengthening governance for disaster risk reduction, 3 targets and 8 tasks were fully completed, with a 100 percent implementation rate.

• For the priority area focused on ensuring disaster preparedness, and longterm planning for post-disaster reconstruction, rehabilitation, and build back better, 2 targets and 23 tasks were completed at an 83.4 percent implementation rate.

Overall, during the 2023–2024 reporting period, implementation of 56 tasks and measures aligned with the four priority areas and eight objectives of the "Medium-term strategy for the implementation of the Sendai Framework for Disaster Risk Reduction in Mongolia", approved by Government Resolution No. 355 (2017) and Deputy Prime Minister's Order No. 51 (2021), achieved an average implementation score of 89.2 percent.

By the end of 2024, efforts to enhance internal security within emergency management organizations and improve monitoring and evaluation mechanisms were fully implemented at 100 percent.

In accordance with the inspection schedule approved by the Chief of the National Emergency Management Agency, a total of 13 comprehensive inspections and 10 implementation inspections were conducted across subordinate units in 2024. Additional inspections were carried out in response to identified violations and deficiencies in the operations of both central and local emergency management organizations, as well as in response to complaints submitted by citizens and businesses. Based on these inspections, appropriate instructions and recommendations were issued to mitigate risks and strengthen organizational performance.

1.2.3. Implementation of the Strategic Plan (2021-2024) of NEMA

The "Strategic Plan of the National Emergency Management Agency 2021–2024" has successfully implemented a total of 70 measures, achieving a 90 percent implementation rate, including 11 measures under the Government's 2020–2024 Action Program, 38 measures for the functions of the Emergency Situations Organization under the law, and 21 measures for the general functions of state organizations, with notable progress in the strategic goal of improving the capacity of technical equipment for disaster protection.

Objectives	Activity #	Average percentage
Objective 1: Improve the standard and quality of disaster protection equipment and techniques and improve communication during disasters.	5	72%
Objective 2: Establish an air search and rescue unit in emergency management services.	2	100%
Objective 3: Improve the quality, efficiency, and effectiveness of dis- aster prevention activities.	8	87.5%
Objective 4: Improve disaster risk management, introduce disaster science and innovation into operations.	10	87%
Objective 5: Improve the coordination of integrated disaster man- agement, ensure communication and electronic information secu- rity.	9	100%

Part I. Disaster management and coordination

Objective 6: Organize the work of retrieving submerged vehicles and equipment from Khuvsgul Lake in cooperation with interna- tional organizations.	1	100%
Objective 7: Improve the storage, protection, transportation safety, and control of petroleum products, explosives, and explosive de- vices.	1	100%
Objective 8: Strengthen firefighting operations and improve re- source readiness.	6	98.3%
Objective 9: Improve the warehouses and protection of strategic resources.	2	30%
Objective 10: Improve the management and organization of state resources and the coordination of humanitarian assistance.	5	100%
Objective 11: Ensure leadership and human resource development and strengthen capacity.	7	98.5%
Objective 12: Improve the legal framework for disaster protection and develop all-round cooperation.	3	76.6%
Objective 13: Increase budget, finance, and investment, improve logistics and support services.	3	66.6%
Objective 14: Ensure internal security, improve monitoring and eval- uation results.	4	100%
Objective 15: Introduce advanced technologies and digital services in disaster protection activities.	4	100%

CHAPTER 1.3. DISASTER PROTECTION COOPERATION

1.3.1. International Cooperation and Visits

Visit of foreign guests to the 20th anniversary of the transition of the Emergency Management Organization of Mongolia to a unified system:

A total of 12 representatives from countries, including the Republic of Korea, the People's Republic of China, the Republic of India, the Russian Federation, and the Republic of Poland, attended the event celebrating the 20th anniversary of the transition of the Emergency Management Organization of Mongolia to a unified system, an event that reflected the scope of the organization's international cooperation.



Figure 1. Military ceremony and parade held in commemoration of the 20th anniversary of the transition of the Mongolian Emergency Management Organization to a unified system.



ment Organization to a unified system.

During the event, foreign representatives were introduced to the activities of NEMA, including the policies and strategies implemented in the field of disaster management, recent upgrades in technical equipment, and training and preparedness programs for personnel. The visiting delegates emphasized the importance of international cooperation in enhancing Mongolia's disaster management capabilities and expressed their willingness to collaborate in the future through mutual exchange of experiences, the organization of joint trainings and exercises, and the provision of technical and equipment support.

Cooperating Countries in 2024

Countries	Year	Content of the collaboration
Japan, (JICA)	2022.04 - 2024	The second phase of the "Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention" has been under implementation since April 2022. As part of the project, efforts are underway to enhance human resource capacity through targeted studies and to develop and approve updated regulations and standards for earthquake resistance.
Republic of France	2024	The second phase of the "Establishment of the Air Search and Res- cue Unit and Supply of Helicopters" project is being implemented with funding from a highly concessional loan provided by the Gov- ernment of the French Republic. As part of the project, additional training is being delivered to emergency service personnel, and the supply of firefighting vehicles is currently underway.

Part I. Disaster management and coordination

Russian Federation	2024	 In accordance with the 2024–2025 cooperation plan approved during the Session of the Mongolian-Russian Joint Commission, held in 2023 in collaboration with the Russian Federation, the following activities were successfully implemented: A joint seminar on firefighting in high-rise buildings was organized in Mongolia from November 6 to 8, 2024. Diving and amphibious landing training exercises were conducted in Khuvsgul aimag. Advanced training for commanders of the Firefighting unit and sub-units was carried out at the General Directorate of the Ministry of Emergency Situations of the Russian Federation in the Republic of Buryatia. A joint seminar focused on psychological preparedness during rescue operations was organized at NEMA HQ.
People's Republic of China	2024	The "Belt and Road" Coordinators' Conference and Youth Di- alogue, organized by the Ministry of Emergency Management of the People's Republic of China in collaboration with its International Cooperation Center, was attended by N. Enkhbold, Ambassador Ex- traordinary and Plenipotentiary of Mongolia to the People's Republic of China, and Colonel B. Unenbaatar, Director of the Administra- tive Department of the National Emergency Management Agency of Mongolia. During the conference, Ambassador Enkhbold held a meeting with Vice Minister Xu Jia Ai of the Ministry of Emergency Management of China, where he expressed Mongolia's full support for and com- mitment to strengthening bilateral cooperation. As part of the initi- ative, a youth exchange and dialogue on "Belt and Road" Disaster Management was organized, aligned with a cooperation framework consisting of four chapters and fourteen action points approved by the conference.
Republic of Slovenia	2024	As part of efforts to initiate cooperation in the field of disaster man- agement with the Civil Protection and Disaster Management Agency of the Republic of Slovenia, the joint declaration between Mongo- lia and Slovenia includes a provision stating: "We will support the exchange of experiences, including strengthening disaster manage- ment capacity and developing training programs."

Visits and Meetings of Representatives from Foreign Countries:

In 2024, a total of 13 official visits, joint trainings, and seminars were organized, during which 67 foreign representatives from various countries and organizations were hosted.

Visit of the Delegation led by General Colcombe, the Head of the Department of Defense and Security Cooperation at the Ministry of Foreign Affairs of the French

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Republic:

At the invitation of Major General G. Ariunbuyan, Chief of NEMA, a delegation led by General Colcombe, Head of the Department for Defense and Security Cooperation at the Ministry of Foreign Affairs of the French Republic, visited Mongolia from October 23-25, 2024. During the visit, the delegation toured the Rescue Unit 105 of the capital city and the Disaster Prevention Training Center. As part of the Mongolian-French cooperation, the delegation also handed over a complete set of PETZL

brand high-altitude rescue equipment worth 34,000 euros to the 111th Air Search and Rescue Unit. The event was attended by the Ambassador Extraordinary and Plenipotentiary of the French Republic to Mongolia, Ms. Corinne Pereira, as well as other officials. In addition, the delegation familiarized themselves with the activities of the various units and branches of the Emergency Management Organization and participated in joint training on mountain rescue operations with emergency personnel.



Figure 3. During the tour of the activities of the Rescue Unit 105 and the Disaster Prevention Training Center of the capital city Emergency Management Department

1.3.2. Training and workshops abroad

A total of 215 staff of the Emergency Management Organization participated in 59 visits, conferences, workshops, meetings, training sessions, and seminars organized abroad in 2024.

<u>Conferences and Exhibitions Attended by Deputy Prime Minister S. Amar-</u> saikhan and Major General G. Ariunbuyan, Chief of the National Emergency <u>Management Agency</u>:

Asia and the Pacific Ministerial Conference on Disaster Risk Reduction:

The Asia and the Pacific Ministerial Conference on Disaster Risk Reduction was held in Manila, the Philippines, from October 14 to 18, 2024, under the theme "Surge to 2030: Enhancing ambition in Asia-Pacific to accelerate disaster risk reduction".

As disaster risk is a transboundary issue, the conference aimed to reduce disaster risk in the Asia-Pacific region by promoting regional disaster prevention, preparedness, and capacity building for disaster risk reduction. It also focused on implementing political commitments made by countries, sharing achievements, innovations, and lessons learned in disaster risk reduction, and strengthening regional mechanisms to support the implementation of disaster risk reduction measures. The conference was attended by over 4,000 representatives from 55 countries, with approximately 7,000 participants joining online.

The Government of Mongolia was represented by a delegation led by Deputy Prime Minister S. Amarsaikhan. During the conference, Deputy Prime Minister Amarsaikhan participated in the High-Level Ministerial Meeting where he delivered a speech on strengthening disaster risk reduction measures in the region. He also held bilateral meetings with several key figures, including Mr. Kamal Kishore, the UN Secretary-General's Special Representative for Disaster Risk Reduction; Ms. Junee Kunugi, Undersecretary for Civil Protection and Disaster Management of the Philippines; the Regional Director of UNICEF for Asia and the Pacific; Vice President Sara Z. Duterte of the Philippines; Ms. Pio Smith, Regional Director of the UNFPA for Asia and the Pacific; the Undersecretary for Regional Development of the Philippines; and



Figure 4: During the Asia and the Pacific Ministerial Conference on Disaster Risk Reduction

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the Ambassador of the Philippines to Beijing. These meetings provided a platform to exchange views on expanding cooperation in regional development and disaster risk reduction.





Figure 5. Official meeting between Deputy Prime Minister of Mongolia S. Amarsaikhan and UNFPA Regional Director for Asia and the Pacific, Mr. Pio Smith, during the opening ceremony of the Asia and the Pacific Ministerial Conference on Disaster Risk Reduction.

Figure 6: Panel discussion on Data-Driven Approaches for Gender-Responsive DRR Action

The delegation, led by Major General G. Ariunbuyan, Chief of the National Emergency Management Agency, participated in the "International K-Safety 2024" exhibition organized by the Ministry of Internal Affairs and National Security of the Republic of Korea. The exhibition, held from September 10 to 12 at the Bexco Complex in Busan, was attended by over 300 enterprises, organizations, companies, manufacturers, and both governmental and non-governmental organizations from around the world. Participants showcased the latest advanced techniques and equipment for disaster prevention, firefighting, industry, public services, water, railway, road safety, and hygiene.

Within the framework of the exhibition, various activities were organized, including international safety and industrial meetings, trade meetings, safety training sessions, promotional activities, and the "World Disaster and Safety Business Forum."

Major General G. Ariunbuyan held a meeting with representatives led by Kim Hoon, Head of the Training Planning Department of the Gyeonggi Province Fire Service Academy, where they discussed cooperation. He also met with Kim Seung-hwan, Deputy Director of the National Institute of Electronic Communications Research, to exchange views on the "Establishing an Smart Emergency Operations Management Center Empowered by Information and Communication Technology in Mongolia" project and reviewed the activities of the Emergency Management Center.

Additionally, Major General G. Ariunbuyan visited the Earthquake Disaster Prevention Research Center to learn about its activities and gain insights from its experiences.



Figure 7. With Representatives from the Gyeonggi Province Fire Service Academy



Figure 8. Visit to observe the operations of the Busan Emergency Operations Center

"Local-level Disaster Risk Reduction and Early Warning System" Training:

The North-East Asia Regional Center of the United Nations Office for Disaster Risk Reduction (UNDRR) and the Global Education and Training Center (GETI) organized a specialized training on "Local-level Disaster Risk Reduction and Early Warning System" from December 3-5, 2024, in Incheon, Republic of Korea. This training aimed at strengthening local disaster risk reduction activities, enhancing the knowledge of staff, and promoting the adoption of international best practices. Participants included members from provincial, capital, and district disaster risk reduction councils, with a focus on improving their understanding of disaster risk management and early warning systems. The training also provided a platform for sharing experiences and learning from global trends and innovations in disaster risk reduction.

Working visits and meetings:

In connection with the implementation of the "Project to Supply Special-Purpose Firefighting Vehicles to the National Emergency Management Agency," representatives from the "Desotel SAS" group of the French Republic visited NEMA and held



Figure 9. Participants of the "Local-level Disaster Risk Reduction and Early Warning System" training, held from December 3-5, 2024, in Incheon, Republic of Korea

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the first meeting to discuss the project's implementation on July 2, 2024.





A working group led by the Director of the Firefighting Department, NEMA Colonel Ts. Nyambayar, visited the Republic of France from September 22-30, 2024, to confirm the design of special-purpose vehicles to be supplied under the "Project for Supplying Special-Purpose Firefighting Vehicles to the National Emergency Management Agency." This project is being implemented within the framework of the agreement between the



Government of Mongolia and the Government of the Republic of France, pursuant to Order No. A/300 of the Chief of NEMA dated September 4, 2024.



In accordance with Order No. A/287 of the Chief of NEMA, dated August 26, 2024, a working group headed by the Director of the Firefighting Department, Colonel Ts. Nyambayar, attended a meeting on forest and steppe fire prevention in the

border areas of Mongolia and the People's Republic of China. The meeting was held in Ulan City, Xiangan Province, Inner Mongolia Autonomous Region, People's Republic of China, from September 10 to 12, 2024. During the visit, the Ulan City Administration of Xiangan Province, Inner Mongolia Autonomous Region, People's Republic of China, decided to provide NEMA Mongolia with a grant of forest and steppe firefighting equipment worth approximately 280 million tugriks. The equipment was received on November 15, 2024, and was subsequently distributed to the Emergency Manage,ent Departments of Dornod, Sukhbaatar, Dornogovi, and Khentii aimags.



In accordance with the order "On Participation in Foreign Events" approved by the Chief of NEMA on October 29, 2024, the Director of the Firefighting Department, Colonel Ts. Nyambayar, participated in the XXV International Conference of the International Firefighters and Rescuers Sports Federation, held in Riyadh, Kingdom of Saudi Arabia, from November 16 to 22, 2024.



The Mongolian delegation participated in the XIX World Championships among men and X World Championships among women in fire and rescue sports, held in Harbin, People's Republic of China, from September 5 to 12, 2024. The delegation was led by Lieutenant Colonel P. Soronzonbold, Head of the Firefighting Labor Protection and Safety Division, NEMA with S. Battumur, Chairman of the Board of the Firefighting Technical All-round Sports Federation, serving as the head coach. A total of 14 servicemen, including athletes from the national team, represented Mongolia in the championship.



Part I. Disaster management and coordination



1.3.3. Memorandums of Understanding and Agreements:

Memorandum of Understanding on cooperation in the field of disaster prevention and mitigation between the National Emergency Management Agency of Mongolia and Ministry of Emergency Situations of the Republic of Belarus:

Figure 10. Official Visit of H.E. A.G. Lukashenko, President of the Republic of Belarus

During the state visit of H.E. A.G. Lukashenko, President of the Republic of Belarus, from June 1 to 4, 2024, a Memorandum of Understanding was signed between the National Emergency Management Agency of Mongolia and the Ministry of Emergency Situations of the Republic of Belarus to strengthen cooperation in the fields of disaster prevention and disaster relief. DISASTER PROTECTION WHITE BOOK - 2024



Figure 10. Official Visit of H.E. A.G. Lukashenko, President of the Republic of Belarus

A Memorandum of Understanding on cooperation between the National Emergency Management Agency of Mongolia and the Emergency Management Agency under the Ministry of Internal Affairs of Romania:

A Memorandum of Understanding on cooperation between the National Emergency Management Agency of Mongolia and the Emergency Management Agency under the Ministry of Internal Affairs of Romania was signed to initiate collaboration in the field of disaster management. The Memorandum was signed in Bucharest by H.E. L. Sayanaa, Ambassador Extraordinary and Plenipotentiary of Mongolia to the Republic of Bulgaria (accredited to Romania), and Dr. Raed Arafat,



Deputy Minister of Internal Affairs and Head of the Emergency Management Agency of Romania.

The two countries plan to engage in extensive cooperation in the field of disaster management, focusing on the exchange of experience, joint training and research, and strengthening disaster response capabilities, particularly in urban areas. The partnership will also aim to improve disaster relief operations, provide both shortand long-term training programs for doctors and medical personnel to enhance their rehabilitation and service capacities in Romania, and support the introduction of relevant European standards in disaster prevention efforts.

Agreement between the National Emergency Management Agency of Mongolia and the Academy of Military Arts of the Republic of Poland:

A delegation led by Major General G. Ariunbuyan, Chief of the National Emergency Management Agency, paid an official visit to the Republic of Poland from September 30 to October 1, 2024. As part of the visit, an Agreement was signed in Warsaw between the National Emergency Management Agency of Mongolia and the Academy of Military Art of the Republic of Poland. This agreement will establish a framework for the exchange of experience and knowledge between the two institutions, particularly in the fields of disaster management and emergency response.

1.3.4. International training and exchanges



The National Emergency Management Agency, in cooperation with the U.S. Embassy in Mongolia and the U.S. Pacific Command, organized the disaster response exercise and exchange (DREE) "Gobi Wolf 2024" in Dornod aimag from May 7 to 10, 2024. The DREE brought together 121 personnel from the Emergency Management

Figure 11. Opening ceremony of DREE Gobi Wolf 2024

Departments of three eastern aimags, with a total of 470 participants empowered through the program. Additionally, 70 trainers and observers from 11 foreign countries took part, contributing to the international scope and knowledge-sharing objectives of the event.



Figure 12. Technical training of Gobi Wolf 2024

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In accordance with the 2024-2025 cooperation plan between the National Emergency Management Agency of Mongolia and the EMERCOM of the Russian Federation, a planning meeting was held in Khabarovsk, Russia, on May 23 and 24, 2024. The planning meeting focused on organizing international firefighting and rescue exercises involving Mongolia, Russia, and China. The meeting was attended by Deputy Chief Brigadier General D. Namsrai and Lieutenant Colonel P. Soronzon-bold, Head of the Fire Department Division, NEMA.



Figure 13. The planning meeting

1.3.5. Partnership and cooperation

In 2024, the National Emergency Management Agency signed Memorandum of understanding with four organizations in the field of disaster prevention and risk reduction, aiming to prevent disasters, reduce risks, ensure preparedness, conduct public disaster awareness and provide humanitarian assistance and services. These agreements cover cooperation with:

• **State Organizations:** Focused on expanding cooperation with domestic military organizations, ensuring readiness for disaster prevention, rescue, and recovery operations in the event of natural phenomena, accidents, and other emergencies. The agreements aim to strengthen local defense systems, improve officers' abilities to perform their duties, enhance their physical and psychological readiness, facilitate training, exchange information promptly, and support the modernization of equipment and tools.

• **Non-Governmental Organizations:** In collaboration with the Mongolian Red Cross Society, efforts are being made to prevent disasters and hazardous phenomena, educate the population on safe living practices, and provide humanitarian assistance during emergencies.

• **International Organizations:** Working with World Vision Mongolia, the focus is on raising public awareness of disaster risk reduction, ensuring preparedness, and providing comprehensive knowledge on disaster protection, including response and recovery operations.

• **Enterprises:** Through a partnership with Oyu Tolgoi LLC, training and awareness campaigns are being organized on preventing and mitigating potential dangers and disasters at the mine site. This collaboration also aims to establish re-

sponse measures for industrial accidents, ensure prompt interaction between relevant organizations, and develop and implement operational procedures and joint plans for professional units and rescue teams.

CHAPTER 1.4. PROJECTS AND PROGRAMS IMPLEMENTED IN THE EMERGENCY MANAGEMENT ORGANIZATION

Project on Provision of Additional Training to the Air Search and Rescue Unit of the National Emergency Management Agency:

Under the Financial Agreement between the Governments of Mongolia and the Republic of France, the "Project for the Establishment of an Air Search and Rescue Unit and the Supply of Helicopters to the Mongolian Emergency Management Agency" was implemented from April 1, 2020, to October 31, 2023. As part of this initiative, the "111th Air Search and Rescue Unit" of the National Emergency Management Agency was established by Resolution No. 163 of the Government of Mongolia, dated October 28, 2020, and began operations at Buyant-Ukhaa International Airport.

Building on the success of this project, the "Project for the Capability Enhancement of the Air Search and Rescue Unit" will continue until December 31, 2026, focusing on the training of flight crew leaders and the development of trained pilots.

Since the project's initiation, from April 21, 2022, to February 11, 2025, a total of 151 emergency calls have been made, resulting in the rescue and transfer of 204 citizens—comprising 152 adults and 52 children—to higher levels of medical care.

The project, financed by a highly concessional loan of 24.7 million euros from the Government of the Republic of France, aims to strengthen the operational capacity of the 111th Air Search and Rescue Unit under the NEMA. During the project period, key objectives include the training of 3 flight crew chiefs, 7 co-pilots, 12 aircraft maintenance technicians, 6 engineering planning specialists, and 6 transport logistics specialists. The project will also support 2,700 hours of scheduled flight maintenance, along with necessary repairs, services, and the supply of spare parts and equipment.

Project to Supply Special-Purpose Firefighting Vehicles to the Mongolian Emergency Management Agency:

Within the framework of the Financial Agreement signed between the Governments of Mongolia and the Republic of France on October 16, 2019, the first phase of the 43-million-euro soft loan project, "Supply of Special Purpose Firefighting Vehicles to Emergency Management Organizations," was implemented from 2019 to 2022. Within this framework, a total of 42 units of 4 types of special firefighting vehicles were supplied, and 15 specialists from the Republic of France's "Desotel SAS" group visited Mongolia 8 times and organized 160 hours of training for 135 personnel of the Emergency Management Organization on topics such as working with firefighting vehicles, the principles and sequence of operation of the "Rino" model special-purpose firefighting vehicles, the use of special equipment, and the maintenance of vehicles and special equipment.

Based on the achievements and success of the first phase of the project, it was decided to implement the second phase of the project. Within the framework of the financial agreement signed between the Government of Mongolia and the Government of the Republic of France on October 12, 2023, the project to supply special-purpose firefighting vehicles to the Emergency Management Organization is being implemented from 2024 to 2027.

Within the scope of the project, 3 industrial object or foam firefighting vehicles, 10 32-meter auto-mechanical ladder vehicles, 5 42-meter auto-mechanical ladder vehicles, and 21 tons of foam-generating agents worth 13,335,000 euros will be supplied to the National Emergency Management Agency. Upon full implementation of the project, the supply of special-purpose firefighting vehicles nationwide will increase to 62.8 percent, the supply of foam firefighting vehicles to 30.9 percent, and the supply of auto-mechanical ladder vehicles to 83.3 percent, respectively.

The Phase II of the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia

Under the Technical Cooperation Agreement signed between the Governments of Mongolia and the Government of Japan on December 5, 2003, the Mongolia Earthquake Disaster Prevention and Protection Capacity Building Project, with a funding of 310 million yen, is being implemented from 2022 to 2026 with four main objectives:

- Creating a legal framework to improve earthquake resilience
- Developing methodologies and guidelines to introduce methods and technologies that ensure earthquake resilience
- Strengthening the capacity to implement comprehensive activities aimed at ensuring earthquake resilience
- Enhancing the training capacity of disaster prevention training centers to improve earthquake resilience.

As of February 2025, the project has revised and improved building codes for assessing the seismic resistance of reinforced concrete, brick, and prefabricated buildings. It has also developed guidelines for strengthening steel and wooden structures and organized two training sessions to introduce the contents of these rules and guidelines, involving a total of 140 engineers.

The design for reinforcing five buildings, including the Maternity Hospital Center of the National Center for Maternity and Child Health, the Governor's Office of Bayangol district, the 20th School of Bayangol district, the 160th Kindergarten of Sukhbaatar district, and the Research Institute for Meteorology and Environment, has been developed. Furthermore, the construction and installation budget for the reinforcement of the Maternity Hospital Center of the National Center for Maternity and the Governor's Office of Bayangol district has been included in the 2025 state budget. Four VR devices, allowing users to physically experience an earthquake, were handed over to the Darkhan-Uul aimag's Emergency Management Department, four to Orkhon aimag's Emergency Management Department, and six to the Disaster Prevention Training Center's- Unit116.

Project on strengthening national capacity of urban search and rescue:

The project "Strengthening National capacity of Urban Search and Rescue of Mongolia" is being implemented in collaboration with the Swiss Development Agency.

Activities included:

- Training and internships by Swiss experts
- 13 officers participated in the rescue training course



Figure 14. During a meeting in Beijing in March 2024

China also hosted a joint working group of the National Emergency Management Agency of Mongolia and the Swiss Development Cooperation Agency during a working visit to Beijing in March 2024. A meeting was held to continue implementing the "Urban Search and Rescue Capacity Strengthening Project," which will significantly contribute to enhancing the urban search and rescue capabilities of the Mongolian Emergency Management Agency and establishing an internationally accredited urban search and rescue team.

CHAPTER 1.5 EMERGENCY MANAGEMENT ORGANIZATION CAPACITY

1.5.1 Strengthening the structure and organization of the emergency management organisation

To strengthen Mongolia's disaster response capacity, ensure the timely delivery of government services to citizens, and enhance overall preparedness, seven new firefighting and rescue units have been established in Ulaanbaatar city, and Selenge, Umnugobi, and Dornogobi aimags. This initiative was approved under Resolution No. MN/231 of the Government of Mongolia, dated 22 May 2024.



Figure 15. Forest and steppe fire prevention training, research, testing and industrial center

In order to strengthen Mongolia's disaster response capacity, ensure the prompt delivery of government services to citizens, and enhance overall service preparedness, the Unit 123 of the Forest and Steppe Fire Prevention Training, Research, Testing, and Industrial Center has been newly established and has commenced its operations.

To enhance disaster preparedness and response capacity, the Government of Mongolia has restructured and established the "Disaster Protection Training Center Unit 116" under the NEMA, a Search and Rescue Branch in Tsagaannuur soum of Selenge aimag, and Search and Rescue Sub-Unit in Erdenemandal soum of Arkhangai aimag, Otgon soum of Zavkhan aimag, and Bat-Ulzii soum of Uvurkhangai aimag, while also equipping the Air Search and Rescue Unit with three Airbus EC-145 C-2 helicopters for emergency medical operations, one Cabri G2 training helicopter, a mobile training simulator, additional technical equipment, and constructing a head-quarters, hangar, and lighting system in compliance with European standards.

1.5.2. Personnel training

As outlined in the National Emergency Management Agency's action plan, over 170 officers are currently enrolled in doctoral, master's, and 3- and 5-year academic programs at the University of Internal Affairs, as part of efforts to train and retrain national personnel.



Figure 16. Human resource training and preparation of emergency management organization

Approximately 270 students have graduated from the Sergeant School of the University of Internal Affairs as rescue-firefighters and fire truck drivers, and have been assigned to both central and local emergency services, where they are actively fulfilling their duties. As a result, the staffing level of emergency services has reached 91.7 percent. In 2024 alone, more than 2,770 personnel participated in domestic training programs (counted in duplicate), while over 80 personnel took part in international trainings, workshops, and projects, enhancing their skills and qualifications. Additionally, more than 70 personnel are currently pursuing bachelor's and master's degrees in disaster protection at academies and institutions in Russia, Poland, Turkey, South Korea, Japan, and Thailand.

1.5.3 Activities, Training, and Information for the "Year of the Sergeant"

In connection with the declaration of 2024 as the "Year of the Sergeant" at the initiative of the President of Mongolia, the Mongolian Armed Forces organized a series of events, including conferences, trainings, seminars, and cultural, public, and informational activities, all aimed at enhancing the knowledge and skills of the sergeant corps. As part of these efforts, the opening activities and training for the sergeant corps of the Emergency Management Organizations were conducted through
four regional centers, with online communication connecting the sergeant corps across the country. The event, held under the slogan "Sergeant Corps - Specialized Service," provided training on several key topics, including:



Figure 17. The First Conference of Female Sergeant in the Emergency Management Organization

- Mongolian Pride and Mongolian Immunity
- Creating a Happy Workplace
- Ethics.

As part of the "Year of the Sergeant" initiative, two staff were selected to participate as panelists in the "First Women Sergeants' Forum", which was held under the auspices of the President of Mongolia. The sergeants, representing the Unit 113 of the National Emergency Management Agency and the Emergency Management Department of Khuvsgul aimag, participated as panelists during the forum.



Figure 18. The First Conference of Women Sergeants from the Emergency Management Organization



Figure 19. Conference of Sergeants from State Military and Law Enforcement Agencies

1.5.4 Gobi Wolf 2024 Disaster Response Exercise and Exchange

In accordance with the order of the Chief of the NEMA, No. A/123 of 2024, the "Gobi Wolf-2024" Disaster Response Exercise and Exchange (DREE) was held in Dornod Aimag, the center of the Eastern region, in cooperation with the US Embassy, and the INDOPACOM. DREE comprised seven key components: academic training, command and post exercise, search and rescue operations in rubble and confined spaces, firefighting and rescue operations, safety measures during chemical accidents, water search and rescue operations, and helicopter air rescue operations.



Figure 20. "Gobi Wolf-2024" DREE

This exchange of experiences and best practices brought together representatives from ministries, agencies, state disaster protection services, state military and law enforcement agencies, international and humanitarian organizations, the National Rescue Brigade, Air Search and Rescue Units 111 and 115, the Search and

Rescue Unit of the Capital City, Emergency Management Departments of Dornod, Sukhbaatar, and Khentii aimags in the Eastern Region. Additionally, 70 representatives from 11 foreign countries, including the United States, Australia, Bangladesh, India, Laos, Maldives, Nepal, Sri Lanka, Thailand, Vietnam, and the Republic of Korea, participated, bringing the total number of participants to 470, including both foreign and domestic attendees.

The event provided an invaluable opportunity for rescuers and participants from professional organizations to study and exchange information on disaster preparedness, response, search and rescue, recovery, and humanitarian assistance planning. Participants shared standards, good practices, and lessons learned from their respective countries and regions, significantly enhancing their knowledge and professional skills.



Figure 21. "Gobi Wolf-2024" DREE

Exercise on Preparedness and Response for Mass Gatherings and other Health Threats:

The European Union's Chemical, Biological, Radiological and Nuclear (CBRN) Risk Reduction Initiative and the International Science and Technology Centre implemented the P87 regional project on "Public Health Preparedness and Response to Public Health Emergencies" during 2022-2024 in Kazakhstan, Kyrgyzstan, Pakistan, Uzbekistan, Tajikistan, and Mongolia. Within this framework, the Preparedness and Response for Mass Gatherings and Other Health Threats exercise was successfully organized at the NEMA on May 21-22, 2024. This exercise, conducted simultaneously across the six participating countries, involved 45 experts from 15 organizations, including representatives from the National Emergency Management Agency, the National Institute of Environmental Health, National Security Council, the National Institute of Public Health, the Ministry of Environment and Tourism, the Ministry of Foreign Affairs, the Ministry of Health, the Ministry of Food, Agriculture and Light Industry, the Police Department, and other relevant entities.

Professional Development Training for Military and Law Enforcement Staff:

The General Staff of the Mongolian Armed Forces, with the support of the Defense Polytechnic College, included 1 staff from the National Rescue Brigade and 4 personnel from the Emergency Management Department of the capital city in the "Professional Development Course" for leaders of state military and law enforcement agencies.

As part of the training program, 34 central and local personnel, based at the Aquatic Sports Training Center of the Emergency School of the University of Internal Affairs, received theoretical instruction on topics such as flood awareness, types of swimming and their characteristics, search and rescue operations, "Baku" swimming, the "Dactyl" signal for water rescuers, and first aid methods. Over 14 days, they participated in practical training in the swimming pool, where they practiced essential rescue swimming skills, including breaststroke, lap swimming, swimming on the water, 5-meter deep diving, 25-meter long diving, boat rescue operations, and floating ring throwing under the guidance of an instructor. Their basic knowledge was assessed through exams.

Additionally, 10 personnel from central and local emergency management organizations participated in the "International Firefighter Training" at the Gyeonggi Provincial Fire Service Academy in the Republic of Korea.

Smoke jumpers-rescuer training:

In cooperation with the National Rescue Brigade, a smoke jumper-rescuer training course was organized in Batsumber Soum, Tuv Aimag, and a rescue operation training course was held in the Buyant-Ukhaa region with the Mining Rescue Unit 9, focusing on flight safety, improving professional skills, and fostering cooperation and communication during disaster response operations.



Figure 22. Rescue operations, smoke jumpers training and exercises

In addition, a "Rescue Operations, Smoke Jumpers Landing Practice, and Training" was organized in Arvaikheer Soum, Uvurkhangai aimag safely.

Air search and rescue team training and practice:

In accordance with the training program for the establishment of an air search and rescue unit in Mongolia and the pilot training program, four first-year student pilots and Heli-Union instructor pilots Romain Cadet, Stephane Leroiux, David Busson, and Dominic Heraud conducted training flights in the Bio-1 and Buyant-Ukhaa regions with the Cabri G2 helicopter, ensuring flight safety.

Additionally, 10 pilots, 12 engineers, technical specialists, and an air search and rescue team from the first flight unit of the NEMA were trained, enhancing their readiness and ability to perform their duties effectively.

As part of the training program for engineers and technical personnel, a qualification course for the EC-145 helicopter and an Arriel-1 engine qualification course for the EC-145 helicopter were organized, and certificates were awarded to the engineering and technical service personnel.

In collaboration with rescue specialists from the Civil Protection Department of the Republic of France, training was provided for air rescue specialists, rescuers, and emergency teams in the "Terelj" and "Buyant-Ukhaa" regions. Upon completion of the training, certificates were awarded to the trained personnel by the Civil Protection Department of the Republic of France. Furthermore, on April 21, 2022, a joint headquarters training session was held on the theme "Opportunities to Perform Special Mission Flights on Emergency Calls" with the staff, flight service, and experts from the Heli-Union company. Starting from June 9, a six-month training program was organized for working with rescue lifting equipment.

Additionally, as part of the training program for professional rescue teams in aerial search and rescue operations, 4 rescue specialists, 4 rescuers, 4 doctors, and 4 nurses participated in courses covering topics such as "Rescue from High Mountains and Rocks," "Rescue from Rivers and Lakes," "Search and Rescue from Flood Waters," "Rescue from High Buildings and Structures," "Rescue from Water Vehicles," and "Emergency Medical Assistance by Aircraft" with aircraft hoist. The training was led by rescue and medical emergency trainers from the Civil Defense Department of the Republic of France, ensuring both flight safety and operational effectiveness.

1.5.5. Supply of equipment, techniques, protective gears, uniforms, and tools

To enhance the preparedness and readiness of emergency management services and improve the working environment for personnel, we are implementing four types of projects and programs, with a total value exceeding 160 billion tugriks, in cooperation with foreign governments and international organizations.

For instance, the "Financial Agreement" between the Government of Mongolia and the Government of the Republic of France was approved by the Mongolian Parliament on January 11, 2024. This has enabled the commencement of the second phase of the "Project to Strengthen the Air Search and Rescue Team of the Emergency Management Services and Supply Fire Fighting Vehicles," funded with 139.3 billion tugriks. As part of this initiative, we have received 20 tons of fire-fighting foam agents, 490 types of helicopter spare parts, 20 types of tools, and 18 types of oils and lubricants, valued at 336.1 thousand euros. Furthermore, in the near future, 18 units of 3 types of specialized firefighting equipment, totaling 13.3 million euros, will be delivered.

Additionally, with state budget investment, a total of 30 vehicles, including 6 special-purpose passenger transport vehicles, 18 small-scale forest fire vehicles, 4 special-purpose small-scale firefighting vehicles, 2 emergency service vehicles, 2 special-purpose fully equipped medical vehicles, and 1 special-purpose county bus, have been distributed to central and local emergency management services. This has increased the supply of technical equipment by 6.5 percent compared to the previous year.

In order to improve the readiness of the communication organization across the branches and units of the emergency management services, 634 pieces of communication and information equipment across 13 types have been purchased, increasing the supply of radio communication equipment.

Moreover, to incorporate advanced technical equipment into the core activities of the organization, we have introduced a fire-fighting drone and a small robot on a trial basis. The provision of self-contained breathing apparatus (SCBA) to protect personnel in the capital city has also reached 100 percent.

By order No. A/35 of 2024 from the Chairman of the Khural of Citizens' Representatives of the capital, 21 types of equipment and protective clothing have been supplied. This includes personal safety systems for firefighters, high-pressure oxygen treatment equipment for rescuers and firefighters in cases of nitrogen gas poisoning during steam and deep diving, protective clothing for use in chemical and radiation accidents, thermal imaging cameras, high-resolution camera drones, and other necessary equipment for the Disaster Protection Service and professional units to carry out response measures during dangerous events and accidents.

As part of the air search and rescue unit project, we have received 59 pieces of 15 types of rescue equipment and tools for aircraft lifting devices, along with 179 pieces of 32 types of "Petzl" brand search and rescue equipment and personal

protective gear. Additionally, 25 types of medical equipment for emergency medical care have been supplied and are currently being used in operations.

Regarding clothing, in 2024, 8 enterprises and organizations that signed purchase agreements with the NEMA have approved a total of 61 types of standard and special-purpose uniforms and equipment. According to the approved schedule, central and local departments and agencies have provided uniforms and gears to personnel whose service life or standards have expired, as well as newly appointed officers. As a result, the provision of clothing has reached 60 percent.

A total of 86,687,350 tugriks has been invested in machinery and equipment to enhance the production capacity of emergency service officers.

State Investments for Construction and Maintenance of Buildings and facilities of Emergency Management Organization:

A new two-story extension building, covering an area of 364 ml, was constructed and put into operation as part of the state budget investment to expand the Emergency Operations Center building.



Figure 23. Repair of buildings and facilities of local emergency services.



Figure 24. The newly built EOC building

Necessary routine repairs have been carried out on the buildings and facilities of the central and local Emergency Management Organizations to ensure their normal operations.

1.5.6. Competitions and other events:

On the occasion of the 20th anniversary of the Emergency Management Organization, the President of Mongolia awarded the NEMA with the "Sukhbaatar Order," the Emergency Management Department of the Capital City with the "Red Banner Order of Military Merit," and the Emergency Management Departments of Orkhon, Selenge, Dornod, and Umnugovi aimags with the "Order of Military Merit," by decree of the President of Mongolia. Among the active duty and retired personnel of the emergency management services, member of the veterans' committee, (retired) Colonel Puntsagyn Bataakhuu, was awarded the title of "Honored Economist." Retired Senior Sergeant Purevdorj Khatanbold, rescuer of the Unit 9 of the Search and Rescue Sub-Unit under the NEMA, Senior Sergeant Tumenbayar Davaadorj, firefighter of the Firefighting and rescue unit 18 of the Bayangol district, (retired) Colonel Chimeddorj Batchuluun, and (retired) Colonel Dorjgotov Uuganbayar were awarded the title of "Honored Service Worker."



Figure 25. Staff who received awards on the occasion of the 20th anniversary of the Emergency Management Organization

On the occasion of the 103rd anniversary of the establishment of modern scientific institutions in Mongolia and "Scientist Day," the Scientific Secretary of the National Institute of Disaster Research, Doctor (Ph.D.), Lieutenant Colonel P. Chimedtseren, and the Head of the Disaster Studies Center at the Joint Research Institute of the University of Internal Affairs, Doctor (Ph.D.), Lieutenant Colonel B. Sarantsetsegt, were awarded the academic title of "Associate Professor."





Figure 26. In 2024, two officers from the Emergency Management Organization were awarded the title of "Associate Professor."

Lieutenant Colonel S. Baigalmaa, Head of the Resource Research Center at the National Institute of Disaster Research, has successfully defended her Ph.D. degree. Her doctoral dissertation, titled "Security of Petroleum Products Supply," explored the essence of petroleum product supply security and international best practices. The dissertation defined the concepts of ensuring petroleum product supply security and strategic reserves at a theoretical level, while also providing a comprehensive analysis of the factors influencing supply security and the activities required to ensure it, all supported by scientific research.



Figure 27. Lieutenant Colonel S. Baigalmaa, Head of the Resource Research Center at the National Institute of Disaster Research, received her Ph.D.



Figure 28. Ph.D G.Batgerel

The doctoral dissertation sub-committee emphasized that this research holds significant practical value and serves as a fundamental study for ensuring national security. It analyzes the current state of Mongolia's petroleum product supply, identifies critical issues related to oil supply security, and proposes measures for improvement.

Dr. G. Batgerel's doctoral dissertation, titled "Opportunities for Increasing Volunteer

Participation in Disaster Prevention," is also of notable practical significance, especially in the current context where enhancing volunteer involvement in disaster prevention is of paramount importance. The study examines international experiences, lessons learned, and achievements in volunteer activities, and, for the first time at the national level, clarifies the roles, collaboration, and directions of volunteer participation in disaster prevention. It also identifies concrete opportunities to expand such participation. These contributions were underscored by the doctoral dissertation defense sub-committee.



Figure 29. Colonel S. Lkhagvasuren, Head of the State Reserve, Humanitarian Aid, and Logistics Division of the National Emergency Management Agency, receiving his Ph.D.

The research work conducted by Colonel S. Lkhagvasuren, Head of the State Reserve, Humanitarian Aid, and Logistics Division of the National Emergency Management Agency, defines the theoretical and practical foundations of the role of Emergency Management Services in the context of evolving warfare. It explores the organization's capabilities, management, and performance.

The study has been recognized as a significant foundational work, with the Doctoral Degree Defense Sub-Council emphasizing that the professional activities of the Emergency Management Services play a vital role in national defense and that these services can fulfill their core duties under any circumstances.

"The Best Research Work- 2024" - The 2024 "Best Research Work" of the Emergency Management Organization was awarded to the study titled "Khot Ail" by Colonel J. Amgalan, Director of the National Institute for Disaster Research (NIDR), Ph.D., Professor, and Captain D. Narantuya, Ph.D., Researcher on Disaster Risk and Intersectoral Issues. The research was discussed and approved as the "Best Research Work 2024" during the meeting of the NIDR's Academic Council.

This study conducted a comparative analysis of dzud (harsh winter disaster) conditions in Mongolia, the living standards of herders, household livestock numbers, and the current state of winter shelters. It aimed to develop model winter shelters tailored to the regional climate and introduce optimal livestock housing solutions. The research concluded that practical implementation would reduce abnormal livestock loss, increase livestock productivity, improve herder household incomes, and enhance living conditions.



The Government of Mongolia recognized the study as a valuable contribution to the "New Recovery Policy" in the livestock sector, supporting effective adaptation to dzud risks. As a result, the project titled "Winter Shelter to Overcome Dzud Risk" was included in the "New Recovery Policy – Regional Development Reform 2024–2028" under provision 1.5.24 of the Mongolian People's Party Action Plan.



Figure 30. Model winter shelter from the "Khot Ail" research study

In addition, as part of the proposal to revise the 1968 winter shelter standards based on the findings of this study, the State Secretary of the Ministry of Food, Agriculture and Light Industry joined the working group to revise the "Standards for the Construction of Winter Shelters, Fences, and Sheds for Livestock", in accordance with Order No. A/420 dated October 2, 2024, issued by the Ministry.

Competitions

The "Best Branch" competition for unit leaders, organized under the auspices of the President of Mongolia and the Commander-in-Chief of the Mongolian Armed Forces, was held on April 10–11, 2024. A total of 12 teams from central and local emergency management services participated in the event.

The "Khoimor" team from the Northern Region took first place, followed by the "Khangard" and "Mazaalai" teams from the Emergency Management Department of the Capital City, which placed second and third, respectively. The "Gobi Wolf 2" team received the special award. Winners were presented with trophies, medals, certificates, and cash prizes.

In addition, the best group leaders, snipers, medical instructors, and communicators were recognized and awarded certificates and monetary prizes for their outstanding performance.



Figure 31. The "Best Branch" competition for unit leaders, organized under the auspices of the President of Mongolia and the Commander-in-Chief of the Mongolian Armed Forces



In the basketball competition organized among the senior staff of state military and law enforcement agencies, the men's and women's teams from the National Emergency Management Agency performed exceptionally well, securing first place. They were awarded trophies, gold medals, certificates, and silver prizes.

In the table tennis individual event, the female athlete received a certificate and a silver medal. Additionally, in the team event, she contributed to the team's silver medal and also earned a bronze medal in the overall team category.

In the "March-Special Training Complex" competition, named after the President of Mongolia and the Commander-in-Chief of the Armed Forces, the men's and women's teams representing the Emergency Management Service won bronze medals. The men's team had previously won silver medals in 2017 and 2022, while the women's team, participating for the second time, earned their first bronze medal. This year, approximately 500 athletes from 10 organizations, including the Mongolian Armed Forces, the Border Protection Authority, Internal Troops Staff, and the National Emergency Management Agency, the General Executive Agency of Court Decision, the Police Department, the General Intelligence Agency, the National Defense University and the University of Internal Affairs, competed in three categories: the "Permanent Division," "Conscript Division," and "Female Military Division."



Figure 32. The "March-Special Training Complex" competition, named after the President of Mongolia and the Commander-in-Chief of the Armed Forces

In anticipation of the "Sergeants' Conference," a volleyball championship was organized on April 16-17 to provide servicemen with an enjoyable experience and promote their physical health. Over 200 athletes from 21 teams representing 11 state military and law enforcement agencies competed in speed, strength, and agil-

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place by the Police Department team.

ity. The champions were selected based on their performance. In the men's category, first place was claimed by the Police department team, second place by the NEMA team, and third place by the Border Protection Authority team. In the women's category, first place was taken by the NEMA team, second place by the Mongolian Armed Force team, and third



Figure 33. State Military and Law Enforcement Officers Volleyball Championship

In accordance with the "Guidelines for the 2024 National Championship of Firefighting Technical Multi-Sports," approved by Order No. A/124 of the Chief of the NEMA dated April 18, 2024, the competition was held in Darkhan-Uul aimag from July 3-5, 2024.

A total of 248 athletes from 31 teams participated in the competition, representing 5 clubs: 8 teams from the "Ganduulga" club of the Ulaanbaatar region, 5 teams from the "Shonkhor" club of the Eastern region, 7 teams from the "Altangadas" club of the Northern region, 6 teams from the "Od" club of the Central region, and 5 teams from the "Mungun duulga" club of the Western region. The competition consisted of 4 categories: "Assault ladder," "100-meter obstacle race," "the fire relay 4 x 100 meters," and "Combat Spread."



Figure 34. National Championship of Firefighting Technical Multi-Sports 2024

In the assault category, N. Purevdash, a Master of Sports and athlete of the Ulaanbaatar Railway Militarized Emergency Service, took first place with a time of 14.65 seconds. In the 4x100 meter relay, the Ulaanbaatar Railway Militarized Emergency Service team claimed first place with a time of 61.42 seconds. In the 100-meter obstacle race, an athlete from the Emergency Management Department of Orkhon aimag Team No. 1 took first place with a time of 16.97 seconds. In the combat spread category, the Emergency Management Department of Bulgan aimag Team secured first place with a time of 29.57 seconds. In the 2-type competition, an athlete from the Emergency Management Department of Darkhan-Uul aimag Team No. 1 achieved a time of 32.22 seconds. The teams from the Emergency Management Department of Umnugobi aimag tied for first place with a total of 13 points.



Figure 35. National Championship of Firefighting Technical Multi-Sports 2024

Representatives from the Firefighting and Rescue Unit 11 of the Emergency Management Department, Songino-Khairkhan district and the Firefighting and Rescue Unit 29 of the Emergency Management Department, Chingeltei district successfully participated in the "AXA" quize competition, organized by the General Intelligence Agency on May 3, 2024, at the Central Sports Committee building of the Agency.



Figure 36. AXA" quize competition

A total of 14 athletes from the national team will participate in the XIX World Championships among men and X World Championships among women in fire and rescue sports, which was held in Harbin, People's Republic of China, from September 5 to 12, 2024.



Figure 37. The XIX World Championships among men and X World Championships among women in fire and rescue sports

Four personnel from the Mining Rescue Unit participated in the entertainment program "Chak Hak," organized by the Police Department and TV5, and won.



Figure 38. The entertainment program "Chak Hak," organized by the Police Department and TV5

1.5.7. Social security and health protection of personnel

A provision has been enacted to grant monetary incentives equivalent to 30 months of basic salary every five years to emergency service personnel who have worked in rural areas or soums for five or more years. In accordance with this law, a total of 2.8 billion tugriks in monetary incentives were awarded to 112 personnel this year.

By gradually increasing the salary scale and rank of emergency management service personnel, the salary of personnel increased by an average of 18.5 percent, and the salary of senior personnel increased by an average of 19.6 percent compared to the same period in 2023.



Figure 39. Emergency management service personnel participating in housing mortgage loan and rent-to-own housing programs

In addition, 13 personnel were included in the 6 percent mortgage loan program for housing, and 15 personnel were included in the housing program under a lease-to-own condition. Seventeen personnel were provided with gers, 5 personnel received support to acquire 0.7 to 2.1 hectares of land, and 43 personnel received financial assistance to address housing and other social issues.

In total, 94 personnel received financial support to resolve housing and related social challenges.

Health protection of personnel:

In accordance with the order of the Chief of the NEMA and the approved guidelines, a total of 1,371 employees and officers of the Emergency Management Departments from Gobisumber, Dornogobi, Dundgobi, and Umnugobi aimags in the southern region, as well as Arkhangai, Bulgan, Darkhan-Uul, Selenge, Orkhon, Khuvsgul, and Tuv aimags in the northern region, were organized for early health screenings and preventive examinations.



Figure 40. Preventive health check-ups for central and local emergency management personnel

To prevent potential infectious diseases among officers responsible for implementing flood response measures during the 2024 heavy rain flood season in the capital city, the antibacterial preparation Intesti Bacteriophage was distributed in cooperation with the Immunization Service of the National Center for Infectious Diseases. In June, immunization efforts were organized for the officers and employees of the Capital Region Emergency Management Organization, with a total of 1,232 personnel participating.

Figure 41. Preventive health check-ups for central and local emergency management personnel



By Order No. A/17 of the Chief of the NEMA dated January 26, 2024, NEMA jointly with the Embassy of the U.S. and the Indo-Pacific Command organized the "Gobi Wolf 2024" DREE in Dornod aimag. As part of the event, a 50-bed field hospital was set up for disaster response, and doctors and psychologists from the Eastern Region Emergency Management Departments were trained and engaged in practical exercises.



Figure 42. Psychologists of the Emergency Management Organization



Figure 43. Compilation of Legal Documents in the Health Sector

A two-volume compilation of legal documents on healthcare for emergency management services doctors, psychologists, and medical specialists was prepared by order of the Chief of the Agency, including 8 laws of Mongolia, 4 Government Resolutions, 1 Deputy Prime Minister's Order. 5 Joint Ministerial Orders (from the Minister of Health and the Minister of Labor and Social Protection). 17 Orders from the Minister of Health. and 12 rules, regulations, instructions, and program plans. Additionally, within the framework of the President of Mongolia's declaration of 2024 as the "Year of Sergeant," the Emergency Management Department of Arkhangai aimag and the Sergeants' Council, in cooperation with TV9 Television and Arag Production, implemented the "Dreams Come True" project, through which Sh. Bulgantogtokh, a rescuer-chemist and

senior sergeant with 19 years of service in the Emergency Management Organization, was gifted a 0.07-hectare plot of land, a fence, and an 8x10-meter house built by his fellow staff, who presented him with the keys in recognition of his dedication.

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Figure 44. A moment of presenting the key to a house to Senior Sergeant Sh.Bulgantogtokh, a rescuer-chemist from the Search and Rescue Branch

CHAPTER 1.6. DISASTER PROTECTION RESEARCH, STUDY AND INNOVATION

1.6.1. Activities of the Science and Technology Council of the National Emergency Management Agency

The Science and Technology Council of the National Emergency Management Agency, in collaboration with the National Institute of Disaster Research, has published and made available the 2024 No. 1 (12) issue of the journal Disaster Research and Innovations. The scientific papers submitted for publication are reviewed by experts from the journal's editorial board, and only those that meet the criteria outlined in the regulations are published.



Figure 45. The journal Disaster Research and Innovations 2024 N¶ (12)

Figure 46. The textbook "Research methodology"



Professor, Doctor, Lieutenant Colonel B. Enkhtuvshin of the Firefighting Department at the Emergency School of the University of Internal Affairs has developed a textbook titled Research Methodology, which explains research principles, scientific knowledge, theories, concepts, and methods of quantitative and statistical analysis through practical cases and examples.

Every year, the National Institute of Disaster Research prepares and publishes the Disaster Protection White Paper in both Mongolian and English, which is released by the Prevention Department and made available to the public. The Disaster Protection White Paper – 2023 has also

been included on the National Research Platform implemented by the Government of Mongolia at www.sudalgaa.gov.mn.

Regular meeting of the National Council of Disaster Risk Reduction

The 2024 regular meeting of the National Council of Disaster Risk Reduction, established to promote public-private and intersectoral cooperation, citizen engagement, and provide policy recommendations for disaster prevention in Mongolia was successfully held.

The Council emphasized the importance of disaster risk assessment, evidence-based planning, and the implementation of risk reduction measures aligned with development policies and strategies at the administrative, territorial, and sectoral levels.

In this context, with support from the Asian Development Bank, the technical assistance project "Strengthening Disaster Risk Assessment, Planning, and Risk Transfer Capacity" was implemented from 2020 to 2023. The project involved the assessment of 10 of the most frequent disaster types in Mongolia across various elements, including national and local infrastructure, healthcare and educational facilities, state-owned roads, electricity and heating networks, businesses, populations, households, agriculture, and pastureland. As a result, approximately 1,500 hazards, exposure, and vulnerability maps were developed. A disaster risk database has also been established, enabling public access to these assessments, maps, and related data for use by both the public and decision-makers.

Activities of the Academic Council of the National Institute for Disaster Research:

The Academic Council of the National Institute of Disaster Research, operating under the NEMA, was scheduled to meet six times in 2024 to review five research

reports and eight progress reports to be submitted to the designated agency, actively supporting evidence-based disaster prevention efforts.



Figure 47. Meetings of the Academic Council of the National Institute of Disaster Research

Research works of the Professors' Team of the Disaster Management School, University of Internal Affairs:

The Professors' Team of Disaster Research held four meetings during the 2023–2024 academic year and completed the following activities:

• At the meeting held on March 29, 2024, the research topics and supervisors for 14 students of the 7061st cohort in the Emergency Managemet–Disaster Studies program were appointed, and the preliminary defense of the research papers of 9 master's students from the 7062nd cohort was organized.

• On April 27–28, 2024, the Disaster Studies Master's Degree Defense Council convened, based on the list of "Students who meet the criteria for master's defense, research topics, supervisors, and official reviewers" approved by Order A/174 of the Rector of the University of Internal Affairs. During the session, 16 master's students successfully defended their theses.

• On November 20, 2024, a meeting was held to calculate the research workload hours for 3 doctoral students, approve a supervisor for 1 doctoral student, and review and provide recommendations on the following works: the single-topic study Opportunities for Reducing Disaster Risks for Vulnerable Groups, the textbook Environmental Safety, the textbook Plant Farming Practice, and the textbook Fire Fighting Supervisor.

1.6.2. Research and innovation

From 2005 to 2024, the National Institute of Disaster Research completed a total of 147 research projects, making a valuable contribution to the development of disaster science and the organization of disaster protection activities based on scientific principles.

The Institute has also compiled the work of its own researchers, academicians, employees, and other scholars conducting studies in the field of disaster science.

Books, journals, research reports, manuals, and instructions have been converted into electronic format and made publicly accessible via the Institute's website.

In 2024, the institute completed and submitted several key research projects. These include:

As part of the study on the current status of training, qualification, and specialization of emergency personnel at the State Emergency Management Service, an analysis was conducted to assess the satisfaction of both external and internal stakeholders. The study also examined how the training programs align with the overall objectives of the Agency.

In the study titled "The Possibility of Special-Purpose Vehicles for Firefighting on Ulaanbaatar City Roads and Streets," the use of small-sized firefighting vehicles and equipment was proposed for application in densely populated districts and residential areas. The study also determined the appropriate forms and purposes for deploying such vehicles.

Additionally, under the initiative of the President of Mongolia, the "Protection of the Khuvsgul Lake Ecosystem" project included an assessment of fuel damage from 33 vehicles that were withdrawn from the lake. The environmental impact was calculated based on four types of damage: water pollution, pollution of aquatic organisms, ecosystem contamination, and air pollution. The estimated fuel content of the withdrawn vehicles was 50, 65, and 70 tons, respectively.



Figure 48. Meetings of the Professors' Team of Disaster Research

Disaster Risk Assessment Qualification Training:

Since 2019, the National Institute of Disaster Research has organized the annual "Disaster Risk Assessment Qualification Training" to support the implementation of the Law on Disaster Protection and Government Resolution No. 190 of 2020, titled "Disaster Risk Assessment Procedures." In 2024, the 6th iteration of the training was held from June 3 to 14, during which 42 participants successfully completed the course and were awarded certificates authorizing them to conduct disaster risk assessments.



Figure 49. Disaster Risk Assessment Qualification Training 2024

1.6.3. Innovations

On April 15, 2024, the State Reserves Department of the NEMA, the National Institute of Disaster Research, and the research and testing project leader signed Trilateral Agreement No. 85. Under this agreement, the National Institute of Disaster Research is undertaking the research, testing, and implementation of the project titled "Installation of Automatic Level Gauges in Fuel Depots."



Additionally, the Intellectual Property Office, the implementing agency of the Government of Mongolia, has issued:

• A certificate of invention for the "Magnetic Powder for Fingerprint Detection – MGL-Magnetic";

• A copyright certificate for the research work "Satisfaction Study of Emergency Management Service Personnel";

• And a copyright certificate for the research work "Burnout Syndrome of Emergency Management Service Personnel."

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Figure 50. New inventions and copyright certificates were obtained from the Intellectual Property Office, the implementing agency of the Government of Mongolia.

In 2024, NEMA's AI-based media assistant "Nemaka" produced a total of 24 video news items covering the agency's activities, public warnings, and safety advice, reaching a duplicated audience of 9.3 million people. The introduction of AI-based technology has significantly improved information accessibility, resulting in a 3.6-fold increase in viewership compared to the previous year.

To raise public awareness of disaster risk reduction, disaster prevention, and emergency response efforts, the agency conducted advocacy campaigns such as "Let's Prevent Together," "Responsibility Protects You," and "Let's Prevent." Through these efforts, approximately 1,800 news items and informational posts were shared on the "National Emergency Management Agency's Prevention Department" Facebook page, reaching over 20 million people and increasing public engagement by 56 percent compared to previous years.

Furthermore, a total of 3,746 types of information were disseminated to the public via the official website nema.gov.mn, the "Онцгой байдлын ерөнхий газар" Facebook page, the Prevention Department's social media platforms, and Twitter. These posts collectively reached a cumulative audience of 261 million people, that an increase of 51 percent compared to the same period last year.



Figure 51. The NEMA's AI-based media assistant "Nemaka"

1.6.4. Laboratory tests and analysis

To strengthen the material base of the "Fire Laboratory" of the National Institute of Disaster Studies:

With funding from the NEMA, an X-ray diffractometer (TC XRD device) manufactured by Dandong Aolong Radiative Instrument Group LLC of China was imported and installed in November 2024 to enhance the capacity of the Fire Laboratory at the Integrated Safety Assessment Center. The legal framework and relevant testing methodologies are currently being studied to support its effective use.

In 2024, the National Institute of Disaster Research analyzed 238 resolutions and 450 samples submitted by courts and police, issued 238 expert opinions, and reviewed 5 case files, providing corresponding expert evaluations.



Figure 52. The X-ray diffractometer-TC XRD device



Figure 53. The number of requests to determine fire hazard characteristics and the number of tested samples in 2005-2024

At the request of private enteties, enterprises, organizations, and individuals, a total of 563 samples of equipment and construction materials were analyzed, and corresponding laboratory test results were issued for each sample.



Figure 54. Number of submitted samples and official resolutions from the court, prosecutor, police investigator, and other investigators to appoint an expert and conduct an examination.

The Chemical Laboratory of the National Institute of Disaster Research received and analyzed 157 samples submitted by central and local Police Departments, in accordance with Detective Resolution No. 83, "On Appointing Experts and Conducting Tests," and issued 83 expert opinions.

1.6.5. Scientific conferences and training

Discussion Conducted in the Framework of the 20th Anniversary of the Emergency Management Organization:

As part of the 20th anniversary of the Emergency Management Organization, the National Institute of Disaster Research organized two discussion series under the theme "Present and Future of the Emergency Management Organization."

The first session focused on presenting and discussing academic papers, gathering insights from the organization's leadership and branch representatives, and reviewing the organization's achievements, successes, and areas for improvement.

Recognizing that the future of the Emergency Management Organization depends on qualified and skilled personnel, participants emphasized the importance of investing in staff training, professional development, and stable employment. Measures to strengthen human resource capacity and improve organizational planning and strategy were also discussed.



Figure 55. Discussion 1 on "Present and Future of the Emergency Management Organization"

The second part of the discussion, titled "Development, Health, and Safety of Personnel of the Emergency Management Organization" was successfully held on October 31, 2024. Participants discussed and made recommendations regarding the organization's capacity to consistently implement the policies and decisions of the Government of Mongolia. The discussion also addressed the organization's ability to effectively apply scientifically grounded, well-researched, and data-driven methods to reduce disaster risks stemming from climate change and human activities.

Key focus areas included enhancing the responsibility, knowledge, skills, discipline, and teamwork of Emergency Management Organization personnel. In addition, the discussion emphasized the importance of creating favorable conditions that enable employees to effectively carry out their roles, with particular attention to their health, safety, and overall well-being.



Figure 56. Opening of the Discussion 2 on "Present and Future of the Emergency Management Organization"

Scientific Initiatives for Disaster Risk Reduction: Conference and Essay Competition:

The National Emergency Management Agency and the National Institute of Disaster Research jointly organized a two-stage scientific conference and essay competition under the theme "Disaster Risk Reduction Scientific Initiative-2," during which 23 submissions were reviewed, 11 were selected for the final round, and winners were announced, including first place in the physical works category awarded to "Results of Experimental Research on the Production of Fire Extinguishing Agents and Products," and in the scientific article category to "Standard System for Disaster Risk Management Based on Fog Computing Technology," while second place was shared by "Formation of Mongolian Traditional Medicine Reserves During the Plague: Needs, Experience, and Opportunities," "Results of the 'Hot Ail' research work to reduce and overcome disaster risks," and "Issues of Strategic Reserves to Ensure the Security of Petroleum Product Supply."

Scientific and theoretical-practical conference "Participation of stakeholders in disaster risk reduction in Selenge aimag and border regions":

The Emergency Management Department of Selenge aimag, in collaboration with the Aimag Governor's Office and with the support of the National Institute of Disaster Research, organized the first-ever scientific and theoretical-practical conference on the topic "Participation of Stakeholders in Disaster Risk Reduction in Selenge Aimag and Border Regions" in two stages.



Figure 57. Scientific and theoretical-practical conference "Participation of stakeholders in disaster risk reduction in Selenge aimag and border regions"

At the theoretical and practical conference, 8 articles were selected for the second round out of 15 works submitted by state military and law enforcement agencies, disaster protection services, professional units, universities, research institutions, and independent scientists and researchers. A discussion was held on October 25, 2024, in Sukhbaatar soum, Selenge aimag, where the top works were presented and selected.

The conference is considered to have contributed significantly to enhancing the role and participation of stakeholders in disaster risk reduction efforts in border regions. It also supported disaster protection activities based on research findings, facilitated the submission of evidence-based proposals to relevant organizations for inclusion in local development policies, and promoted the integration and implementation of disaster risk reduction strategies in both local and sectoral development plans.

International Scientific Conference on "Ecological Security and Disaster Issues in Border Areas":

The Disaster Research Center, Border Security Research Center, and Security Research Center of the Research Institute of the University of Internal Affairs, in collaboration with the Mongolian Red Cross Society, organized an international scientific conference on the topic "Ecological Security of Border Areas: Urgent Problems and Solutions to Disasters" on November 15, 2024. The event was held both in person at the Children and Youth Center of the Mongolian Red Cross Society and virtually via an electronic platform.

Domestic and international scientists and researchers discussed the results of studies on the ecological security of border areas, factors influencing disaster risk, and urgent disaster-related challenges and their potential solutions. The conference emphasized the integration of theory and practice, while highlighting future trends, modern advanced technologies, and key research findings and recommendations.



Figure 58. International Scientific Conference on "Ecological Security and Disaster Issues in Border Areas"

Academic Discussion on "Internal Security Issues":

The Disaster Research Center of the Research Institute of the University of Internal Affairs organized a discussion on the topic "Current Issues of Internal Security" on November 8, 2024, in the "Soyombot" hall of the University.

The discussion was attended by scientists and researchers from the National Security Council, the Police and Internal Military Research Center of the General Directorate of the Police, the National Institute of Disaster Research under the National Emergency Management Agency, the University of Internal Affairs, various universities, schools, organizations, and experts from other fields. Presentations were made on topics such as "New Geopolitical Situation: Mongolia's External Security Environment," "The Role and Participation of the Domestic Military in Ensuring Mongolia's Internal Security," "Linguistic and Cultural Security," "Some Issues of Security in the Surrounding Environment," "Border Security," and "Security of Petroleum Products Supply."



Figure 59. Academic Discussion on "Internal Security Issues"

In honor of the 60th anniversary of the establishment of the State Reserves, the State Reserves Department, NEMA in collaboration with the Department of Economics, Resources, and Logistics of the University of Internal Affairs, successfully organized an international scientific conference on the topic "Quality and Safety of Strategic Products" in 2024.

At this conference, scientists from the University of Nebraska-Lincoln (United States), Irkutsk Agricultural University (Russian Federation), Korea University (Republic of Korea), Beijing Agricultural University (People's Republic of China), and Laiakh University (Islamic Republic of Pakistan) participated online and presented their research papers.



Figure 60. International scientific conference on "Quality and Safety of Strategic Products"

In addition, scientists, researchers, employees, and officials from the National Emergency Management Agency, the School of Emergency Management, the Research Institute of Plant Protection, the Agricultural University, and the Institute of Plant and Crop Production discussed the research findings presented by international researchers on the current status, challenges, future trends, and the introduction and development of new ideas and innovations related to Mongolia's strategic products. The discussions also focused on the implementation of joint scientific projects and programs. The results of the conference were compiled, and recommendations were developed and published in a compilation.

Workshop on Forest and Steppe Fire Prevention in the Border Area Between Mongolia and the People's Republic of China:

The Mongolia-China Border Forest and Steppe Fire Prevention Workshop was held in Ulan City, Xiangan Province, Inner Mongolia Autonomous Region, People's Republic of China, from September 10 to 12, 2024. During the event, the NEMA's Firefighting Department working group visited Ulan City, Xiangan Province. During the visit, the Ulan City Administration of Xiangan Province decided to grant forest and steppe fire-fighting equipment worth approximately 280 million tugriks to the National Emergency Management Agency of Mongolia. PART II.

DISASTER PREVENTION AND RISK REDUCTION

CHAPTER 2.1. DISASTER PREVENTION

2.1.1. Prevention and inspection

By the end of 2024, all activities aimed at ensuring the internal security of emergency management organization and improving monitoring and evaluation were assessed as 100% complete.

According to the schedule approved by the Chief of the NEMA, comprehensive inspections were conducted in 13 subordinate units, and performance assessments were carried out in 10 units. In line with management decisions, inspections were organized based on identified violations and deficiencies within the internal operations of both central and local emergency management organizations. Additionally, inspections addressed complaints filed by citizens and private entities and enterprises, with appropriate instructions and recommendations provided to mitigate potential risks.

As part of the inspection activities, a total of 116,313 violations were detected across 14,346 buildings and 210,129 households in ger districts. Of these, 91,887 violations (approximately 79%) were resolved immediately and in accordance with legal procedures. In total, 5,268 formal requests, 5,049 notifications, 154 presentations, and 87 recommendations were submitted to the relevant authorities for decision-making within the organization.

Furthermore, violations committed by 814 citizens and legal entities, who failed to comply with fire safety regulations and violated relevant laws, norms, and rules, were addressed through a simplified procedure in accordance with the Law of Mongolia on Violations. As a result, fines amounting to 413,150,000 tugriks were imposed.

2.1.2. Disaster prevention advocacy

- Advocacy activities increased by 56% compared to the previous year. -

Within the framework of the joint measures approved by the Deputy Prime Minister of Mongolia:

In order to prevent disasters, the Deputy Prime Minister of Mongolia approved and implemented guidelines for a total of six types of joint measures and events in 2024. These included, "Integrated Measures for Fire Safety and Prevention in Residential Areas," "Earthquake Disaster Prevention and Awareness Day," "International Day for Disaster Risk Reduction," "Integrated Measures to Prevent Severe Winter and Spring and Dzuds," "Integrated Measures to Prevent Flash Floods," and "Integrated Measures to Prevent Floods and Water Accidents."

In accordance with Article 6.1.6 of the Law of Mongolia on Disaster Protection, which mandates the organization of disaster prevention training, public awareness, and the provision of information, comprehensive measures and campaigns were conducted to reduce disaster risks and promote the achievements, initiatives, and best practices of organizations and citizens involved in this field. Advocacy cam-

paigns such as "Let's Prevent Together," "Responsibility Protects You," and "Let's Prevent" were organized. A total of approximately 1,800 news articles and information were posted on the "ОБЕГ-ын Урьдчилан сэргийлэх газар" Facebook page, reaching over 20 million people.



In this context, a 'Be Prepared' guide for children on household fires, snow and dust storms, dzud, and floods was prepared. A total of 25,000 copies were printed and distributed to citizens and the public during 'Open Day of the Service'.



Fire safety and preventive integrated measures for ger districts

In organizing the second phase of the joint event, a total of 13,247 employees and staff were deployed, including 7,428 personnel from the central and local emergency management organizations and 5,819 from other organizations. Additionally, 920 vehicles and technical equipment were used. (Figure 61)

Within the framework of the joint event, 242 open-day's events were organized in aimags, capital cities, soums, districts, baghs, and khoroos to enhance citizens' knowledge and understanding of fire prevention and the measures to be taken in the event of fire hazard. This represents an increase of 23 open-day events, or 9.5 percent, compared to the same period last year. (Figure 62)







242

250

240

In connection with the nationwide organization of the integrated event, a total of 295 types of news, warnings, and recommendations were prepared, including 55 news stories, 10 interviews, 230 posters, and 10 video clips. These materials were posted on the website of the Emergency Management Agency, as well as on the 'Онцгой байдлын ерөнхий газар' and ' ОБЕГ-Урьдчилан сэргийлэх газар' Facebook pages, reaching a total of 17,608,220 people. To motivate citizens to protect themselves and prevent disasters, hashtags such as 'Let's Prevent Together, Not Just Sit Around, ' 'Let's Prevent Together,' and 'Responsibility Will Protect You' were used when delivering recommendations.

According to the Unified Statistical Database of Mongolia, there are 240,779 households in Mongolian ger districts and 410,175 households in houses, totaling 650,954 households in ger neighborhoods. Of these, 251,368 households, or 38.6 percent, have implemented fire safety and prevention measures, marking an increase of 3.7 percent compared to the same period last year. (Figure 63)


Figure 63. Number of ger households that organized screenings and provided guidance and advice

In cooperation with professional organizations nationwide, inspections were conducted to determine whether the fire safety and electrical wiring of homes and households in ger districts met standard requirements. A total of 74,419 violations related to stove safety and 29,826 violations related to electricity were detected. Of these, 104,245 violations were eliminated on the spot, and 45,227 violations were eliminated by the state fire inspector, with professional methodological advice provided. (Figure 64)

A detailed survey was conducted with the staff of the Governor's Offices in the aimags, capital city, soums, districts, and baghs regarding the roads, exits, and locations inaccessible to fire trucks in 5,194 households in ger districts. Information on the locations and addresses inaccessible to fire trucks was submitted to the Governor's Office of the respective territory, and 4,829 households that were inaccessible to roads, exits, and fire trucks were relocated. (Figure 65)





Figure 64. Violations identified during inspections



Earthquake Disaster Prevention and Awareness Day

In order to ensure the implementation of Government Resolution No. 67 (2017) of Mongolia, training and drills on "Earthquake Disaster Prevention" were organized for a total of 177,401 employees, teachers, staff, students, and pupils from 17 ministries, 10 state disaster protection services, 30 universities, 2,449 state organizations, and 1,151 enterprises and institutions. (Table 1)

No.	Class room training	Number of participating organizations	Number of participating employees, teachers, staff, students, and pupils			
1	Government ministry	17				
2	Disaster Protection state services	10	8046			
3	Universities	30				
4	State organization	2449	112978			
5	Private entity and enterprise	1151	56377			
	Total	3657	177401			

Table 1. Nationwide implementation status of Resolution No. 67of the Government of Mongolia of 2017

Within the framework of ensuring the implementation of Government Resolutions No. 339 and No. 340 of 2011 of Mongolia:

In order to ensure the implementation of the "Disaster Warning and Information Signal Transmission Procedures" and "Disaster Evacuation Procedures," approved by Resolutions No. 339 and 340 of the Government of Mongolia in 2011, evacuation drills were organized for 21,958 employees of ministries, state disaster protection services, and universities; 112,978 employees of state organizations; 56,377 employees of enterprises and units; 32,163 employees of local disaster protection agencies; 3,227 employees of vocational schools; 6,085 employees of enterprises and organizations; and 1,071,424 teachers, staff, students, and pupils.

Additionally, 2,272 employees of the Emergency management organization and 6,010 employees of other organizations conducted public training and drills, bringing 1,312,494 participants from various organizations (Table 2)

Table 2. Nationwide implementation status of Government ResolutionsNo. 339 and 340 (2011) of Mongolia

No.	Participation of citizens,	Number of	
1.01	for	participants	
1		Ministry and university	21958
2		State organization	112978
3		Private entity and enterprise	56377
4	Participants	Disaster Protection local service	32163
5	-	Professional unit	3227
6		Other organization	6085
7		Citizen	1071424
8	Ongonigona	Emergency management orgnization	2272
9	Organizers	Others	6010
		1312494	

Integrated measures to prevent severe winter and spring conditions and the risk of dzud

In accordance with Government Resolution No. 279 of 2023 on "Certain Measures to Prepare for the Winter and Spring of 2023–2024 in the Agricultural Sector," the Government of Mongolia approved the required secure stock levels of hay and fodder to be prepared at the aimag, capital city, soum, and district levels, as well as the quantity of meat to be stocked for the spring food needs of aimag center populations in 2024.

According to research by the meteorological agency, the winter of 2023–2024 experienced the heaviest snowfall in the last 49 years. Although indicators such as summer pasture quality, carrying capacity, snow cover area, and snow depth were like those during the 2009–2010 dzud, the key difference was the extreme weather fluctuations in November and December 2023. Several episodes of sudden warming followed by sharp temperature drops caused ice crusts to form on pastures, resulting in "iron dzud" conditions across 58 soums in 13 aimags, an unprecedented phenomenon.

To minimize the impacts of winter and spring hardships, the State Emergency Commission established an Emergency Operations Task Force and implemented a two-phase strategic plan. The first phase focused on reducing the impact of dzud and ensuring rapid response actions, while the second phase addressed the disposal and disinfection of livestock carcasses caused by the dzud and implemented preventive measures against flash floods caused by snowmelt.

Integrated measures to prevent the risks of ice-related incidents on rivers and lakes, and flash floods caused by snowmelt

In accordance with the Order of the Head of the State Emergency Commission (SEC) in August 2023, an Emergency Operations Task Force was established. In connection with this, a team was appointed, consisting of representatives from relevant professional organizations, with the responsibility to provide leadership and coordination for preventing flash floods caused by snowmelt.

A total of 470 employees and officials from relevant professional organizations in the capital and districts, along with 126 technical devices, worked manually and with specialized machinery to excavate 26,456.1 cubic meters of ditches, remove 7,463 tons of ice, and transport it to the Tuul and Gunt rivers, and Nogoo nuur lake. Additionally, 500 meters of earthen dams were constructed. As a result, 273 households were protected from the risk of water and ice flooding. However, 9 households were rendered uninhabitable, 7 of which moved on their own, while 2 households were relocated by personnel of the Emergency management organization.

Since the beginning of the year, there have been a total of 110 reports of flash flooding in the capital city. In response, a total of 685 staff, 169 vehicles and machinery, and 60 moto pumps from the Emergency management organization, the Agen-

cy for geodesy and water engineering, and district Governor's offices have worked together to pump out 9,511 tons of water, excavate 5,613 meters of ditches, clear 3 bridge channels, transport 155 tons of ice and 3 tons of sludge, open 35 meters of drainage pipes, and build 3,570 meters of earthen dams. These efforts ensured the safety of 310 households, 5 businesses, and relocated 3 households from Bayanzur-kh (1) and Khan-Uul (2) districts.

Integrated measures for the prevention of floods and water-related accidents

As of the beginning of 2024, a total of 92 water-related accidents have been recorded nationwide, resulting in the deaths of 79 citizens, including 14 children. Additionally, 17 individuals, including 7 children, were rescued.

Over the past 10 years, 1,058 people in Mongolia have lost their lives due to water accidents. Of these, 28.9 percent were children aged 0–17, and 67.4 percent of adult victims were men. By age group, 64.4 percent of all fatalities involved children and young people under the age of 35. In terms of causes, over 70 percent of all incidents occurred during recreational activities (such as swimming, fishing, consuming alcohol, or leaving children unsupervised.) Approximately 15 percent occurred while crossing rivers on bridges or in impassable areas, or while traveling across ice to take shortcuts. Another 5 percent happened during the course of work duties or in water bodies formed by mining operations, and around 10 percent were reported without a clearly identified cause. Moreover, around 80 percent of all water accidents take place during the summer season, with more than 40 percent occurring in July alone.

In accordance with the guidelines approved by the Chief of the NEMA, a working group led by Colonel D. Bat-Erdene, Head of the Prevention Division, NEMA, conducted official visits on June 24 and 25. On June 24, they met with representatives from the Ministry of Energy, the Ministry of Construction and Urban development, the Ministry of Health and the Ministry of food, Agriculture and Light Industry. On June 25, they visited the Ministry of Transport, the Ministry of Mining and Heavy Industry, the Ministry of Labor and Social Protection, and the Ministry of Environment and Toruism. The group reviewed the implementation of the January 2024 Task Force Plan of the SEC, assessed flood preparedness, and provided relevant guidance and recommendations.



Figure 66. Status of readiness inspections and the provision of instructions, guidance, and recommendations

Flood and Water Accident Prevention Measures at the Local Level:

In cooperation with professional organizations, inspections of flood protection dams and drainage channels were conducted in all 21 aimags and urban areas. As a result, over 170 km of flood protection infrastructure were cleaned and maintained.

A total of 431 warnings and notices were posted on the official websites and social media platforms, reaching 1,188,497 users. Official notifications were delivered to 1,661 households located in high-risk zones, and 54 households were relocated from extremely high-risk areas. Additionally, 183,669 users received early warning messages via mass SMS as part of integrated spring flood prevention measures.

Within this framework, 163.5 km of flood protection infrastructure was cleaned, 727.9 km of new drainage and protective embankments were constructed, and official notices were delivered to 1,299 households by state disaster inspectors. Snow and ice were cleared from the yards and fences of 173 households located in potentially affected areas, and 76 households were relocated to reduce risks.

On the "ОБЕГ-ын Урьдчилан сэргийлэх" Facebook page, 33 types of public awareness materials (including 10 news updates, 15 posters, and 8 videos) were posted regarding ice collapse on rivers and lakes and flash flood risks. These posts received 2,147,312 views (duplicated count), with 5,877 reactions and 6,232 shares.

A total of 310 warning signs and surveillance cameras were installed in high-risk locations where water accidents frequently occur.

In line with Order No. 01 of the SEC of 2024 and the guidelines approved by the Deputy Prime Minister of Mongolia for the "Integrated Measures to Prevent Flood Hazards," six press conferences were organized by the Emergency Operation Task Force. Press footage and videos were disseminated through over 70 media outlets, including MNB, Malchin, TV9, NTV, MNC, Mongol HD, MN-25, SBN, ETV, and numerous online platforms such as zarig.mn, mpa.mn, zugii.mn, unuudur.mn, ergelt. mn, gogo.mn, zindaa.mn, dobu.mn, ikon.mn, and news.mn.

Additionally, 22 types of posters including 4 addressing civil duties and 96 advisory messages on weather conditions, flood hazards, and water safety were developed and shared on the official pages of the "Онцгой байдлын ерөнхий газар" and "ОБЕГ-ын Урьдчилан сэргийлэх" Facebook pages, reaching a duplicated count of 1,424,021 users.

Public awareness was further raised through over 650 interviews and media briefings broadcast via more than 120 outlets, including MNB, Eagle TV, Mongol HD, TV9, SBN, Chanel 25, NTV, Tenger TV and Malchin, and print publications such as "Udriin Sonin", "Ugluunii sonin", "Zuuny Medee", niitlel.mn, zarig.mn, ubn.mn, medee.mn, news.mn and mnb.mn. Influencers and public figures participated in the campaign, amplifying the impact of these flood and water accident prevention efforts.

Based on weather warnings from the Meteorological Agency, 300 mass SMS alerts were broadcast. Furthermore, 310 warning signs and surveillance cameras were installed along riverbanks in high-risk areas identified through risk analysis.

In collaboration with government, non-governmental, general education, and preschool education institutions, 350 training sessions were conducted for 18,088

teachers, staff, and students on preventing water-related accidents.

Lastly, 20 years of disaster data—including incidents, recurrence, damage, and affected individuals were recorded in the National Disaster Information Database to support evidence-based disaster risk reduction and emergency planning in Mongolia.

2.1.3. Disaster protection training

Disaster preparedness training

In 2024, a total of 7,956 disaster preparedness training sessions were organized nationwide, involving 303,786 participants. Compared to the same period of the previous year, the number of these training sessions increased by 531, or 0.17%.



Figure 67. Number of training

In accordance with Article 13 of the Law of Mongolia on Disaster Protection, disaster preparedness trainings were organized for civil servants, employees of government and non-government organizations, enterprises, and citizens as follows:

- 12 disaster protection complex training involving 3,362 people
- 24 command and post exercises for 4,900 people
- 237 management training sessions for 6,257 officers
- 406 university and vocational training sessions for 11,074 students
- 548 high school training for 31,633 students
- 463 middle school training for 26,513 students
- 490 elementary school training for 22,096 students
- 504 preschool training for 24,458 children

• 3,563 training for civil servants and employees of government agencies and legal entities involving 87,782 participants

• 655 training for disaster protection services and professional units for 25,762 participants

- 829 citizen training for 47,295 people
- 33 conscript substitute trainings for 1,385 people
- 119 volunteer group training for 1,986 participants
- 73 training for person with disabilities for 9,617 participants



Figure 68. Number of participants

In total, 7,956 training courses were conducted nationwide, involving 303,786 participants. Compared to the same period last year, the number of training increased by 531 (7.1%), and the number of participants increased by 24.8%.

To implement a unified Incident Command System (ICS) for organizing and managing search and rescue operations and disaster response effectively, 25 officers from the NEMA, including regional centers in Dornod, Umnugobi, Khovd, and Orkhon aimags, were trained as ICS trainers. This training was conducted in cooperation with the U.S. Forest Service from November 11–14 at Unit 113. These trainers are now equipped to train local emergency responders and volunteers during disaster protection complex training or command post exercises.

The training on the topic of "Child Protection Policy, Disaster Preparedness, and Response" was organized in two phases in collaboration with the United Nations Children's Fund (UNICEF). The first phase of the training was held across the 9 districts of the capital city. The second phase was organized in a regional format based on the Emergency management organization's regional centers, covering 21 aimags and 9 districts, where a total of 114 staff and officers were trained as instructors and issued certificates.

In the framework of child protection policy, a series of six comic-style "Ready for Action" manuals were developed, providing preventive advice on dangers such as earthquakes, building and forest and steppe fires, snow storms, floods, and dzud, tailored to the age and cognitive characteristics of children. A total of 25,000 copies were printed and distributed to central and local secondary schools. Additionally, these manuals were distributed to the public during advocacy events. The necessary funding of 19.4 million tugriks for printing the manuals was provided by UNICEF.

An advocacy campaign to promote the organization was organized, involving over 4,000 family members of the personnel.

As part of the 20th anniversary of the Emergency management organization, an event titled "Emergency Service - Our Service" was organized to promote the agency's activities and highlight the professional roles of its personnel, involving the family members of the personnel.

The event, which was held from March 22 to May 5, 2024, over a period of more than two months, involved more than 4,000 participants, including personnel from the Emergency management department of 17 aimags, the Emergency management division of 4 districts, and their family members.

During this campaign and meeting, in addition to introducing the achievements of the Emergency management organization's 20 years of operation and its future goals, various activities were carried out, such as showcasing technical equipment and museum exhibits, organizing art performances for family members and attendees, and distributing gifts to children. The local emergency management organization management and personnel attached great importance to promoting the agency's activities, organizing extensive outreach events at the regional and local levels.

2.1.4 Disaster prevention promotional activities

The news and information posted on the Agency's websites and social media pages have reached a total of 261 million people in terms of duplicate figures.

Utilizing modern advanced technologies, the Emergency management organization is actively delivering promotional information to the public. One of the key initiatives is the 24-hour operation of a "chatbot" or automated responder, based on the messaging service of the "Онцгой байдлын ерөнхий газар" Facebook page. This allows citizens to receive the information they need without delay, as well as receive preventive advice and information.

In 2024, a total of 3,746 types of information, including timely news, alerts, posters, and videos, were posted on the organization's nema.gov.mn website, the "Онцгой байдлын ерөнхий газар" and the "ОБЕГ-Урьдчилан сэргийлэх газар" Facebook pages, and its Twitter account. These reached a duplicated audience of 261 million people, representing a 51 percent increase compared to the same period last year.



Figure 69. Website 'Nema.gov.mn'

Additionally, to promote and raise public awareness about the duties and professional specifics of emergency management service personnel, 39 personnel were invited as guests for the "NEMA Times" feature. The prepared content was posted on the nema.gov.mn website and the "Онцгой байдлын ерөнхий газар" Facebook page, reaching 603,342 people and being broadcast to the public through approximately 80 media outlets.

Multifaceted Public Awareness Activities on Disaster Prevention

In line with the modernization of technology, current needs, and public interest, a variety of information channels were introduced to ensure accessible delivery of disaster prevention news and alerts to the public.

Starting from June 28, 2024, in cooperation with "Larisco City Media" company, disaster prevention warnings and information began broadcasting on 103 public buses operating on all routes in the capital city, enabling passengers to access knowledge and understanding about floods, forest and steppe fires, and building fires.

Disaster prevention warnings and public information have also been broadcast to citizens through national radio channels such as Mongolian National Radio, News Information 88.8 FM, World Mongols Radio 88.3, and Auto Radio 96.3.

To ensure that children and citizens can access disaster prevention warnings,

recommendations and information anytime, 23 new video contents were added to the video library on Look TV and Univision platforms as a dedicated package.

A documentary series titled "101" was produced to highlight the unique nature of the profession and responsibilities of emergency service workers. In collaboration with "Nomadia Pictures Producing" LLC of Unitel Group, the 10 series documentary how emergency responders, especially rescuers, respond to calls and the challenges they face. It is now available to the public free of charge on Univision and Look TV platforms.

The AI-based media assistant "Nemaka" delivered information to 9.3 million citizens.

Over 670 news items about the activities of the emergency management organization are disseminated monthly through 136 media outlets.

Media monitoring was conducted on the news and information issued by the NEMA. In cooperation with the "Center for Media Development," media monitoring was carried out starting from October 14, 2024, on disaster prevention-related information disseminated through media outlets by the NEMA. Monitoring covered 136 media organizations such as 100 news websites, 26 TV channels, 7 daily newspapers, and 3 magazines. Among the total of 678 related news items, 451 were published on websites, 59 were broadcasted on television, 16 were printed in newspapers and magazines, and 152 were shared on Twitter, reaching the public through various media platforms.

A total of 75 million visits were recorded on the specialized disaster information website belenbai.mn. Launched in 2023 by the NEMA, this platform provides consolidated warnings and preventive information on six disaster types: building fires, forest and steppe fires, floods, storms, and dzud. In 2024, the site received 75 million cumulative visits. In partnership with the international organization World Vision Mongolia, the "Be Ready" training module has been updated and published on website 'belenbai.mn' to enhance public awareness and knowledge.

A TV PROGRAM 'EMERGENCY HOUR' - 'ОНЦГОЙ БАЙДЛЫН ЦАГ'

To promptly deliver timely information from official sources to the public, the NEMA has been producing and broadcasting the program "Emergency Hour" every two weeks. In 2024, a total of 24 episodes (episodes 161 to 185) were produced and aired through Mongolian National Broadcaster channels 1 and 2, as well as Ulzii, News Channel, TV24, and Malchin TV, reaching the public nationwide.

In order to make disaster prevention and warning information accessible to people with disabilities, the Agency collaborated with sign language interpreter S. Byambadelger. In 2024, 24 episodes of the "Emergency Hour" program equivalent to 370 minutes along with 5 short video content on disaster prevention, were broadcast a total of 240 times through five television stations and social media platforms.



Figure 70. Program 'Emergency Hour'

<u> A Newspaper 'EMERGENCY NEWS' – 'ОНЦГОЙ МЭДЭЭ'</u>

In 2024, the monthly publication "Emergency News", the official newspaper of the Emergency management services, released a total of 12 issues, covering editions No. 199 to 210, and distributed them to the public. Throughout the year, the newspaper featured 28 interviews with the agency's management and personnel, and published 220 articles, reports, and news stories related to the agency's operations.

A notable innovation was that 9 of the issues included content prepared by the departments of NEMA.



Figure 71. Newspaper 'Emergency News'

Press conference

In 2024, the NEMA organized a total of 12 press conferences to provide the public with early warnings and information regarding various hazardous weather events and disasters, including building and forest/steppe fires, earthquakes, ice breakage, flash floods, severe snow and dust storms, and blocked mountain passes and roads.

Additionally, the SEC's Emergency Operations Center held 23 press conferences focusing on winter preparedness, dzud conditions, response measures, and flood disaster prevention. These briefings were disseminated to the public through over 170 media outlets, including daily newspapers and social media platforms.

Timely updates and warnings were regularly shared with the public via national and local media outlets, including over 50 television channels such as MNB, Malchin, NTV, TV5, MN-25, UBS, ETV, Eagle, Suld, TV9, and TV8, as well as more than 40 online news websites like news.mn, ikon.mn, isee.mn, medee.mn, dobu.mn, tsahiur. mn, and eguur.mn, and 5 daily newspapers.



Figure 72. Press conferences

CHAPTER 2.2 DISASTER RISK REDUCTION

2.2.1. Disaster Risk Assessment

Disaster risk assessments are being conducted at the national, local, administrative, territorial unit, sectoral, and legal entity levels, in accordance with the Law of Mongolia on Disaster Protection, the "Disaster Risk Assessment Procedure" approved by Government Resolution No. 190 of 2020, the "Disaster Risk Assessment Guidelines" approved by Order No. 68 of the Deputy Prime Minister in 2021, and other relevant legal documents.

Risk assessment for schools and kindergartens

In cooperation with the Governor's offices of aimag, the capital city, districts, and the international organization World Vision Mongolia, a general disaster risk assessment of schools and kindergartens is being conducted. As of 2024, 85% of schools and kindergartens nationwide have undergone the assessment, and in the capital city, the general disaster risk assessment has been completed for 100% of the 152 state-owned schools. Additionally, in the capital, disaster risk assessments were carried out in 42 secondary schools following the 'Child-centered Risk Assessment

Methodology and Guidelines'.

Detailed disaster risk assessment

In accordance with Government Resolution No. 190 of 2020 on "Disaster Risk Assessment Procedures" and the Deputy Prime Minister's Order No. 100 of 2021 on "Operational Guidelines for the Professional Council on Disaster Risk Assessment", special permits for conducting detailed disaster risk assessments have been issued, and assessments are being carried out.

The Professional Council has held 7 meetings from 2019 to 2024. Before the Law of Mongolia on permits came into effect in Mongolia, a total of 33 entities were granted special permits. However, since the Law came into effect in 2023, 3 entities have had their permits revoked, and 1 entity was granted a permit. As of 2024, a total of 31 entities are conducting detailed disaster risk assessments under the scope of their special permits. Special permits for disaster risk assessments are issued in 6 sectors: Mining, Infrastructure, Agriculture, Environment, Historical and Cultural Heritage Sites, Industry and Services, and Health.



Figure 73. The special permit for conducting detailed disaster risk assessments has been granted as follows (totaling 71 across sectors)

As of 2024, a total of 598 enterprises and organizations across the country have conducted detailed disaster risk assessments for each type of disaster.



2.2.2. Activities of the National Council for Disaster Risk Reduction

In accordance with Government Resolution No. 189 of 2020, the 2024 regular meeting of the "National Council for Disaster Risk Reduction" was held on December 9.



Figure 75. The regular meeting of the National Council for Disaster Risk Reduction

At the meeting, the Council reviewed the implementation of the assignments and directions given during the November 10, 2023 meeting, and discussed necessary measures to be taken at the national and local levels for further disaster risk reduction.

Out of a total of 20 measures, the implementation rate was 81 percent, broken down as follows:

- 8 measures were fully implemented (100%)
- 3 measures had 90% implementation
- 3 measures had 70% implementation
- 4 measures had 60% implementation
- 2 measures had 50% implementation
- 0 measures had 30% or 0% implementation

Additionally, the meeting presented the progress of activities implemented by the National Council for Disaster Risk Reduction during 2023–2024, the results of the 2024–2025 dzud risk assessment, regional disaster risk reduction trends in the Asia-Pacific, and recommendations from the Capacity for Disaster Reduction Initiative (CADRI) evaluation report conducted in Mongolia.

Furthermore, the meeting focused on ensuring inclusive, multi-stakeholder cooperation by involving representatives of children and people with disabilities in the discussion and approved the final set of recommendations to be adopted from the meeting.



Figure 76. Presentation on Ensuring the Participation of Children and Persons with Disabilities in the National Disaster Risk Reduction Council

Since its establishment, over the past 6 years, the National Council for Disaster Risk Reduction has implemented disaster risk reduction measures in accordance with the Law of Mongolia on Disaster Protection, allocating a total of 134.5 billion tugriks for these activities. PART III.

EMERGENCY OPERATIONS AND COORDINATION

CHAPTER 3.1. DISASTER PROFILES

3.1.1. Overview of disasters and accidents in Mongolia

In 2024, a total of 5,118 hazardous phenomena and accidents occurred across Mongolia, resulting in the deaths of 336 people, injuries to 204 individuals, the loss of 7,456,298 livestock, and direct damages amounting to 40.8 billion tugriks.

In response to these disasters, a total of 39,893 personnel and 8,942 units of equipment from the Emergency management organization and other organizations and local authorities were mobilized. Their efforts saved the lives of 8,237 people and protected property worth 392.5 billion tugriks belonging to the government, organizations, businesses, and citizens. Additionally, 0.8 billion tugriks was spent by the Emergency management organization and local administrations for disaster response and mitigation efforts.

During the year, Mongolia experienced 73 earthquakes, 111 flash floods, 70 river floods, 13 lightning incidents, 36 other weather-related hazardous events, 1 hailstorm, 3,462 building fires, 41 strong windstorms, 137 forest and steppe fires, 77 biological hazards, and 1,097 accidents caused by human activities or negligence.

Table 5. Number of Hazardous Events and Accidents (2025 VS. 2024)										
	A		-	發		Ó		1	ġ.	Human
	Earthquake	Flood	Ligthe ning	Other meteorological events	Hailstorm	Building fires	Severe storms	Forest and steppe fires	Biological hazards	induced emergency or accidents
2023	86	107 181	9	17	1	3054	75	101	151	876
2024	73		13	36	1	3462	41	137	77	1097

Table 3. Number of Hazardous Events and Accidents (2023 vs. 2024)

In 2024, 70% or 3,599 cases of all hazardous events and accidents were fires, 2% (77 cases) were biological hazards, 22% (1,097 cases) were accidents related to human activity, 5% (272 cases) were water and weather-related hazards, and 1% (73 cases) were geological hazards.



Figure 77. Proportion of hazardous events and accidents by type in 2024

Part III. Emergency operations and coordination

In 2024, 55 percent of the total damages—equivalent to 37 billion tugriks were caused by fires. Hydro-meteorological hazards accounted for 44 percent, or 29.5 billion tugriks. Accidents resulting from human activity led to losses of 0.8 percent, or 0.6 billion tugriks, while biological hazards accounted for 0.2 percent, or 0.5 billion tugriks in damages.



Figure 78. The proportion of total damage caused by disasters and hazardous events in 2024, by type of disaster.

In 2024, the causes of mortality from disasters and hazardous events were as follows: 28 percent (94 people) died due to traffic accidents, 18 percent (62 people) from building fires, 30 percent (101 people) from water-related accidents, 9 percent (31 people) went missing and were presumed dead, and 14 percent (48 people) died from other types of accidents.





In 2024, the highest number of disasters and hazardous incidents occurred in Ulaanbaatar city, with a total of 2,212 cases. Among the provinces, Umnugobi, Tuv, and Darkhan-Uul aimags recorded higher numbers compared to others.



Figure 80. The number of disasters and accidents in 2024 by aimag and capital city.

When the number of incidents is calculated per 100,000 people in each aimag and capital, the highest rates are observed in Gobisumber, Umnugobi, and Dundgobi provinces.



Figure 81. The number of disasters, hazards, and accidents per 100,000 people.

Hydro-meteorological hazards

Heavy rains and floods:

In total, 70 cases of flooding occurred across 20 aimags and 42 districts in the capital. As a result, 628 livestock were lost, 61 houses and buildings were damaged, and 1,082 people's lives were saved. A total of 2,387 employees and 445 vehicles and equipment were deployed to flood-prone areas, causing damage amounting to 762.1 million tugriks.

Flash floods:

A total of 111 instances of flash floods occurred across 10 aimags and 27 districts in the capital. As a result, 10 houses and buildings were washed away and damaged, while 58 lives were saved. In the flood-affected areas, 1,092 officials and 176 vehicles and equipment were deployed, causing damages amounting to 86.2 million tugriks.

<u>Lightning:</u>

In 2024, lightning strikes occurred in 6 aimags and 12 districts of the capital, resulting in 3 fatalities, 1 injury, and the loss of 499 livestock. The total damage amounted to 75.3 million tugriks.

Severe storms:

A total of 41 instances of severe wind and storms affected 14 aimags and 33 districts of the capital, causing damage to 150 livestock, and 134 houses and buildings were destroyed. The financial losses reached 2 billion tugriks. In the search and rescue operations for people lost in the storm, 167 individuals and 35 vehicles and equipment from the emergency services and local residents were involved.



Figure 82. Earthquake Distribution Map, 2024

Geological hazards

Earthquake:

In 2024, a total of 44,758 earthquakes occurred across the territory of Mongolia and its border regions. Of these, 22,609 earthquakes took place within the territory of Mongolia. Based on their magnitudes, the earthquakes in Mongolia were classified as follows:

- Magnitude M < 1.5: 20,149 events
- Magnitude $1.5 \le M \le 2.4$: 5,607 events
- Magnitude $2.5 \le M \le 3.4$: 341 events
- Magnitude $3.5 \le M \le 4.4$: 39 events
- Magnitude $4.5 \le M \le 5.4$: 3 events
- Magnitude $5.5 \le M \le 6.4$: 1 event

A total of 73 earthquakes with a magnitude greater than 3.5 were recorded by the NEMA. These events were distributed across the provinces of Khuvsgul, Arkhangai, Bayankhongor, and Umnugobi.

Biological Hazard

A total of 77 cases related to human and animal infectious diseases were received by the emergency management services. As a result, 16,053 heads of livestock perished. To prevent further outbreaks, the deceased animals were buried and disposed of, followed by disinfection and sterilization procedures. A total of 630 personnel and 150 pieces of equipment were mobilized for these preventive and vaccination efforts.



Figure 83. Biological hazards

Man-made hazards and accidents

A total of 1,097 human-related incidents were recorded, resulting in 269 fatalities and injuries to 140 individuals, while 2,738 lives were saved through emergency response efforts involving 7,176 personnel and 1,538 vehicles mobilized by the Emergency management organization and local authorities; of these incidents, 36% involved vehicles stuck in snow or mud, 11% were water-related accidents, 5% required high-altitude rescues, 12% were road traffic accidents, 16% involved missing persons, and 20% were classified as other types of accidents.



Figure 84. Man-made hazards and incidents

Part III. Emergency operations and coordination







Number of hazards and accidents



Compared to the same period last year, it has decreased by 355, or 4.1%.



The number of injured individuals has decreased by 11, or 5.1%, compared to the same period last

Compared to the same period last year, it has increased by 7.2 billion MNT.



The number of fatalities has increased by 15, or 4.6%, compared to the same period last year.

The number of people rescued, property saved, injuries sustained, and fatalities resulting from hazards and accidents in 2024 show the following figures in comparison with previous years.





Figure 86. Fatalities due to hazards and accidents, 2023-2024 (by aimag and capital city)

When comparing the number of fatalities due to hazards and accidents per 100,000 people in each aimag and the capital city, the provinces of Dornod, Gobisumber, Tuv, and Khentii have the highest rates.



Figure 87. The number of fatalities due to hazards and accidents per 100,000 people in 2024, (by aimag and the capital city)

Part III. Emergency operations and coordination



Figure 88. The number of fatalities due to hazards and accidents (compared to the previous year)

In 2024, 30% of the fatalities due to hazards and accidents were caused by water-related accidents, with 81% of the victims being male. Meanwhile, 28% of the fatalities were due to building fires, with 71% of the victims being male.

3.1.2. Climate overview in 2024

Air temperature:

The average annual air temperature for Mongolia in 2024 was 1.9°C, which is 2.5°C higher than the average temperature from 1961-1990, a period when climate change had relatively weak effects. This makes 2024 the second warmest year observed since 1940.

Analyzing the spatial distribution of the annual average temperature (Figure 89), the southern part of the desert region and the Southern Altai Desert had temperatures ranging from $+6.1^{\circ}$ C to $+10.0^{\circ}$ C, the steppe regions and the Great Lakes Basin



Figure 89. Spatial distribution of the 2024 annual average air temperature

saw temperatures ranging from +3.1°C to +6.0°C, the high mountains of Khuvsgul, the Khangai Range, and the Darkhad Basin experienced temperatures ranging from -3.0°C to -5.7°C, while other areas had temperatures ranging from -2.9°C to +2.9°C.

When examining the average air temperature of 2024 by season:

• In the winter season, 47.1 percent of the country experienced temperatures that were between -1.1°C and -4.2°C colder than the long-term average (LTA), 44.9 percent had temperatures around the average, and 8.1 percent of the areas in Bayan-Ulgii, Khovd, and parts of Zavkhan were between +1.3°C and +2.6°C warmer than average.

• In the spring season, the majority of the country, 91.9 percent, experienced an average air temperature from +1.1°C to +3.6°C higher than the LTA (especially in the areas around Tsetsen-Uul, Otgon, and Bayangol soums in Zavkhan aimag, where temperatures were 3.1°C to 3.6°C warmer than average), and 8.1 percent of the areas had temperatures around the average.

• In the summer season, most of the country, 75.7 percent, had average air temperatures from +1.1°C to +2.8°C warmer than the LTA, with the desert regions, as well as parts of Khentii, Tuv, and Sukhbaatar provinces, being close to the average temperature.

• In the autumn season, the average air temperature across most of the country, 94.1 percent, was between 1.1°C and 3.0°C warmer than the LTA, while 5.9 percent of areas in Bayankhongor and Umnugobi provinces experienced temperatures around the average.



Figure 90. Deviation of the average air temperature in the season of 2024 from the long-term average (norm 1991-2020)

Part III. Emergency operations and coordination

When comparing the deviations from the long-term average (LTA) of monthly average air temperatures over the past five years, it was found that in 2024, the months of January, April, May, July–August, and October–December were between 1.0°C and 5.0°C warmer than the average. In contrast, February was colder than average, with temperatures between -1.0°C and -3.0°C. Meanwhile, in March, June, and September, the average air temperatures were close to the long-term average.





Precipitation: In 2024, the average annual precipitation across Mongolia was 280.6 mm, making it the sixth wettest year since 1940, with totals ranging from 404.7–618.6 mm in the basins of major rivers such as the Khentii Mountains, Kherlen, Onon, Tuul, Orkhon, Selenge, and Tamir; 300.7–396.1 mm in parts of the Khuvsgul Mountains, Khangai Range, steppe, and desert regions; 100–296 mm in the Altai Mountains and surrounding areas; 50–100 mm in the Khankhukhii Range, Great Lakes Depression, and parts of the Gobi; and the lowest amounts, 23.5–43.8 mm, recorded around Tooroi and Ajbogd in Govi-Altai aimag, with the highest annual total of 618.6 mm observed in Mungunmorit soum, Tuv aimag.



Figure 92. Spatial distribution of annual precipitation in 2024

In the winter of 2024, 77.9 percent of the country received above-average precipitation, with some areas experiencing 2 to 3 times more than the LTA, while 5.9 percent received near-average precipitation and 16.2 percent received less than the average.

During the spring, 52.2 percent of the country experienced above-average precipitation, 11 percent near-average, and 36.8 percent below-average. The southern part of Khovd province and the northern areas of the central region experienced relatively high precipitation.

In the summer, 57.4 percent of the territory saw above-average rainfall, 11 percent received amounts close to average, and 31.6 percent experienced below-average precipitation. The Gobi and eastern regions saw higher-than-average rainfall, while the western and central regions experienced less than normal.

In the autumn, 62.5 percent of the country received above-average precipitation, 11.8 percent received near-average, and 25.7 percent received below-average levels. In parts of the Gobi and eastern regions, precipitation reached 4 to 10 times above the long-term average.



Figure 93. Deviation of seasonal total precipitation from the LTA in 2024 (norm 1991–2020)

When comparing the deviations of monthly total precipitation from the LTA over the past five years, it was observed that in 2024, January and April received more than 60 percent above-average precipitation, September had 40–60 percent more, August and October had 20–40 percent more, and February and May to July had 10–20 percent more than the LTA. December precipitation was close to average,





Figure 94. Comparison of monthly total precipitation for 2019–2024 with the LTA (norm 1981–2010)

Extreme Values: In 2024, the absolute maximum air temperature was recorded at 40.8°C in Ekhiin Gol, Bayankhongor aimag, and the maximum ground temperature reached 71°C in Bayandelger, Sukhbaatar aimag. The absolute minimum air temperature was -48.8°C in Otgon, Zavkhan aimag, with the ground temperature dropping to -50°C. The highest daily precipitation was observed on July 25 in Bayan-Uul and Dornod aimags, with a total of 96.8 mm. The highest atmospheric pressure was 972.7 hPa in Sukhbaatar and Selenge aimags, while the lowest was 754.0 hPa in Bayangol, Bayankhongor aimag. The strongest wind speed was recorded at 40 m/s in Bugat, Gobi-Altai aimag.



Figure 95. Extreme values observed during the year

Snow Depth: As of December 31, 2024, more than 60 percent of the country was covered with snow. Snow depth ranged from 11 to 24 cm in the mountainous regions of Altai, Khangai, Khentii, and Khuvsgul, as well as in the Tamsag Depression, while 1 to 10 cm of snow was recorded in some soums across the Gobi, steppe, and semi-steppe regions.



Figure 96. Snow depth as of December 31, 2024 (cm)

Hazardous and disastrous weather events: In 2024, a total of 104 hazardous and disastrous weather events were recorded nationwide, including 95 hazardous and 13 disastrous events. As a result, 3 people lost their lives, and 3,058,998 livestock perished. The events caused significant damage to infrastructure, including 13 national-level roads and bridges, 4 power poles, 108 collapsed gers, 10 buildings with damaged roofs, 374 broken fences, and 5 vehicles with shattered windshields due to dust storms. Additionally, 3.0 hectares of agricultural land were affected. The total direct economic loss from these events was estimated at 3,027,313,260 tugriks. A total of 137 forest and steppe fires were also reported, causing an additional 1,674,144,749 MNT in direct damage.

In total, 15 types of hazardous and disastrous events occurred, among which strong winds, flash floods, heavy rainfall, hailstorms, and lightning were the most frequent, each accounting for 11 percent to 27 percent of the total events. Based on weather conditions, geographical coverage, and duration, such phenomena are classified into frontal and convective origins. In 2024, frontal-origin hazardous and disastrous events were observed more frequently than those of convective origin.

3.1.3 Response measures

Regulation of the storage, transportation, use, and disposal of hazardous and toxic chemicals:

As part of ensuring compliance with the Law of Mongolia on Explosives and Detonating Devices Control, a total of 36 companies applied for new or extended special permits to import or manufacture explosives and detonating devices. In response to 71 requests, materials were reviewed, and recommendations were submitted to the Ministry of Industry and Mineral Resources. Eight companies and organizations from the People's Republic of China requested permission to import explosives, detonating devices, and ammonia into Mongolia. 18 emergency response plans for potential accidents during the transportation process were reviewed and approved. Recommendations were then forwarded to the National Transport Authority.

Regarding the use of hazardous chemicals in mining operations, 6 companies holding special permits for the use of chemicals restricted in Mongolia applied for permission to transport 594.2 tons of sodium cyanide. The transport plans were reviewed and approved. During the 19 transport operations, a total of 98 emergency responders from the emergency management services worked 117 days.

Outbreak and spread of animal highly infectious diseases and response measures

From January 1, 2024, to December 31, 2024, Mongolia reported outbreaks of four types of animal epidemic diseases: Peste des Petits Ruminants, Sheep Pox, African Swine Fever, and Goat Pox. The outbreak and spread of these diseases were monitored and controlled with the relevant measures.

Foot-and-Mouth Disease

In 2024, outbreaks of Foot-and-Mouth Disease were reported in several Asian countries, including China, Palestine, Israel, Cambodia, and Vietnam. These outbreaks were all caused by the O serotype of the virus. Despite the active outbreak in China, which posed a risk of the disease spreading to neighboring countries, including Mongolia, no cases of Foot-and-Mouth Disease were reported within Mongolia during this period.



Figure 97. Foot-and-mouth disease outbreak from January to December 2024. OIE information

In 2024, a total of 7.2 million heads of livestock were planned to be vaccinated against foot-and-mouth disease across the country, with 6.7 million heads, or 87 percent, successfully vaccinated.





Figure 98. The implementation of spring vaccination for the prevention of foot-and-mouth disease



Sheep Pox

As for the outbreak of sheep pox disease in 2024, the disease was reported in countries such as Georgia, Greece, Bhutan, and Bulgaria. In Mongolia, from January 1, 2024, to the present, there have been 91 outbreaks in 71 soums across 12 aimags, with 11,951 heads of livestock in 401 households affected by the disease.



Figure 100. Outbreak of Sheep Pox Disease from January to December 2024. OIE Information



Figure 101. Outbreak of Sheep Pox Disease in 2024

In 2024, a total of 2.5 million doses of vaccine were provided by China's Sinopharm, 3.3 million doses by Turkey's "Dollvet", and 1 million doses by Jordan's "Jovac" through international organizations. Additionally, the "Biocombinat" stateowned enterprise purchased 10.6 million doses of vaccine for 1.4 billion tugriks. A total of 16.9 million heads of livestock were planned for vaccination against sheep pox, and 15.9 million heads, or 94 percent, were successfully vaccinated.

Unified Vaccination: According to the decision of the Director of the General Agency for Veterinary Services on July 25, 2024 (Order A/275), vaccines produced by Biocombinat were distributed to 120 soums and districts, covering 10,105,688 heads of livestock in Dornod (14), Sukhbaatar (13), Khentii (18), Gobisumber (3), Dundgobi (14), Tuv (27), Dornogobi (14), Umnugobi (11), and Ulaanbaatar (6). Additionally, vaccines provided by Turkey's Dollvet were distributed to 43 soums in Orkhon (19), Arkhangai (7), Bulgan (6), Bayankhongor (6), Zavkhan (2), and Gobi-Altai (3), covering a total of 13,404,688 sheep and lambs. Of the planned 12,593,273 heads, 93.9% were vaccinated.

Emergency Vaccination: Emergency vaccination was carried out in the high-risk areas of 6 soums in Uvurkhangai, 1 soum in Tuv, 7 soums in Dundgobi, Jargaltkhan soum in Khentii, Airag soum in Dornogobi, Ogiinuur soum in Arkhangai, and several soums in Umnugobi (Bulgan, Tsogtsetsii, Mandal-Ovoo, Tsogt-Ovoo, Manlai), as well as Ulziit soum in Bayankhongor, with a total of 3,509,500 heads planned for vaccination. A total of 3,337,200 heads were vaccinated, achieving 95.09 percent of the target.



Figure 102. Sheep pox vaccination coverage by aimags, 2024

<u>Goat Pox Disease:</u> As part of the global program to combat and eradicate Goat Pox Disease, it is planned to stop vaccinations by 2027 and fully eradicate the disease by 2030. In connection with this, outbreaks of Goat Pox Disease were reported in 2024 in Turkey, China, Georgia, Romania, Bulgaria, and Greece.



Figure 103. Outbreak of Sheep and Goat Pox Disease, January-December 2024, OIE Information

Since January 10, 2024, outbreaks of the disease have been reported in 12 soums across 5 aimags, including Khentii, Darkhan, Bayankhongor (Bayanglig and Bogd soums), Sukhbaatar (Dariganga and Erdenetsagaan soums), Umnugobi aimag, Nariintel, Khairkhandulaan, Baruun Bayan-Ulaan, Sant, Bogd and Bayangol soums of Uvurkhangai and Khovd (Bulgan), with all 12 outbreaks now fully resolved.



Figure 104. Outbreak of Peste des Petits Ruminants in 2024

According to Order No. A/315 issued by the Director of the General Agency for Veterinary Services on September 5, 2024, a nationwide vaccination campaign was conducted in 16 aimags, targeting 19.697 million animals. Additionally, an emergency vaccination was planned in 3 high-risk soums of Bayankhongor, 2 soums of Sukhbaatar, and 19 soums of Uvurkhangai aimags, covering 3.4926 million animals. Out of the planned total of 23.2 million animals, 20.6 million were vaccinated, resulting in 88.7 percent vaccination coverage.





Lumpy Skin Disease (LSD) in Cattle: In 2024, outbreaks of lumpy skin disease in cattle were reported in several countries, including Russia, Taiwan, Thailand, Japan, South Korea, Vietnam, and Cambodia. Although no cases were detected in Mongolia during 2024, multiple outbreaks occurred in Russia. Notably, in November 2023, a case of LSD was confirmed just across the border from Tes soum in Uvs aimag, indicating the need for proactive planning of preventive measures for 2025.

In response, preventive vaccination was carried out in high-risk areas of Dornod aimag, specifically in Chuluunkhoroot and Khalkhgol soums. A total of 34,650 head of cattle were targeted, with 34,216 successfully vaccinated, achieving a 98.7 percent vaccination coverage.

CHAPTER 3.2 . FIRE CASES

3.2.1. Building fires

In 2024, a total of 3,479 cases of building (object) fires were reported nationwide in Mongolia. Emergency management services responded to 2,684 fire incidents, 533 violations, and 262 fire-related reports.

During firefighting operations:

- 23 people (7 adults and 16 children) were rescued,
- 3,373 individuals were evacuated from smoke-filled areas.
- However, the fires resulted in:
- 60 fatalities (43 adults, 17 children),
- 52 injuries due to burns (44 adults, 8 children),
- 6 individuals (all adults) sustaining other injuries,

• 16 cases of carbon monoxide poisoning (13 adults, 3 children), of which 2 adults died from carbon monoxide exposure.



Figure 106. Comparative indicators of structural fire incidents, rescued people, saved property, and damages and losses

Compared to the previous year, the number of fire incidents increased by 13.9 people, and the number of fatalities caused by fire rose by 6.3 people.

3.2.2. Forest and Steppe Fires

In 2024, a total of 137 forest and steppe fire incidents were reported across 55 soums of 14 aimags nationwide. Compared to the same period in 2023, the number of fire calls increased by 26 percent. The fires affected a total area of 1,505,619 hectares — including 1,406 hectares of forest and 1,504,291 hectares of steppe. In addition, the fires damaged 1 house, 7 gers, 2 vehicles, 7 fences/sheds, and resulted in the loss of 19 small livestock. The preliminary estimated damage amounts to 10.9 billion tugriks.



Forest and Steppe Firefighting Operations:

A total of 4,388 personnel, 756 vehicles, and 145 motorcycles were involved in the firefighting operations for forest and steppe fires. This included 1,383 personnel and 153 vehicles from the Emergency management organization, 158 personnel and 26 vehicles from the Border Protection Agency, 20 personnel and 7 vehicles from the Police Department, and 2,827 local citizens with 570 vehicles and 145 motorcycles.

In 2024, one instance each of cross-border forest and steppe fires was recorded: a fire crossed into Mongolia from Russia once, and fires crossed from Mongolia into Russia and China once each.

Specifically:

• From the territory of Mongolia, a forest and steppe fire crossed into Russia via Bayandun soum of Dornod aimag.

• A fire also crossed into China via Erdenetsagaan soum of Sukhbaatar aimag.
• From Russia, a forest and steppe fire crossed into Mongolia through Dashbalbar soum of Dornod aimag.



3.2.3. Major Wildfires in 2024

Building fires

On April 8, 2024, at 10:28 AM, a fire broke out at the warehouse of the "Minii supermarket' located in Bayankhoshuu's new bus stop, 20th khoroo of Chingeltei district.

The firefighting operation was led by Colonel Ts. Nyambayar, Director of the Firefighting Department, NEMA and involved personnel from the Emergency management department of the capital city, the Search and Rescue Unit of the capital city, the Information and Command Center, Fire and Rescue Unit No.10 of Emergency Management Department of Chingeltei district, Fire and Rescue Units No.26 and No.29 of Emergency Management Department of Songinokhairkhan district, Fire and Rescue Unit No.14 of Emergency Management Department of Bayanzurkh district.

In total, 113 personnel and 29 vehicles participated in the operation, which lasted 4 hours and 23 minutes.

Support was also provided by:

• Chingeltei District Police Department: 12 officers, 4 vehicles

- Capital Emergency Medical Services Center: 4 staff members, 2 vehicles
- Water Supply and Sewerage Authority: 5 employees, 3 vehicles

• Ulaanbaatar Electricity Distribution Network Company: 3 staff members, 1 vehicle.



On September 13, 2024, at 14:52, a fire broke out at the Mergen Tonjukhuk Museum building in the 3rd khoroo of Nalaikh district.

The firefighting operation was led by Lieutenant Colonel P. Soronzonbold, Head of the Firefighting, Labor Protection, and Safety Division, NEMA. The operation involved personnel from the Emergency Management Department of the Capital City, Fire and Rescue Unit No.28 of Emergency Management Division of Nalaikh district, Fire and Rescue Unit No.63 of Emergency Management Division of Bayanzurkh District, and Fire and Rescue Unit No.24 of the Emergency Management Department of Tuv aimag.



In total, 53 personnel and 7 vehicles participated in the operation, which lasted 11 hours and 30 minutes, using 176 tons of fire extinguishing agents and 1,459 liters of diesel fuel to extinguish the fire.

Additionally, 6 personnel and 1 vehicle from the Armed Forces' Unit 337 participated in the operation, along with 2 personnel from the Nalaikh District Governor's Office and 5 employees from Chandmani Nalaikh State Owned Enterprises, bringing the total to 66 personnel and 10 units of machinery and equipment.

In Dornogobi aimag, in the 3rd bag of Altanshivee soum, a fire broke out at an office, workers' dormitory, and warehouse belonging to "Meel International" LLC, a subcontractor for the oil refining plant.

The firefighting operation was led by Colonel G. Bat-Erdene, Director of the Emergency Management Department of Dornogobi aimag, with 26 personnel, 3 specialized firefighting vehicles, 3 personnel transport vehicles, and 8 police officers with 2 vehicles. The operation also included 35 workers and 1 vehicle from the company, as well as 2 machines. In total, 69 personnel, 11 vehicles, and machinery were involved in the operation, which lasted 6 hours and 15 minutes. The operation consumed 88 tons of fire extinguishing agents and 108.54 liters of diesel fuel to extinguish the fire.

Forest and steppe fires

In Bayandun soum of Dornod aimag, at "Dungiin Ulaan Zamiin Bulag" area (240 km north of the aimag center and 45 km northeast of the soum center), a wildfire was reported on October 11, 2024, at 3:01 PM. The response team from the Dornod aimag Emergency Management Department, consisting of 16 personnel from the Bayan-Uul soum's Firefighting and Rescue Unit, 2 vehicles, 16 personnel from the Search and Rescue Unit, 2 vehicles, and 63 personnel from Bayandun soum's professional unit with 10 vehicles, along with 20 workers and 2 machines from the mining sector, 19 personnel and 3 vehicles from Dashbalbar soum's professional unit, 8 personnel and 1 vehicle from Sergelen soum's professional unit, 5 people and 1 vehicle from Gurvanzagal soum's professional unit, and 5 people and 1 vehicle from the Bayan-Uul soum's Governor's office, totaling 152 people and 22 vehicles, worked together to extinguish the fire.

After 4 days, on October 14, 2024, at 6:40 PM, the fire was completely extinguished. The fire burned a total area of 75,000 hectares, with a length of 50 km and a width of 15 km. Two empty houses, three animal pens, one house, one vehicle, and one person suffered burns.



Аймгийн төр

Авто зам

PART IV.



CHAPTER 4.1. RECOVERY AND RECONSTRATION

4.1.1. Recovery

To prevent natural disasters and mitigate damage and loss, a rapid response system has been established to deliver health, social welfare, and other state services, and to organize search and rescue operations during hazardous weather and disaster events. This is part of a broader initiative to ensure preparedness and response.

In this regard, the Deputy Prime Minister of Mongolia, the Head of the SEC, along with the Ministry of Food, Agriculture and Light Industry (MoFALI), Ministry of Health (MoH), Ministry of Environment and Tourism (MoET), and the National Emergency Management Agency (NEMA), formed a "Rapid Response Team" to visit herders and livestock owners in remote districts of Ulaanbaatar city and in aimags experiencing severe winter and spring conditions. They met with local communities, assessed the situation, and took necessary actions to reduce risks.

As part of this process, a Government Resolution was drafted to release essential items from the state reserves and replenish them. The Government of Mongolia approved the 2024 resolutions numbered 63, 68, and 242 on "Disbursement of Funds," allocating 22.4 billion tugriks worth of goods and materials from the state



reserves. These included 15 types of items (vehicles. equipment, tents. products, animal food feed, petroleum products, work and winter clothing, medical supplies, generators, water pumps, work gloves, shovels, sacks, and raincoats). These materials were distributed to Ulaanbaatar city and 21 aimags and were delivered via transport.

In 2024, the goods and materials spent from the national reserve for disaster recovery and immediate rehabilitation efforts to eliminate the effects of disasters and accidents across the country show an increase of 37.4% compared to the previous year, 2023. DISASTER PROTECTION WHITE BOOK - 2024



Figure 107. Activities to open roads and passes in aimags and soums affected by severe winter and spring conditions, and deliver essential goods and materials to herders

CHAPTER 4.2. HUMANITARIAN ASSISTANCE

In accordance with the implementation of Government Resolution No. 62 of 2024, an official donation account was opened under the name of the NEMA on February 20, 2024. Based on the directive of the Chief of NEMA, the A/42 order of 2024, a working group was established to coordinate the donation and assistance activities from citizens and businesses participating in the "Let's Help Our Herder Families Campaign." The group organized the rapid acceptance, registration, storage, and distribution of domestic humanitarian assistance in accordance with Government Resolution No. 133 of 2020.

As part of the national campaign to help herders, 6 individuals, and 34 organizations and businesses donated a total of 1,098,407,612 tugriks worth of 78,281 items from around 200 different types of goods and materials to the SEC.

The donated goods and materials received by the SEC were allocated to 21 aimags and districts of the capital city, based on five distribution plans approved by the Deputy Prime Minister and the Head of the SEC. The distribution aimed to support overcoming the disaster caused by the harsh winter, disposal of livestock carcasses, and to reduce risks related to drought and floods.

CHAPTER 4.3. INTERNATIONAL HUMANITARIAN ASSISTANCE

Under the initiative of the United Nations Resident Representative Office in Mongolia and international organizations, donor organizations operating in Mongolia have provided a total of 7.8 million USD in cash and in-kind donations to various levels of the Emergency Commission, government agencies, citizens, and herders.

Additionally, in support of overcoming the dzud caused by the harsh winter and to assist the herders affected by it, the Government of Mongolia and the SEC received humanitarian aid by May 10, 2024, including 6,000 tons of red wheat and 2,000 tons of oats from Russia, 4,460 blankets, 1,000 water storage containers, 7 generators, and 14 extension cords from Japan, and the equivalent of 20,000 USD from India, totaling approximately 6.5 billion MNT in humanitarian assistance.

On March 17, 2024, a bilateral meeting was held in the town of Kyakhta at the Russian-Mongolian border crossing, with the Head of the Republic of Buryatia, A.S. Tsydenov, and the Deputy Prime Minister and Head of the SEC, S. Amarsaikhan, leading the delegations. At this meeting, the first 250 tons of wheat were officially handed over to the Mongolian side.

The Government of India expressed its solidarity in helping herder households affected by the winter disaster by contributing the equivalent of 20,000 USD. This donation was presented to the General Authority for Emergency Management in March 2024 by the Charge d'Affaires of the Indian Embassy in Mongolia, Sanjiv Kumar.

In March 2024, the Government of Japan also sent humanitarian aid to support herders affected by the dzudr, including goods and materials. This assistance was handed over to the SEC by the Ambassador of Japan to Mongolia, Igaivahara Masaru, and representatives of JICA's Mongolia office.

CHAPTER 4.4. ACTIVITIES OF THE STATE EMERGENCY COMMISSION (SEC)

In 2024, the SEC worked based on the laws and regulations governing the Government of Mongolia, the Government Special Fund, Disaster Protection, the National Reserve, and other related legislation, as well as the operational procedures of the SEC.

By the Government Resolution No. 21 of August 7, 2024, "On Approving the New Composition of the State Committee, Commission, and Council of the Government," the composition of the SEC was updated.

The SEC held six meetings regarding the prevention of disasters, risk reduction, overcoming the challenges of winter and spring, taking countermeasures against the harsh winter, responding to floods, preventing zoonotic diseases, and implementing rapid response actions. Appropriate decisions were made, and implementation was ensured.

Additionally, the SEC worked within the framework of reducing disaster risks, mitigating the consequences of disasters and hazardous events, and implementing recovery actions. In collaboration with the Government, 10 draft resolutions were discussed and approved, and the implementation of these resolutions was carried out. The progress and outcomes of the recovery and mitigation actions were presented 12 times at Government meetings.

During the reporting period, six meeting minutes, 12 orders, and three official assignments were issued by the SEC to ensure the implementation of measures.

The SEC established three rapid response teams and one emergency working group for coordinating the response measures, eliminating the consequences of disasters, and conducting recovery activities. These groups were organized to address issues on the ground, such as providing humanitarian assistance, supporting local emergency commissions, eliminating flood impacts, and managing animal carcass disposal. Additionally, the SEC provided support for preparing for winter and spring, conducting risk assessments, and overseeing the work in 21 aimags and 330 soums. Rapid response groups, led by the head, deputy head, and members of the Government and SEC, as well as senior officials from emergency management services, were appointed 12 times to ensure coordination and effective response.

4.4.1. Measures Taken and Implemented by the SEC

In November 2023, the total precipitation across Mongolia was 2.5 times higher than the LTA, in December it was 1.9 times higher, and in January 2024, it was 2 times higher than the LTA. As a result, about 90 percent of the country had a thick snow cover. Some provinces experienced heavy snowfalls not seen since 1975, leading to difficult winter conditions. In the winter of 2009-2010, during the dzud year,

the average snowfall across the country was 8.5 mm, which was 1.4 times higher than the LTA, whereas this year, by February, 9.6 mm of snow had fallen, which was 1.6 times higher than the LTA. In other words, this year has seen more snow than the harsh winter of 2009-2010.

Heavy wet snow, repeated snowfalls, and severe snowstorms, along with freezing temperatures, caused the vegetation to be buried under the snow, pastures froze, and herders faced a very difficult winter and spring. The dzud conditions were most severe at the end of January, with 46 soums in 14 aimags experiencing iron dzud, 135 soums in 17 aimags experiencing white dzud, and 69 soums in 17 aimags facing mild white dzud, totaling 250 soums affected by dzud.

The number of livestock losses in early 2024 reached 8.1 million, an increase of 4.2 million from the previous year, or 2.1 times higher, accounting for 12.5 percent of the total livestock. The livestock sector makes up about 93 percent of the agricultural sector, and with a significant increase in livestock losses, the sector contracted 26.7 percent, limiting overall economic growth by 3.9 percentage points.

As a result of the dzud, 4,957 households across the country had livestock losses of 70 percent or more, and 513 households lost all their livestock.

To reduce the risks of dzud and mitigate the challenges of spring, the Government of Mongolia, under Resolution No. 62 on February 14, 2024, transitioned the administrative and territorial units, government, and local authorities to a heightened state of disaster preparedness from February 15 to May 15, 2024. The government worked with local emergency commissions to ensure the delivery of food, fuel, hay, and feed to herders, clear blocked roads, and provide health and other services. Specifically:

• Health organizations in aimags and soums provided medical assistance and services to 169,981 herder households and 8,431 people migrating with livestock.

• The SEC has implemented measures such as deploying mobile health teams to remote soums and appointing resident doctors to the soums. By the order of the Minister of Health, 304 resident doctors worked in soums affected by the dzud, providing medical assistance to 23,299 children aged 0-5, 3,865 pregnant women, and 36,075 cases of common illnesses. Additionally, 5,670 people received emergency medical services, 1,326 people received dental examinations, and 9,289 people received psychological support services.

• By the Government's resolution, the national reserves have provided 14,993 tons of feed, 850 tons of hay, 1,164 tons of flour, 582 tons of rice, and 1,800 food and health packages. Additionally, 27,658 tons of hay and 9,915 tons of feed, which had been prepared by local reserves, were distributed to 141,572 households and 136,634 households, respectively.

• The "Agricultural Corporation" LLC purchased and stored 9,965 tons of feed barley, which was contracted by 14 aimags affected by the dzud. 13 aimags have already received 7,010 tons of barley to distribute to herders. Additionally, 8,500 tons of feed barley and oats were received as humanitarian aid from Russia, and distribution and transportation activities were organized.

• The state military and law enforcement agencies, with a total of 9,879 per-

sonnel and 2,287 vehicles, carried out missions in 19 aimags and 265 soums. They delivered 19,281 tons of hay, feed, and other materials to 95,611 herder house-holds, cleared 67,297 km of snow-blocked roads, relocated 425 households, cleared snow from 502 households' homes and enclosures, retrieved 1,034 snow-trapped vehicles, protected the safety and health of 3,931 citizens, provided services to 85 individuals, and helped remove approximately 5,000 unidentified livestock from the border area, identifying the owners of 21,377 animals.

• The aimag and soum Emergency Commissions, local disaster protection agencies, and professional units provided food assistance to 9,453 herder house-holds, medical assistance to 16,258 herder citizens, distributed 257,760 bundles of hay to 86,796 herder households, and provided 63,075 tons of feed assistance to 107,309 herder households. In total, 9,026 personnel and 2,398 vehicles were involved in these operations.

• The aimag and soum Emergency Commissions, along with state military and law enforcement agencies, and the participation of citizens and businesses, organized the clearing of 132,897 km of snow-blocked roads.

- International Humanitarian Assistance: To provide humanitarian aid to aimags, soums, and districts affected by severe winter, the UN Resident Coordinator's Office led a Humanitarian country team in collaboration with the SEC and the NEMA. Since December 2023, the humanitarian team has assisted 66,800 herders, collecting \$10,628,732 in donations.

- Livestock Carcass Disposal and Disinfection: To manage the disposal of livestock carcasses due to excessive mortality from the dzud, 1,663 disposal sites were organized, and the remains were buried and disposed of in an orderly manner.

The calculation of the probability of livestock mortality due to the 2023-2024 dzud was carried out by the NEMA, the Emergency Response Team under SEC, the Ministry of Food, Agriculture and Light Industry, the Institute of Meteorology, Hydrology and Environment, the National Statistics Office, and the Geography and Geoecology Institute of the Mongolian Academy of Sciences.

According to the estimates made by the research team, the probability of livestock mortality was expected to reach its highest point in March 2024. Under Scenario A1, the mortality rate could reach 14.3 million animals, or 22.1 percent of the total livestock population, while under Scenario A2 (the more severe scenario), mortality could reach 15.4 million animals, or 23.8 percent.

Thanks to the early actions implemented by the Government of Mongolia and the SEC against the dzud, the potential damage was reduced by half.

4.4.2. Activities of the Emergency Response Team under SEC

On December 8, 2023, by the Order of the Head of the SEC, the Emergency Response Team (ERT) was established to ensure coordinated efforts to reduce the impact of winter and spring hardships, prevent hazardous weather and disaster events, organize quick response measures, eliminate consequences, and coordinate the activities of regional and local emergency commissions, the National Emergency Management Agency, ministries, and agencies. The ERT was comprised of 56 officials from 19 organizations, including the National Statistics Office, Ministry of Food, Agriculture, and Light Industry, Ministry of Energy, Ministry of Health, Ministry of Transport and Communications, Ministry of Environment and Climate Change, Ministry of Family, Labor, and Social Protection, Ministry of Digital Development, Industry and Innovation, Ministry of Minerals and Energy, Armed Forces General Staff, General Authority for Border Protection, Police Department, Meteorological and Environmental Monitoring Agency, Veterinary Services, General Agency for Mineral Resources, General Labour and Welfare Services Agency, General Customs Authority, and the Mongolian Red Cross Society.

The Emergency Response Team of the SEC worked with the following objectives:

• Providing unified coordination and management at the national level,

• Supplying information to the leadership of relevant ministries and agencies via a single communication channel,

• Making rapid and efficient plans,

• Implementing actions, organizing quick responses, eliminating consequences,

• Coordinating the operations of regional and local emergency commissions, national disaster protection services, ministries, and agencies.

Additionally, to further reduce the negative impacts of the winter and spring challenges, prevent hazardous weather and disaster events, organize quick response measures, and intensify the implementation of the "New Cooperative-Wealthy Herdsman" movement launched by the Government of Mongolia, the SEC established a new Emergency Response Team on November 29, 2024. The team consisted of 49 members from relevant ministries, agencies, and disaster management bodies.

In accordance with the Deputy Prime Minister of Mongolia's Order No. 103 dated November 25, 2024, regarding the "Measures to be Taken to Ensure Winter Preparedness," the implementation of the order was carried out effectively. As part of this order, 121 teams consisting of 652 personnel were appointed and sent to work. These teams were tasked with reaching out to 16,009 herder households participating in the "New Cooperative-Wealthy Herdsman" program. They collected feedback from 13,549 herders, achieving an 85 percent implementation rate, and reviewed the progress of loan allocations and program implementation directly on-site.

Furthermore, the Deputy Prime Minister and Head of the SEC approved the "Plan of Action for Response to Dzud" on January 10, 2024, ensuring preparedness. In addition, in the event of an extraordinary disaster, the teams responsible for coordinating the actions of government, military, and law enforcement agencies were designated, and preparedness measures were taken accordingly.

According to an Order from the Deputy Head of the SEC on November 2024, seven emergency response teams consisting of 43 staff members from eight organizations worked in 104 soums across 21 aimags from December 10 to 17, 2024. They reviewed the preparedness of local emergency commissions, the state of winter readiness in the livestock sector, and met with 274 herder cooperative households within the framework of the "New Cooperative-Wealthy Herdsman" movement to familiarize themselves with their activities. The emergency response teams also evaluated the preparedness of winter supplies, including forage and feed, and the conditions for health and medical services. They listened to the issues and concerns raised by local herders and provided the necessary guidance and instructions.

Rapid Response Group Activities /Measles: In response to the occurrence of both imported and domestic measles cases in Mongolia and the rising global spread of monkeypox and other infectious diseases, the situation was deemed critical. In such circumstances, the implementation of quarantine and restrictions, regulation of movement between cities and provinces, and monitoring were essential. Legal documents, guidelines, and protocols were developed to address these measures. The development of a unified information system and actions to be taken were outlined, and the Rapid Response Group tasked with ensuring readiness for rapid response to these challenges was established by Order No. 7, dated September 2, 2024, from the Head of the SEC.

The Rapid Response Group developed a directive for the inter-sectoral information system, which was handed over to the Ministry of Digital Development, Innovation, and Communications, as well as the Ministry of Health.

PART V:

RESPONSE MEASURES TO EXTRAORDINARY CONDITIONS IMPLEMENTED IN 2024

CHAPTER 5.1. EMERGENCY RESPONSE

5.1.1. A fire case at the road intersection located to the west of Dunjingarav Shopping Center in 26th khoroo of Bayanzurkh District

Situational overview:

At 01:06 AM on January 24, 2024, the Emergency Operations and Coordination Center received a call on emergency line 101 reporting a traffic accident at the road intersection near the "Ikh Mongol" and "Dunjingarav" shopping centers in the 26th khoroo of Bayanzurkh District. According to the report, a large truck transporting liquefied natural gas (LNG) collided with a passenger car, resulting in a fire caused by the traffic accident, with the vehicles catching fire.

In response, eight personnel from Firefighting and Rescue Unit No. 63 of the Emergency Management Division, Bayanzurkh district were dispatched at 01:07 AM with two fire engines. They covered a 5 km distance in 8 minutes and arrived at the scene of the fire at 01:15 AM. Upon arrival, they found that the fire had spread extensively. The fire originated near the pedestrian crossing on the eastern side of the intersection, involving a pressurized gas vehicle, the facade of a nearby building, several parked vehicles inside a fenced area, and vehicles on the road. Due to heavy smoke, heat radiation, and widespread flames, the situation required additional support, which was promptly reported back to the Emergency Operations and Coordination Center.



5.1.2. Firefigthing operations and measure taken

Upon arrival at the scene, personnel from Firefighting and Rescue Unit No. 63 found that the fire had already spread significantly, with active flames and intense burning. Following the decision of the fire suppression commander, both primary and support fire engines were positioned to the west side of the burning pressurized gas vehicle. Using fixed deck monitors from the fire engines, fire suppressant agents were directed toward the center of the fire to carry out cooling and neutralization operations.

Approximately two minutes after their arrival, an explosion occurred in the vehicle carrying liquefied flammable gas. As a result of the blast, the pressurized tank was ejected and slid across the intersection, eventually crashing into the northeast side of the "Sunny Town" residential building No. 830, located to the west of the intersection.

In response to the additional capacity need request, reinforcements were dispatched as follows:

- Firefighting and Rescue Unit No. 10, 2nd sub-branch: 6 personnel, 1 vehicle
- Firefighting and Rescue Unit No. 14, 1st sub-branch: 8 personnel, 2 vehicles
- Search and Rescue Unit of the capital city: 17 personnel, 7 vehicles
- Firefighting and Rescue Unit No. 10, 1st sub-branch: 6 personnel, 1 vehicle
- Firefighting and Rescue Unit No. 35: 7 personnel, 2 vehicles
- Firefighting and Rescue Unit No. 26: 10 personnel, 3 vehicles
- Firefighting and Rescue Unit No. 18: 7 personnel, 2 vehicles
- Firefighting and Rescue Unit No. 34: 10 personnel, 2 vehicles
- Firefighting and Rescue Unit No. 30: 6 personnel, 2 vehicles
- Firefighting and Rescue Unit No. 29: 7 personnel, 2 vehicles
- National Rescue Brigade: 22 personnel, 3 vehicles

In total, 217 personnel and 48 vehicles from the NEMA, the National Rescue Brigade, and Firefighting and Rescue Units No. 10, 14, 18, 26, 29, 30, 34, 35, and 63, as well as the Search and Rescue Unit of the capital city, operated at the scene. The fire was brought under control by 02:15 AM and fully extinguished by 04:30 AM, after 3 hours and 15 minutes of continuous operations.

Support was also provided by:

- The Police Department: 624 personnel, 187 vehicles
- Medical services: 21 staff, 10 ambulances
- Ulaanbaatar Railway Security Division and Emergency Services: 10 personnel, 2 vehicles
 - Water and Sewerage Authority: 18 personnel, 10 vehicles
 - Ulaanbaatar Electricity Distribution Company (UB Network LLC): 6 personnel

A total of 896 personnel and 257 vehicles from six organizations participated in the operation.

Tragically, 3 firefighters from Firefighting and Rescue Unit No. 63 lost their lives in the line of duty. Fifteen civilians sustained injuries. A total of 21 households and 29 vehicles were affected at Building No. 207 of EDU Apartment (13 floors, 1 entrance) located west of the Dunjingarav Shopping Center in 26th khoroo of Bayanzurkh district. Of the injured, 8 were taken to the Burn Treatment Center, 6 to the Bayanzurkh district General Hospital, and 1 to the Poisoning Treatment Center for initial medical care.

Additionally, 47 residents (30 adults and 17 children) from Sunny Town Building No. 830 and EDU Apartment No. 207 who were impacted by the fire were evacuated and temporarily relocated to the Cooper Hotel in 13th khoroo of Bayanzurkh district.

5.1.3 Challenges in Firefighting operations

At the road intersection near Dunjingarav Shopping Center in 26th khoroo of Bayanzurkh district, a fire broke out in a vehicle transporting gas fuel, which rapidly escalated and spread widely. (An explosion occurred.)

Several critical challenges were encountered during the incident response:

• Due to the explosion and combustion, a significant amount of toxic gas and smoke was released into the air. This posed a high risk of the fire spreading further and of emergency responders being injured by shockwaves from additional explosions or inhaling airborne chemical substances in concentrations exceeding safe limits.

• Large gatherings of civilians were observed within the hazardous zone, creating conditions where individuals were exposed to danger.

• The heat impact zone was extensive due to high ambient temperatures, intensifying the difficulty of suppression efforts.

• Visibility at the scene was severely limited.

• The explosion caused the fire to spread in multiple directions, complicating containment and response.

• Several emergency responders were affected by the fire, which had a profound psychological impact on the personnel actively engaged at the scene.

5.1.4. Characteristics of the Site

EDU Apartment Complex: Located in the southwest direction from Dunjingarav Shopping Center in 26th khoroo of Bayanzurkh District, the EDU Apartment building was commissioned in 2017. It is a 14-story residential building with a single entrance, housing approximately 63 households and around 180–200 residents. The building includes an underground parking facility with a capacity for 108 vehicles. The structure consists of a reinforced concrete frame with block wall infill and is insulated with polystyrene foam panels.

M Motors Auto Trade Center: This building was also commissioned in 2017. It features a reinforced concrete frame structure with a glass facade and block wall infill construction.



Sunny Town Residential Complex: The Sunny Town apartment building, which accommodates 830 households, was completed and put into service in 2019. It is a fully cast-in-place concrete structure with exterior insulation made of polystyrene foam.



5.1.5. Measures Taken

In accordance with the Order issued by the Head of the SEC in January 2024, a task force was formed with 37 members from 17 organizations. The task force was given the responsibility to evaluate whether the storage, transportation, and distribution of hazardous substances such as fuel and gas comply with legal and standard requirements, and to assess whether approved standards, norms, and regulations meet safety criteria. The task force also had the mandate to implement necessary corrective actions.

The findings and measures taken by the Task force were presented during the 4th meeting of the SEC held on April 18, 2024, where relevant professional and regulatory bodies were given instructions and tasks to carry out the next phase of actions.

The Ministry of Industry and Mining, the Ministry of Transportation, and the Ministry of Family, Labor, and Social Protection, together with the labor safety, occupational health, road transportation, and petroleum inspectors of the Departmental Inspection Agency, jointly conducted an unscheduled inspection at Dashvaanjil LLC

and presented the results.

Based on the instructions from the 4th meeting of the State Emergency Commission, the Ministry of Urban Development, Construction, and Housing included in the 2024 plan for the Construction Norms and Standards Fund, an analysis and revision of the following norms:

"Fuel Station Fire Safety Norm" /BND 21-07-14/,

• "Petroleum and Petroleum Products Storage Fire Safety Norm" /BND 21-03-04/,

• "Gas Supply Norm" BND /42-01-19/.

As part of the plan, the technical orders for updating these norms were issued:

• For the Fuel Station Fire Safety Norm /BND 21-07-14/, the technical assignment was issued on July 9, 2024 (No. 05/2024).

• For the Petroleum Storage Fire Safety Norm /BND 21-03-04/, the technical assignment was issued on July 3, 2024 (No. 01/2024).

• For the Gas Supply Norm /BND 42-01-19/, the technical assignment was issued on July 3, 2024 (No. 02/2024).

The Construction Development Center approved the technical assignments with numbers 01/2024, 02/2024, and 05/2024, and based on these, the Selection Committee for appointing the contractors to revise these norms was formed under Order A/374 dated July 18, 2024, and the procurement process was organized.

In cooperation with the Ministry of Transportation and the National Standardization Agency, relevant professional organizations were consulted to revise the MNS 4978:2017 Standard on "Dangerous Goods. Classification. General Requirements for Transportation." The revision will be discussed at the Road Transport Standardization Board meeting.

By Order No. 18, dated January 24, 2024, the Minister of Urban Development, Construction and Housing established a task force consisting of 35 members from 13 organizations. The conclusions of the task force were presented at the 4th meeting of the SEC on April 18, 2024.

The use of Building No. 207, which was affected by the explosion, was prohibited, and the findings were made by the national inspector from the City Inspection Agency. It was decided that Building No. 207 would be demolished and rebuilt according to the Ulaanbaatar City Mayor's Decree issued on December 2, 2024.

5.1.6. Flood situation and response measures in provinces

On June 17, 2024, a sudden and intense downpour caused a flash flood in Uliastai soum of Zavkhan aimag, affecting 131 hectares of land and 449 residents from 158 households in the Jargalant, Jinst, and Ulziit baghs.

Based on an assessment of the situation, the Head of the SEC approved the following response measures:

- Provision of gers to 40 households who lost their homes;
- Distribution of food packages;
- Supply of 120 tons of disinfectant chemicals;

• Provision of 50 pairs of waterproof boots, 6 disinfection sprayers, and other necessary protective clothing and equipment;

• Allocation of 400 million tugriks for post-flood disaster recovery and mitigation efforts.

CHAPTER 5.2. WINTERING CONDITIONS AND MEASURES TAKEN

Since the beginning of November 2023, frequent and heavy snowfall significantly worsened winter conditions. Based on assessments conducted by relevant professional agencies, the Deputy Prime Minister approved the "Unified guideline for preventing and responding to severe winter, spring conditions, and dzud" on January 24, 2024.

The emergency response task force was established to lead and manage efforts to minimize losses during the winter and spring seasons, to prevent and respond promptly to hazardous and disaster-related weather events, and to mitigate their consequences. The task force, composed of 56 staff members from 19 organizations, was responsible for coordinating the operations of aimag, municipal, and district emergency commissions, disaster protection state services, ministries, and government agencies under unified leadership and management.



Figure 108. The emergency response task force for wintering

In response to the rapidly deteriorating winter conditions, all administrative and territorial units, as well as national and local government organizations across the country, were placed under a high-level of readiness from February 15 to May 15, 2024.

Opening of Blocked Roads and Passes: Due to the onset of severe dzud conditions, including iron and white dzud, and heavy snowfall leading to road and mountain pass closures, over 13,000 herder households across 266 soums in 19 aimags faced critical shortages of government services, food, fuel, and essential goods. In response, military and law enforcement agencies, local administrative bodies, and road maintenance companies jointly cleared 138,767 kilometers of roads, enabling 13,331 herder households to reach central settlements and procure food and livestock fodder.

Delivery of Fodder and Food Aid:

• Under Government Resolution No. 436 (2023), 800 million tugriks worth of vehicles were provided to 4 aimags and 2 districts of the capital.

• Under Resolution No. 449 (2023), 2.2 billion tugriks worth of livestock fodder was delivered to 20 aimags and 3 remote districts of the capital.

• Under Resolution No. 479 (2023), 3.9 billion tugriks worth of fodder, vehicles, fuel, gers, and warm clothing was distributed to 18 aimags and 3 remote districts.

• Under Resolution No. 63 (2024), 24.6 billion tugriks worth of hay, fodder, vehicles, food items, warm clothing, medicines, medical equipment, and disinfectants was supplied to 9 aimags and 4 districts of the capital city.

• Under Resolution No. 68 (2024), 4.5 billion tugriks worth of healthcare and food packages were delivered to 21 aimags and remote districts.

• Under Resolution No. 69 (2024), 15.0 billion tugriks worth of off-road vehicles were provided to 100 soums in 21 aimags.

In total, assistance worth 51.1 billion tugriks including 12 types of aid such as fodder, food, healthcare packages, vehicles, gers, warm clothing, and disinfectants was provided.

Additionally, aimag and soum emergency commissions delivered:

- Food aid to 9,453 herder households,
- Healthcare services to 16,296 herders,
- 257,760 bales of hay to 86,796 herder households,
- 63,091 tons of animal feed to 107,346 herder households.

These operations involved 9,063 personnel and 2,414 units of equipment.

Search and Rescue Operations: During the harsh winter conditions, 1,034 vehicles stranded in the snow were successfully recovered, ensuring the safety and well-being of 3,931 individuals, with 85 people receiving direct assistance. Additionally, approximately 5,000 unmarked livestock that had drifted into border areas during blizzards were driven out of the state border zone. Over 90,000 head of livestock displaced by the storm were identified, of which 21,377 were returned to their rightful owners, thereby preventing potential damages estimated at 9.5 billion tugriks.

Furthermore, 425 households buried in snow were relocated, and snow was cleared from the homes and fences of 502 households. A total of 9,063 personnel and 2,414 units of equipment were mobilized and involved in these emergency operations.

Healthcare Assistance and Services: In response to the worsening winter conditions, the Ministry of Health ensured the readiness of healthcare facilities to provide health assistance and services. In accordance with the orders of the Minister of Health, A/396 and A/403 of 2023, funding for the purchase of emergency medical vehicles for 20 health centers in 14 aimags was approved from the Ministry's budget. The purchasing rights were transferred to the healthcare organizations. Additionally, by the Minister's orders A/127 and A/104 of 2024, the procurement of 20 emergency vehicles was approved.

The WHO provided 3,000 medication kits to 15 soums in Arkhangai, Bayankhongor, and Uvurkhangai aimags, and distributed emergency response kits, water purification tablets, warming blankets to 98 health facilities, and thermostats for temperature regulation to 100 healthcare centers in various regions.

In terms of healthcare assistance, a total of 178,412 herders residing either in migration camps or their home provinces received healthcare services across 21 aimags. Additionally, 20,460 households received medicine kits.

This assistance targeted specific groups, including 2,556 pregnant women, 29,026 children aged 0-5 years, 28,446 elderly people, 10,701 individuals with disabilities, and 21,507 individuals with chronic diseases, bringing the total number of recipients of healthcare services to 92,236 herders.

Moreover, 18,087 children aged 0-5 years were vaccinated as part of the scheduled immunization campaign, regardless of their registered location.

Measures Taken by State Military and Law Enforcement Organizations: A total of 9,879 personnel from state military and law enforcement agencies, along with 2,287 units of equipment, were deployed across 19 aimags and 265 soums. They provided 19,281 tons of hay and feed and other materials to 95,611 herder households.

These organizations cleared 67,297 km of mountain passes blocked by snow, opened roads, relocated 425 households, and freed 502 households and their homes from snowdrifts. Additionally, they extricated 1,034 vehicles that had become trapped in the snow, safeguarded the lives and health of 3,931 citizens, and provided services to 85 individuals. They also located 21,377 livestock that had drifted into the country's border zone due to snowstorms, identified their owners, and took preventive actions to avoid potential damages amounting to 9.5 billion tugriks.

Health facilities in the aimags and soums provided medical assistance to 169,981 herder citizens and 8,431 migrants moving with their herds.

<u>Response Action Planning:</u> Based on the prevailing conditions, a unified response plan consisting of 4 sections and 17 parts, titled "Dzud response plan", was developed and approved by the Deputy Prime Minister of Mongolia and the Head of the SEC on January 10, 2024.

<u>Plans were formulated and implemented</u> to open roads, deliver hay and feed, provide medical assistance, and mobilize state military and law enforcement agencies to carry out necessary operations.

In accordance with the official instructions of the SEC, risk assessments were conducted at the local and provincial levels through orders issued by the governors of the capital city and 21 aimags. Based on these assessments, response plans were developed and implemented.

Additionally, plans were devised and carried out for the disposal of livestock carcasses.

<u>Wheat, Oats, and Barley Collection and Distribution Efforts:</u> The Agricultural Corporation state-owned enterprises has signed agreements with 14 aimag to distribute

a total of 9,965 tons of feed wheat, which was purchased and stockpiled by the corporation. To date, 13 aimags have successfully received 7,010 tons of wheat, which is being distributed to herders. Additionally, in response to the winter disaster, 8,500 tons of feed wheat and oats were provided as assistance from Russia to affected herders. The collection, transportation, and distribution of these resources have been organized at the regional and aimag levels.

International Humanitarian Assistance: In response to the severe winter conditions affecting aimags, soums and district, humanitarian aid is being provided with the coordination of the United Nations Resident Coordinator and the Humanitarian Country Team. Since December 2023, the HCT, in collaboration with the SEC and the NEMA, has assisted 66,800 herder households, ensuring that there is no duplication of aid. Additionally, they have raised 10,628,732 USD in donations to support the ongoing efforts.

Disposal of Animal Carcasses and Disinfection: In response to the loss of livestock due to the dzud, a coordinated and organized approach was implemented for the disposal of carcasses. A total of 6.7 million animal carcasses were buried and destroyed at 1,663 disposal sites. Across the country, a total area of 1,331,271 ml and facilities such as pens, shelters, and winter quarters spanning 6,262,727 ml were disinfected.

Thanks to the early actions and step-by-step response measures taken by the Government of Mongolia and the SEC against the dzud, potential damage was reduced by half.

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DISASTER PROTECTION WHITE BOOK - 2024

INTEGRATED DATA ON HAZARDOUS EVENTS AND ACCIDENTS IN MONGOLIA IN 2024 /increased figures/

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m		Others																			
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20		Peste des peuts futilitatils (pig) Rahiae																			-
3	Biological	Riacklan																			
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26		I umov skin disease																			
27		Malignant Catarrhal Fever																			
28		Pasteurellosis																			
29		Others																			
30		Poisoning																			
31	Fires	Building fire	80	<u>ہ</u>	34	~ ~	7 7	, 	• •	0	23	21	7 0 5 645.667	672,500,000	3,162,742 7 446 494	436 1264	87 240	9 2,41	2,411,500,000		
33		Mining accidents	2	,	2	,		,							0. 0	202	2		, ,		
34		Explosives																			
35		Bullets and explosives ordnance																			
36		Spill of radioactive material																			
37		Spill of chemical substances																			
38	Man-made	Electrical accident																			
39	hazards and	Road and transportation accident	4	0	4	2	8	4	0	0				0	374,400	24	4	2	0		
40	accidents	Water accident	14	0	8	0	13	0	0	0	0	0	0	0	1,969,400	111	37	ო :	0		
41		Missing and lost cases	4	0	12	0	4	0	0	0				0	4,874,800	198	38	13	0		
42		Stuck in snow, water, sand or mud	7	0	ი	0	0	0	0	0				0	1,184,500	61	5	69	0		
43		Fall from a height accident	•	¢	ç	c	c						0	c	c		•	,	c	1A	
44		Others (domestic accidents)	+α		n u		0	5 6							0 916 030	4 05	- α	- ~		11	
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		Total	191	-	97	4	32	80					12 645,667	/ Z,064,649,528	35,629,866	2288	440	15/ 2,41	2,411,500,000	X	

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m		Others																	
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5		Snow storm																	
9		Dust storm																	
7		Whirlwind																	
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6	Hvdro-	Snow/heavy snow																	
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27		Malicinant Catarrhal Fever																	
28		Pasteurellosis																	
29		Others																	
30		Poisoning																	
31	Circe	Building fire	83	6	48	9	6 0	0	0	11	19	6		1,058,570,000	3,292,965	720	100	2	1,400,000,000
32	-	Forest and steppe fires	10	0	10				0	0	0		4,052	15,404,192	1,178,900	367	87	0	0
33		Mining accidents	-	0	0				0	0	0		0	0	25,200	38	6	0	0
34		Explosives																	
35		Bullets and explosives ordnance																	
36		Spill of radioactive material																	
37		Spill of chemical substances																	
38	Man-made	Electrical accident																	
39	hazards and	Road and transportation accident	5	0	5				0	0	0	2	0	175,000,000	699,700	27	5	5	0
40	accidents	Water accident	8	0	2		8		0	0	0	0	0	0	1,000,800	61	11	4	0
41		Missing and lost cases	5	0	4				0	0	0	0	0	0	765.000	73	17	4	0
42		Stuck in snow, water, sand or mud	17	0	10	0	0	0	0	0	0	0	0	0	2,008,600	06	17	103	0
43		Fall from a height accident																	
44		Helicopter/air operations	4	0	2				0	0	0		0	0	0	4	-	-	0
45		Others /domestic accidents/	e	0	2	0	1	0	0	0	0	0	0	0	147,000	52	10	-	0
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			Earthquake	Land slides	Others	Severe winds and storm	Snow storm	Dust storm	Whirlwind	Hailstones	OW		Lightning	es		Drought	Dzud	Others	Coronavirus infection*	Marmot plaque	Anthrax	Foot and mouth disease	Peste des petits ruminants (pig)	Rabies	Blackleg	uminants		Lumpy skin disease	Malignant Catarrhal Fever	Pasteurellosis	Others		Enrest and stenne fires		Explosives	Bullets and explosives ordnance	Spill of radioactive material	Spill of chemical substances		accident		Chick in snow water sand or mild		Helicopter/air operations	Others /domestic accidents/	
		Types of disasters, natural hazards and accidents	Earth	Land	đ	Severe win	Snow	Dust	Whit	Hails	Snow/he	Flasi	Ligh	Cold	Ē	Dro	ď	đ	Coronaviru	Marmo	Ant	Foot and m	Peste des petits	Ra	Blac	Peste des pe	Shee	Lumpy sk	Malignant Ce	Paster	đ	Pois	Forest and	Mining	Expl	Bullets and exp.	Spill of radio	Spill of chemi	Electrica	Koad and trans	Water on	Chick in chow w	Fall from a h	Helicopter/a	Others /dome	Total
		Types of disas:		bazarde	11928105						Hydro-	meteorological	hazards												Biological	hazards							Fires						Man-made	nazards and	accidents					
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				Affected	ted	Affected	lod	ion	sle bi			-		ə	Dep	Deployed	Re	Rescued/saved		
#	Types of disast	Types of disasters, natural hazards and accidents	Number of cases	Viinag/capital city	Soums/districts	Total	Burnt, injured, sick, poisoned	pnissiM	Perished and burie livestock and anima	Affected gers, buildir and facilities	Destroid gers, hous and buildings	Affected vehicles Burnt land /hectare	/TNM\ səksoJ	/LNW/ Booluse exbeuse	elqoaq	bns sələirləV brandiupə	People	\TUM\ złeccA		
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27		Malignant Catarrhal Fever																		
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30		Poisoning																		
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33		Mining accidents																		
34		Explosives																		
35		Bullets and explosives ordnance																		
36		Spill of radioactive material																		
37		Spill of chemical substances																		
38	Man-made	Electrical accident																		
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42		Stuck in snow, water, sand or mud	16	4	~			0	0	0				4,703,460	67	20	11	0	A	
43		Fall from a height accident	e	-	-	0	0	0	0	0	0	0		0	21	m	-	0	NI	
44		Helicopter/air operations	ი	2	9			0	0	0		0	0	0	0	0	2	0	NI	
45		Others /domestic accidents/	12	5	4	0 2		0	0	0				385,550	88	-	14	0	ΞX	
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