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## Disaster Management by Security Agencies in Nepal

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### **Abstract**

*As per the MOHA report (2021), disaster has been claiming life and property of people. MOHA has its plan to tackle the Disaster because of the fact that Nepal is a disaster-prone country. The categories of disaster as per MOHA report, 25 types of disasters have been happening in Nepal and causing loss of life and property of people. In this context, this article aims to find out the situation of disasters in the country as whole and province-wise scenarios of disaster cases; examine the sufficiency of security personnel to implement the disaster policy mandate given by the government of Nepal and elucidate the required coordination for preparedness, responses and rescue operations that have to carry out by the security agencies in support of three tiers of governments. For this purpose, secondary data from the MOHA web pages were retrieved to analyze the interrelationship of each disaster. Likewise, policies related to preparedness and response in general, especially to security agencies were reviewed. Key informants (KI) interview was taken to consolidate findings from the secondary data. Koshi Province is in the top position of the disaster cases whereas Sudurpaschim Province is at the lowest position out of 26148 disaster cases from 2011 to 2021 June. Despite the deficiency of human resources in the security agencies and the lack of proper coordination made by the three tiers of government, security agencies accomplish the roles of preparedness, response and rescue operation more than their capacity to save life*

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*and property of people. The study concludes that disaster management is not the government's priority whatever its claim in government policy documents due to lack of appropriate coordination with the security agency and insufficient security personnel. The coordination and ensuring of required security personnel is the responsibility of the government when it concerns disaster management by the security agencies in Nepal.*

## **Background**

In Nepal, three security agencies-Nepali Army (NA) (96000), Armed Police Force, Nepal (37054) and Nepal Police (79554) have their own mandates and carried out their activities according to their mandates (Uprety, 2022). The NA protects the sovereignty of Nepal. The APF is mainly focused on border security and disaster management. The NP is the national and primarily law enforcement agency. Having different functions, these agencies are deployed in various cases of disaster emergencies. However, how human resources are prepared to respond the disasters is the curiosity of this article on the context of disasters that occur in the country each year. The aim of the article is to assess the volume of disasters and find out the shortage and surplus of human resources required to respond to disasters. Likewise, another objective of the article is to examine the coordination activities of security agencies with federal, provincial and local governments to respond collectively. Finally, there are suggestions derived from the findings of the research.

## **Policy Review for Disaster Reduction and Management**

The policy mandates are described in two parts. The first part is the general picture of disaster management in which all stakeholders have to accomplish their tasks. It means that the accumulation of each stakeholder role is the final result of risk reduction. This means that it provides the mandate to federal, provincial, local, non-governmental organizations, civil society, universities, schools, the private sector etc for risk mitigation caused by the disaster. The Government of Nepal (GoN) has developed legal and institutional arrangements to plan and manage disaster risk reduction and management activities. For example, Natural Calamities (Relief) Act, 1982 focuses on post-disaster response and relief and authorizes the government of Nepal to give appropriate orders to anyone undertaking relief work. Local Bodies Operation Act 2017; Building Act 1998; National Building Code 2004; National Strategy for Disaster Risk Management 2009, Climate Change Policy 2011, Land Use Policy 2012, Water Induced Disaster Management Policy 2015; National Reconstruction and Rehabilitation Policy 2015; National Disaster Response Framework 2013, Basic Guideline related to Settlement Development, Urban Planning and Building Construction 2016; National Urban Development Strategy 2016 are important legal and Policy framework. The new act i.e. the Disaster Risk Reduction and Management Act, 2017 provide a comprehensive outlook to capture the different dimension of disaster risk management- preparedness, rescue, response, rehabilitation and resettlements. The GoN developed agenda for action in the Disaster Risk Reduction National Strategic Plan of Action (DRRNPA 2018-2030) based on priorities set by the Sendai Framework for Disaster Risk Reduction

(SFDRR) (2015-2030) and implemented it accordingly to achieve sustainable goals (MOHA, 2022). However, the mid-term evaluation report highlights the lack of technical and skilled human resources in the provincial and local government to take disaster risk reduction responsibilities, the lack of informed decision-making culture, and low financial investment for risk reductions (MOHA, 2022). Besides, this report indicates a high risk of fire incidents (household, urban fire and forest fire) which are responsible for substantial loss of lives and properties in Nepal.

Likewise, while reviewing the second part of the policy review specific mandate of security agencies for disaster management, Disaster Risk Reduction and Management Act, 2017 invited security personnel as a member of the committees formed from the apex grassroots level of governance. National Strategy for Disaster Risk Management 2019 aims to achieve resilience in Nepal by providing guidance in prioritizing strategic interventions and stakeholder involvement. Evernthough these few laws state the broad picture of disaster risk management (UNDP, 2012 ; MOHA, 2018), these laws have not clearly stated the preparedness and response protocol in general and security agencies in particular when it is concerned to disaster risk management.

The security agencies of Nepal (NA, APF & NP) have their own specialized functions as per their acts. To carry out disaster response activities, the activities are grouped into four headings: a) training, resources, deployment and incentives b) disaster field information collection; c) rescue to the victim and d) respond to the victim.

These security agencies should develop security personnel through training. They train their personnel specialized in different disasters. For example, APF trained security personnel in the following headings- Medical First Responder (MFR), Collapsed Structure Search and Rescue (CSSR), Dead Body Management (DBM), Water Induced Disaster Rescue, Rappelling and Climbing, Fire Fighting Technique and Practical Emergency Logistic Training ([www.dmts.apf.gov.np](http://www.dmts.apf.gov.np) as of April 29, 2023). Also, security agencies arrange the logistic materials required for the emergency. Both security personnel and required materials should be in a ready position for disaster response. The law of land states explicitly that security agencies should deploy their troops for search, rescue and relief operations to save life and property of people (Article 51 and Article 267 (4) of the Constitution 2015 and APF Act, 2001).

They observe the field, assess the damages due to disasters and report to the concerned agency. Likewise, security agencies assist in the opening of affected roads and bridges due to disaster. Security agencies assist to establish emergency assistance camps and relief centres for the victims. Security agencies will provide security to the victims and others. They will provide first aid health services and bring victims up to hospitals. The NA has been actively participating in disaster management and leading some emergency operations. The constitution of Nepal 2015, has mandated NA to mobilize and respond to any disaster situation and has to coordinate with other security agencies to save life and property of people.

The APF is designed to combat domestic violence without mobilizing military personnel. The APF is mandated for disaster management and relief work. According to the APF

Act, 2001, its mandates include rendering assistance to the relief of natural calamities or epidemics that has occurred or likely to occur in any part of Nepal. The MoHA decided to entrust APF as a prime security agency in disaster management particularly in the response phase. For the purpose of achieving these task of disaster risk mitigation, APF collects disaster-related information and analyze the data, immediately identifies required resources, assigns the task to the emergency response force, and coordinate with other security agencies. Urgently, APF deploys its forces for search, rescue and relief operations in the field. APF provides assistance to build emergency shelters and camps including first aid to the needy victims. Finally, APF assesses damages due to disaster and informs the head office (Disaster Management Division, APF, 2023).

The NA plays a vital role to overcome natural and human-made disaster challenges in general specifically the 1990 earthquake in the eastern part of Nepal, the Koshi flood in 2008 and others. The NA has also played a major role in providing emergency assistance through peacekeeping operations in conflict-prone countries of the world(Nepali Army, 2021; in KC, 2022). The NP also plays a vital role in information collection, operation coordination, and supporting rescue, relief and rehabilitation work (UNDP, 2012, 18p).

On the background of such policy mandates of security agencies for disaster management in Nepal, Zaw and Lim (2017) argue that security agencies play a vital role in humanitarian assistance because of readiness, preparedness and team spirit. Dagur (2008) highlight the discourse on coordination between civil administration and security agencies. KC (2022) opines that well-prepared human resource in sufficient number and sound coordination mechanism always gives net positive results in the Nepalese context. However, it is a curiosity to know the situation of disasters in Nepal along with their impacts and their interrelations. Besides, it is also a pertinent issue to find out the sufficiency of security personnel and coordination with the government.

### **Methodology**

Secondary data were collected from MOHA- the main agency for disaster management while primary data were collected through in-depth interviews with retired security force commanders and experts. They were selected on the criteria of being commanders of disaster management during their service period in the security agency. Primarily 26148 disaster cases which happened from 2011 to 2021 June were collected from MOHA. These data were used to find out the trends of disasters in Nepal along with their impacts. Financial and non-financial loss/impact of the country were also calculated from the secondary data. Likewise, province-wise distribution patterns of disaster cases were also analyzed. Based on disaster types as illustrated in the secondary data, the correlation with each other was also traced out.

In the case of primary data, eight retired commanders and experts from security agencies as Key Informants (KI) were interviewed to examine the translation of security agencies' mandate for disaster management in Nepal. KIs who were the former commanders of the APF battalions involved in rescue operations during the disaster such as the earthquake in 2015, flooding and the COVID-19 pandemic were selected purposively. They were asked three questions- sufficiency of human resources in the security

agencies, coordination with the other stakeholders and the ways forward for effective response and rescue operations at the time of disasters. On the basis of both findings derived from the secondary data and primary data, the suggestions to mitigate the disaster risk in terms of preparedness and response were forwarded so that the security agency will have space to reform internally.

### The Situation of Disaster in Nepal

Nepal is at risk of different disasters due to natural hazards. On average, more than 500 various disastrous incidents occur resulting in the loss of physical infrastructures and human life and affecting livelihoods every year (MOHA, 2018). As per the records of the MOHA (2021) from 2011, there were more than 26,148 cases of disasters reported in police station. Still, unreported cases were prevailed in Nepal, but not included in this paper. The data showed that disaster cases were increasing trends in successive years. These disaster cases lost the life of people, missed people and affected families but also lost the economy. The types and scales of the disaster the loss of life and property. For example, an earthquake in 2015 lost more than 9 thousand people alone. However, there were about 500 people lost their lives each year in Nepal. There were also missed people each year due to disasters, mostly floods and landslides. The number of affected families also increased. In ten years period (2011-2021), 39 billion NPR was lost due to different types of disasters. Besides, there were a lot of injuries, public houses were fully or partially damaged of public houses and private houses, and lost cattle and their sheds etc (see Table 1). Such a loss is unbearable in a country like Nepal. The data revealed that as the number of disaster cases increased, the loss of life and property also increased. From 1971 to 2015, more than 40,000 people lost their life due to disasters. This number is more than two persons losing lives every day.

**Table 1**

*Loss of Life and Property Due to Disasters in Nepal*

Incident Date	Yearly Injuries	Yearly Gov. House Damaged	Yearly Gov. House Damaged Partially	Yearly Private House Fully Damaged	Yearly Pvt. Houses Partially Damaged	Yearly Cattle Loss	Yearly Displaced Shed
2011	408	0	0	1451	683	0	90
2012	472	0	0	4242	816	69	265
2013	531	0	0	2429	361	0	549
2014	490	0	0	10034	24687	0	756
2015	22661	2687	3776	773936	299378	1974	118
2016	764	2	3	3428	1222	8162	986
2017	737	0	1	1927	14427	3291	555
2018	2902	0	1	2505	1880	5164	643
2019	2452	0	0	4939	6873	9008	1260
2020	1175	8	5	1959	3330	0	771

2021	444	2	5	947	760	2	666
Total	33036	2699	3791	807797	354417	27670	6659

*Note.* Ministry of Home Affairs (MOHA) as of June 2021.

There were more than 75,000 people have been injured and about 3,000,000 have been affected (see Table 2) (MOHA, 2018).

**Table 2**

*Loss of Life and Property Due to Disasters From 2011 to 2021*

Year	Year-wise disaster cases	Yearly death	Yearly missing people	Yearly affected family	Yearly economic loss(NPR)
2011	1165	418	135	649	994,207,730.00
2012	1716	433	47	2859	1,291,895,997.00
2013	1688	472	185	2633	2,056,863,292.00
2014	1332	505	294	39812	16,815,037,717.00
2015	977	9304	212	828	944,589,530.00
2016	2370	486	47	13241	2,812,378,791.00
2017	2463	490	67	19073	2,496,785,394.00
2018	3919	478	9	8180	4,341,891,926.00
2019	4536	489	41	25263	4,705,960,265.00
2020	3769	559	102	11314	1,761,220,860.00
2021	2213	153	23	3019	1,287,158,896.00
<b>Total</b>	<b>26148</b>	<b>13787</b>	<b>1162</b>	<b>126871</b>	<b>39,507,990,398.00</b>

*Note.* Ministry of Home Affairs (MOHA) as of June 2021.

Research and investigation of disaster management are carried out globally and locally to find out the exact reasons and the explanatory factors responsible for disaster governance for the sake of framing appropriate disaster policy making. Various types of natural and man-made disasters were happened in Nepal due to its geographical location, unplanned infrastructure development and growing urbanization (MOHA, 2018). It revealed that, as the capacity of public institutions is strengthened, the vulnerability due to hazards of disaster will decrease. This is referred as the disaster risk. As the disaster risk is decreased, the life and property of the people will be saved. The preparedness, responses, reconstruction and rehabilitation cycle is followed for disaster management theoretically whereas the nature of these steps is context-dependent. Therefore, there is limited research on handling disaster cases administratively from a preparedness and response perspective in the context of Nepal. Thus, the article aims to find out the province-wise distribution of the disaster case in Nepal and the correlations of these disasters with each other.

### Province-Wise Distribution of Disaster Cases in Nepal

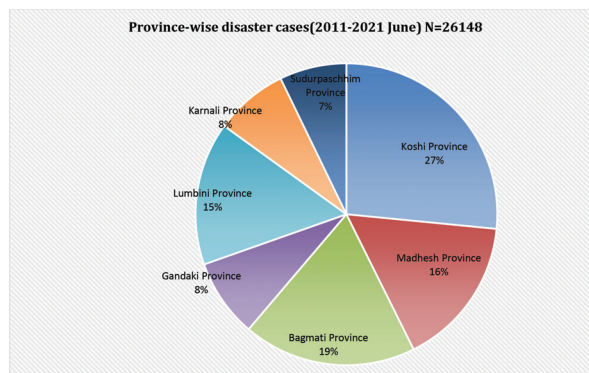
Nepal is a geographically and geologically unique country in the world. As the altitude varies, its landscape also varies. Consequently, the temperature and precipitation also vary throughout the country. In general, its northern part occupies by the Himalayan, its middle ranges are hilly regions and valleys while its southern part is covered by the Chure range and plain areas. About 83 percent of Nepal lies in the hill and Himalayan regions and 17 percent in the plain Terai(MOHA, 2018). The hilly region is at risk of landslide and soil erosion whereas Chure and the Terai are at risk of flood, droughts, fire and epidemics. The Himalayan region is at risk of avalanches and glacial lake outbursts. All of Nepal being in the very active seismic zone, and the hilly and Himalayan settlements are at high risk of the earthquake (MOHA, 2018).

Because of altitude, the temperature of the Himalayan region has a lower range temperature, middle range temperature in the hilly region and a bit higher temperature in the southern part of Nepal. The political division of Nepal does not exactly match the altitude, temperature and precipitation. Nepal is divided into seven provinces. The Koshi Province spreads the Himalayan range to Terai(Plain areas) whereas Madesh Province is found only in the Plain area. Likewise, most of the parts of Bagmati Province are in the Himalayan and Hilly regions and a few parts are in the Terai region. Likewise, Gandaki Province has the same type of topography as Bagmati Province. In the case of Lumbini Province, its most geographical areas are in Terai and few in the Hilly regions. Most areas of the Karnali region are in the Himalayan regions whereas a few parts are in the hilly regions and Terai regions. Sudurpachhim province has more or less similar areas in the Himalayan, hilly and Terai regions of Nepal.

Such geographical and topographical tenets of the provinces are major factors when the preparedness and responses for the sake of disaster management are concerned. Each province should consider these tenets while preparing for preparedness and response attempts. The frequency of the disaster cases determines the degree of preparedness and responses.

**Figure 1**

*Province-Wise Disaster Cases*

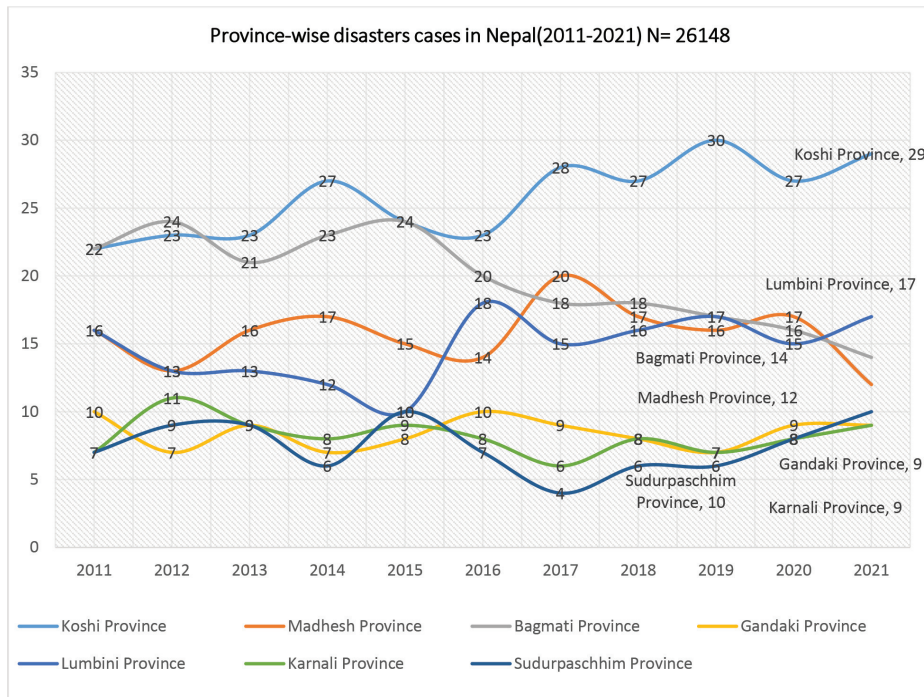


*Note.* Ministry of Home Affairs (MOHA) as of June 2021.

Figure 1 revealed that the maximum frequency of disaster cases out of more than 26 thousand cases, 27 percent of its share were found in Koshi Province. The second highest number of disaster cases i.e. 19 percent were found in the Bagmati province. Likewise, the third topper was Madhesh Province by 16 percent whereas the Lumbini Province by 15 percent. Gandaki Province, Karnali Province and Sudurpaschhim Province have disaster cases of about 7/8 percent in totality.

**Figure 2**

*Yearly Province-Wise Disaster*



*Note.* Ministry of Home Affairs (MOHA) as of June 2021.

The number of cases determines the number of public offices, the number of human resources, the volume of logistic materials, the types of training institutions and others. This study reveals that most of the human resources in general and particularly public officials need to deploy in the Koshi Province, Madhesh Province, Bagmati Province and Lumbini Province. The high frequency of disaster cases in each province suggests the more demands of training institutions, more public plans and policies, strong architectural design structurally, safe housing and settlements etc. Governments-federal, provincial or local have to manage human resources and set institutional structures along with the plan and policies to save the life and property of the citizen.

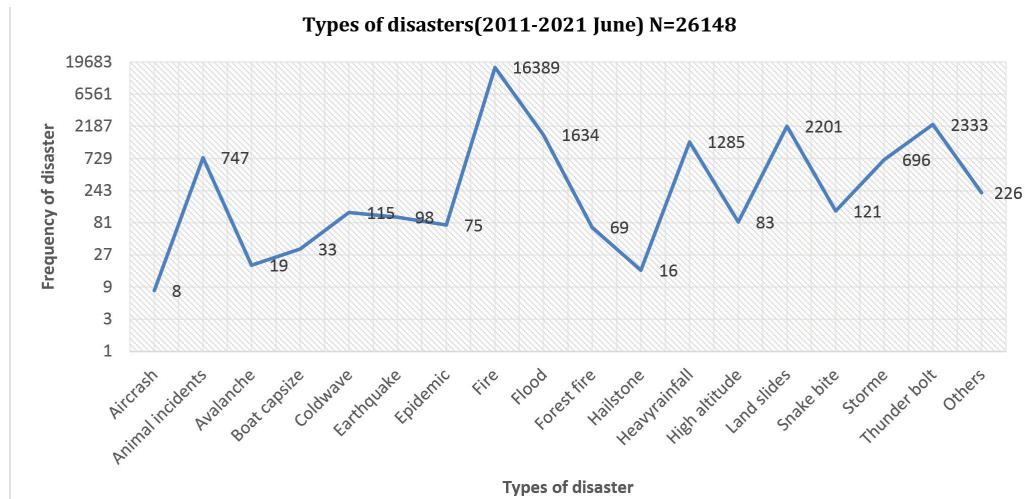
While going through the analysis of types of disasters out of 26148 disaster cases in Nepal, fire (16389 cases) is the most prominent disaster case. The second type is thunderbolt (2333) and followed by landslides (2201). The fourth type of disaster is



flood (1634) and the fifth one is heavy rainfall (1285). In the majority of the districts of Nepal, disasters occur recurrently where more than 90 percent of the population are at high risk of death due to two or more than two types of disaster. These disasters were associated with each other and seasonal based too. Likewise, the earthquake is most fatal and frequently occurring in Nepal (For details see the following figure). This data suggest that the attention of the administrative division in general especially by the provincial government and local government along with federal public institutions should focus on the preparation of firefighter, landslide rescuers, flood rescuer, thunderbolt avoider housing settlement along with logistic, communication and other required materials when preparedness and response are concerned for the disaster management in Nepal. In the global comparison, Nepal has been ranked in 11th position as the risk-prone country in the world in terms of earthquakes and 30th position in terms of flood and landslide.

**Figure 3**

*Types of Disaster Cases*



*Note.* Ministry of Home Affairs (MOHA) as of June 2021.

The above-mentioned data are seasonally based. As per the reporting date of these disasters (26148) to MOHA, few of them seem seasonal-related among these disasters. These disasters are categorized in the following seasons: (a) Spring (March to May): Avalanche, fire, forest fire, hailstone, storm, thunderbolt, (b) Summer (June to August): Avalanches, fire, flood, heavy rainfall, landslide, snake bite, (c) Autumn (September to November), (d) Winter (December to February): Cold wave and (e) All seasons: Air crash, Boat capsized, Earthquake, high altitude.

Therefore, the public institutions and provincial/local government focus on the prepare human resources and required logistic material before the season and deploying the team when a disaster happens in the respective provincial and local governments. This data shows that the preparedness and response team should be ready to respond to the

disaster according to season. Otherwise, there might be heavy loss of life and property in the country in the absence of preparedness and response properly.

### **Inter-Relationships of the Disasters**

Recent occurrence of significant disasters (such as Hurricane Katrina, the Haiti earthquake, and the Fukushima Daiichi nuclear disaster) have both inspired and necessitated research to build a deeper understanding of how disasters can cause cascading effects, particularly on critical infrastructures. Given the importance and broad scope and relevance of the topic, a wide range of stakeholders (i.e., scientists, engineers, government agencies, intergovernmental organizations, etc.) have studied risk relationships and cascading effects over the years. An exhaustive capture of pertinent studies is neither possible nor necessary here. Yet, a review of some of the recent studies reveals interesting trends and observations on the state of current research (McGee. et al., 2015)

The data of MOHA (2011-2021 June) reveals that there is a significant relationship with each other of the disasters because of cascading effects. Aircrash, avalanches, animal incidents, fire, hailstone, heavy rainfall, landslides, snake bite, storm, thunderbolts, floods, high altitudes, etc have significant relationships with each other. Therefore, this data suggests that the preparation of human resources by the public institutions and provincial government as well as local government pay attention to these types too. The same human resource can respond to the disaster if training is properly given to them. This data lays the foundation for making syllabi of training courses when prepared by the public institutions and provincial/local government. The data also shows that earthquakes, forest fire avalanches, coldwave and epidemics have no relationship with other types of disasters that frequently happened in Nepal. It means that the training syllabus for these disasters needs to prepare differently customized to the reality of Nepal in case of preparedness and response. The training syllabus needs to include national scenarios of disaster cases, and relationships with other disasters and required capable security personnel to address the demand of the victim.

### **Sufficiency of Human Resources/Security Personnel**

In Nepali security agencies, there were 6.61% technically skilled human resources and 93.39% semi-skilled human resources for rescue and relief operations out of 212608 security personnel in totality. Categorically, the NA has 10.41% technically skilled persons of its total strength, 5.48 % in the APF and 2.55% in the NP. See the following table for details.

**Table 3**

*Skilled and Semi-Skilled Security Personnel in Nepal*

<b>Security Agency</b>	<b>Technically Skilled</b>	<b>Semiskilled</b>	<b>Total</b>
Nepal Army	10.41 %	89.59 %	96000
APF	5.48%	94.52%	37054

NP	2.55%	97.45%	79554
<b>Total</b>	<b>6.61%</b>	<b>93.39%</b>	<b>212608</b>
	<b>14065</b>	<b>198543</b>	<b>212608</b>

*Note.* Adopted from directorate of disaster management of Nepalese Army, APF, Nepal disaster management division, Nepal police disaster management division, (2022).

Whether these numbers of human resources available in the security agencies are surplus or shortage or sufficient to respond to the above-mentioned number of disasters each year is the main question. Retired security commanders argue that this number is not sufficient and is explicitly short to respond to the disaster. They univocally urged to prepare the required skilled and professional human resources in order to mitigate the disaster risk in Nepalese society.

One of the KI, a former commander argued that the preparedness of human resources faced challenges due to shortages of the appropriate trainer, training centre and appropriate syllabus during his period. He remembered that the existing syllabus was prepared as per the 1982 act, not as per the recently revised act of 2017. Likewise, there was a shortage of firefighters, fire extinguishers and a lack of oxygen gas including other logistic materials. Moreover, incentives to the security personnel were also lacking even though the response activities during disaster crisis was dangerous and life-threatening acts. He further argued that multiple strategies were required to prepare human resources by security agencies. He focused on the revision of the training syllabus for disasters considering the interrelationship of disasters, networking with security agencies, experience sharing etc. Exposure visits within the nation could also be carried out. The dry exercise is mandatory for the sake of preparedness of human resources who responded to disasters at the time of crisis.

Another former commander argued that the government must manage the disaster management battalion in each province because the number of large-scale or small-scale disasters was too high. Each battalion should have a disaster response platoon. He further emphasized that the noble purpose of security agencies is to save life and property of the people.

Likewise, another KI, a former commander of APF argues that it is hard to cope with disaster in Nepal due to the vulnerability created by multiple disasters at the same time. Even though many initiatives had been taken from the national and international levels to strengthen the capacity of Nepali people to cope with any kind of disaster, there was a shortage of required human resources either from security agencies or from the public side. To fulfil such deficiency, volunteers in the local government could be prepared and mobilized during the disaster crisis. APF could train them if the government provided the mandate to the APF. The APF itself had prepared the team for disaster management. On average, there were about APF 50 persons in each province despite of shortage of human resources. As per the APF plan, about 620 security personnel were required in each province to respond to the disaster. Therefore, the plan of APF itself showed that there was a huge deficiency of human resources in the security agencies. According to

him, 620 security personnel should be managed by the government.

Another KI, a disaster expert as well as the former commander shared his experience of the 2018 flood rescue operation. Despite of shortage of human resources in the provincial brigade, existing security personnel were standing by. Logistic materials such as a boat, tube, life jacket, rope, dry food etc were also managed by the APF. He admired the security personnel's contribution to saving life and property of the flood victims. Without having any basic resources, they rescued the flood victim even at the night. The APF and other security agency personnel were insufficient for rescue operations because the scale of the flood was too high. Based on his past flood rescue operation experience, he narrated that trained human resources were insufficient in the security agencies.

Besides, another KI, former security personnel argued that security agencies had specific roles in their respective areas including responding to disasters during the crisis. Disaster management required highly professional persons. Only two to three weeks-long training impartment to the security personnel was not sufficient. Therefore, a separate special force within the security agencies was required due to the high frequency of disaster cases and the unique nature of each disaster in Nepal. The unique nature of the disaster was due to geography, climate change and seismic conditions and unpredictable precipitation. Security agencies personnel had been doing their job more than their capacity.

In sum, former commanders argued that security agencies have been facing a shortage of human resources during the response and rescue operation. This argument is also confirmed in the report of the Mid-term review of the Sendai Framework for Disaster Risk Reduction (2015-2030)(MOHA, 2022) because of the high recurrent frequency of disasters in all seasons in Nepal. Auditor General reports (2022) highlighted that insufficiency of security personnel during the COVID-19 pandemic eventhough APF mobilized 22500 and NP deployed 45355 security personnel. A noteworthy point is that responding to a disaster is one of the responsibilities of security agencies among others. Because of the unique nature of the disaster, it demanded the highly specialized force in each province to respond immediately at the doorsteps of the people. Despite insufficient human resources, security agencies have been responding to disasters more than their capacity. Its example could be observed during the Earthquake in 1990, the Koshi flood in 2008, Earthquake in 2015 and COVID 19 crisis. The two to three-week training for the security personnel was not sufficient to respond to the disaster. Therefore, preparedness of human resources is the mandatory and proactive act of security agencies to fulfil insufficient skilled human resources by security agencies in consultation with the government.

### **Coordination Between Government Agencies**

The Disaster Risk Reduction and Management (DRRM) Act, 2017 came into action replacing the response and relief-centric law, the Natural Calamity Relief Act 1982 (MOHA, 2019). The new act provides a comprehensive outlook to capture different dimensions of disaster risk management. As per MOHA, the DRRM Act is more progressive in encouraging a proactive approach to reducing and managing disasters by

introducing the ‘whole of society approach’ in disaster risk management and ensuring ownership and accountability. It not only aspires to have a more proactive response during the disaster but also insists upon continuity in risk reduction, response, recovery and rehabilitation. To translate these provisions of the act, coordination between inter public institutions such as security agencies and three tiers of government is the prominent task during the preparedness and responding phase of disaster management (MOHA, 2019).

KI, a former commander argued that the coordination mechanism could be strengthened effectively. He opined that coordination was very easy to say but very hard in reality. Therefore, these must be easy and specific coordination protocols from the federal government to local government in association with security agencies. For example, the APF force was not included in the coordination committee at the local level.

Likewise, KI, a former commander argued that there were many committees at the central, provincial and local levels. However, these local committees were facing trouble to operate response and rescue operations due to a lack of transfer of authority from the central level. The provincial internal affairs and law ministry needed to have more roles so that it could strengthen local-level governments and organizations. Besides, locally formed disaster management committees could coordinate with the schools and other local organizations to produce volunteers. Security personnel would train them. Governments should have incentive plans to give incentives if they were mobilised during the response and rescue operations of disasters.

Another KI, a former commander argued that security agencies lack resources among various public institutions. These public institutions should be coordinated through financial resources, human resources, physical resources and information sharing. As a result, synergetic effectiveness would be produced if there is effective coordination established inter public institutions.

He further argued that coordination should be established and linked with each other up to the ward level of local level governments. At the ward level also, there must be enough stock of logistic materials such as food for disaster-affected people, volunteers, tents, public buildings etc. because local level governments could provide financial resources to manage such essentials during a disaster crisis. Information on food storage, the number of trained volunteers, tents and public buildings should be shared with the security agencies for the sake of effective coordination.

However, the other KII argued that the coordination mechanism is not criticism free despite of coordination mechanism at the central, provincial and district levels. The committee meeting used to held after the disaster, not for their preparedness. These coordination meetings should be held prior to seasonal-based disasters. Their decisions paved the path to take decisions by the respective security agency to manage and orient their human resources.

## **Conclusion**

The above discussion shows that Nepal is a highly disaster-prone country. The data

from 2011 to 2021 June revealed that there were more than 26148 disaster cases throughout the country including 1379 death cases each year. The data from 2011 to 2021 revealed one disaster and two death case ratios in Nepal. Looking province-wise distribution of disasters, Koshi Province stood at the first position, Bagmati Province at 2nd position, Madhes Province in 3rd Position and Lumbini Province at 4th position of disaster cases happened in Nepal. Likewise, Gandaki Province, Karnali Province and Sudurpaschhim Provinces were in 5th, 6th and 7th position in the disaster cases respectively. Fire, thunderbolts, landslides, heavy rainfall, and floods were the five top-most occurring disasters in Nepal. However, heavy rainfall, flood, thunderbolt, hailstone, avalanches etc have a significant relationship with each other. It means one disaster causes another to have happened. In the case of risk disaster management, the preparedness, response and rescue operation concerns, there are ambiguities legally eventhough security agencies are assigned roles of preparedness, response and rescue operations in case of disaster including their other regular roles and responsibilities without providing adequate financial resource and specific legal mandate.

KI informants, former commanders and disaster experts argue that security agencies have been accomplishing the task of preparedness, response and rescue operation for disaster risk management more than their capacity despite human resource deficiency and lack of appropriate coordination mechanisms with the three tiers of governments in Nepal. Despite many policy provisions focusing on three tiers of government including other stakeholders, security agencies have given due attention to respond the disaster crisis at the critical phase of the disaster. The insufficiency of security personnel and lack of appropriate coordination with security agencies reveal that governments don't pay top priority to disaster risk management eventhough governments have given the ceremonial commitment and promises for disaster risk management in front of the citizen.

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