International Journal for Multidisciplinary Research (IJFMR)

E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Himalayan Nepal-Tibet Tsunami: Genesis, Causes, and Critical Justice Appraisals

Bishnu Pathak[1], Carter Dillard[2], Suriya Khan[3]

Abstract

This study examines the ecosocial vulnerabilities and structural inequalities exposed by the transboundary flash flood of August 26, 2026, colloquially termed the "Himalayan Nepal–Tibet (China) Tsunami". Occurring under fair-weather conditions, the disaster is evaluated through the analytical frameworks of climate, spatial, and intergenerational justice. The event resulted in the mortality or disappearance of over 6,000 individuals, primarily working-age adults (aged 18–50), including daily-wage laborers, logistics workers, tourists, and local administrators, while comprehensive livestock and aggregate capital losses remain unquantified. Geological assessments indicate the disaster was initiated by a massive cryospheric and bedrock collapse near Mount Langtang Lirung, estimated at approximately 25 million m³. The subsequent ice–rock avalanche induced temporary river damming and a subsequent catastrophic breach, propagating a high-energy debris flow through the Lhende, Bhotekoshi, and Trishuli river systems. This cascade devastated downstream communities across the Rasuwa, Nuwakot, and Dhading districts and compromised approximately 783 MW of hydropower capacity. Utilizing a qualitative network-tracking methodology that triangulates social media data, field dispatches, and emerging empirical literature, this paper investigates the intersections of anthropogenic climate change with localized systemic risk multipliers, specifically hydropower hazards, dam vulnerabilities, floodplain encroachment, and unregulated infrastructure development. Grounded in the principle of Common but Differentiated Responsibilities and Respective Capabilities, the study advocates for non-debt-creating loss-and-damage financing, ecocentric infrastructure paradigms, participatory governance, and transboundary diplomacy to advance structural justice for both human and more-than-human communities. Recognizing the provisional nature of scholarly inquiry and the inherent limitations of individual knowledge, this study adopts the epistemological premise that "we know that we do not know." It therefore invites critical review, constructive feedback, and further empirical investigation to support the ongoing refinement and advancement of its findings.

Keywords: Himalayan tsunami, flash flood, Nepal-Tibet disaster, climate justice, reparation, victims, missing, loss and damage, Bhotekoshi, tourist, and working-aged adults.

1. Introduction

At 08:40 a.m. on August 26, 2026, Rasuwa's Timure Bazaar displayed its typical daily baseline of institutional, societal, and socio-economic activity. Within the domestic sphere, the local populace engaged in routine reproductive labor and preparatory daily tasks, while the transient tourist demographic remained largely localized within hospitality infrastructure for sustenance and convalescence. Concurrently, formal state mechanisms and commercial sectors demonstrated synchronized operational mobilization. Institutional security apparatuses, comprising the Nepal Police, Armed Police Force, and the Nepali Army, executed routine border-governance protocols, while public and private administrative sectors, including financial institution personnel and customs officials, prepared for high-volume operational workflows. This regulatory framework intersected with the local market economy as merchants, hoteliers, and logistics operators coordinated freight movements and commercial enterprises. Spatially distributed from the central marketplace to peripheral riparian settlements, the incremental escalation of pedestrian mobility and commercial openings delineates an ordinary morning matrix of commerce, governance, and everyday borderland activities of life.

Suddenly, a thunderous roar resembling a massive aircraft crash reverberated through the Bhotekoshi river area, causing the earth to tremble violently as if struck by a severe earthquake. Individuals in various locations immediately fled from shops, homes, and offices, scrambling toward the upland cliffs in a state of sheer panic. Concurrent with the deafening sound, a catastrophic surge of debris unleashed by the Chinese side, comprising boulders, soil, uprooted trees, vehicles, and other wreckage, demolished Nepal's seven-story customs office within seconds. The inundation advanced with such extreme velocity and violent force that passengers inside vehicles were unable to even open their doors to escape. Amid the chaos, desperate cries for help echoed, while many found no time to exit shops, and others were instantly buried and swept away by the cascading debris while still trying to comprehend the unfolding disaster. Approximately thirty seconds after the initial acoustic manifestation, the entire customs complex, adjacent state administrative facilities, banking institutions, multi-story hotels, residential developments, road networks, and municipal infrastructure were completely obliterated. The event was so terrifying, apocalyptic, gruesome, and unimaginable in speed, and the catastrophic tsunami defied human comprehension, leaving survivors confronting a nightmare beyond the power of words to describe.

The proposed "Himalayan Nepal–Tibet (China) Tsunami" of the morning of August 26, 2026, extending from the Lhende River through Rasuwa, Nuwakot, Dhading, and Chitwan, is conceptualized in this study as an extreme, cascading cryospheric, geospheric, and hydrospheric hazards. Triggered by instability within high-altitude ice and mountain slopes, the event underwent a rapid downstream transformation into a destructive surge comprising water, snow, ice, rock, sediment, and general debris mass movement (An et al., 2022 and USGS, 2026).

While "tsunami" traditionally denotes long-wavelength oceanic waves (Britannica, undated), its application here is analytical, highlighting the exceptional velocity, momentum, volume, and cascading impact of a sudden mass flash flood flow constrained within narrow river valleys. This conceptual framework aligns with established evidence across the Hindu Kush Himalaya (HKH), where glacier retreat, glacial lake expansion, slope instability, and extreme precipitation interact to produce compound hazards (ICIMOD, undated). As ICIMOD observes, climate change is compounding both the frequency and operational complexity of these high-mountain flood processes throughout the region.

The genesis of this "Himalayan Tsunami" lies in a single, isolated physical event that evolved into a multi-stage cascading process (Mathema, September 4, 2026 and Sunuwar, September 3, 2026). This study further distinguishes the immediate triggering event from the underlying, amplifying drivers associated with global climate warming, which destabilize glaciers, accelerate snow and ice melt, thaw permafrost, and alter regional precipitation regimes.

Its primary objective is to inform the global conscious communities and institutions about the extent of human and material destruction caused by the "Himalayan Tsunami," which entered Rasuwa via Kerung, Tibet. The specific objectives were as follows:

- Assessing the Impact: To evaluate the scale of devastation and tragic conditions created by the "Himalayan Tsunami".

- Tracing Origins: To identify the physical mechanisms and causative factors behind its origin.
- Analyzing Causal Factors: To conduct a detailed study into how this catastrophic event unfolded and the underlying drivers of its severity.
- Framing Climate Justice: To perform a critical, justice-oriented analysis of how disproportionate carbon emissions from industrialized nations impact vulnerable countries like Nepal, and to establish the theoretical and legal rationale for climate reparations to support Nepal's recovery.

Since the onset of the flash-flood disaster, we have systematically documented and analyzed more than one thousand short videos circulated across social media platforms, employing a network-tracking method or approach to identify, cross-reference, and contextualize visual evidence. These poignant records affected anyone deeply, at times moving us to tears, an emotional response that has persisted throughout the preparation of this manuscript. In parallel, we reviewed hundreds of relevant scholarly and institutional publications, direct-message exchanges, and broadcast news reports. We sought to triangulate these diverse sources and synthesize the empirical insights they collectively provide. The study covers a three-week period, from August 26 to September 16, 2026.

Given the compressed research timeframe and the breadth of issues requiring contextualization, this study primarily offers a qualitative and empirical assessment of the disaster’s impacts across three critically affected districts: Rasuwa, Nuwakot, and Dhading. Dimensions that could not be examined adequately within the present scope are reserved for subsequent investigation.

Throughout this inquiry, we have remained guided by the maxim, “we know that we do not know.” This principle represents not merely intellectual humility but an explicit recognition of the limits of knowledge and a commitment to continually question established assumptions. Accordingly, the scientific, environmental, social, and philosophical arguments advanced here are presented as provisional interpretations rather than immutable certainties.

No single study can provide a definitive account of a multidimensional disaster. Some empirical findings, interpretations, and conceptual propositions may therefore require qualification or revision as additional evidence emerges. We welcome constructive criticism, empirical corrections, methodological observations, and alternative interpretations. Rigorous scrutiny and sustained scholarly dialogue are indispensable to the advancement of knowledge. This study is offered in that spirit as an invitation to critical reflection and further inquiry. We remain, above all, a lifelong student, mindful that every conclusion may generate another question and that genuine scholarship begins with acknowledging what remains unknown.

2. Post-situation of the devastating Himalayan Tsunami

The flash floods that struck the Bhotekoshi–Trishuli river system in Rasuwa constituted one of the most devastating, catastrophic, and unprecedented hydrological disasters in the world's modern history. On the morning of August 26, 2026, the event assumed a tsunami-like magnitude and destructive character unprecedented in the historical experience of Nepal’s Himalayan and mountain regions. Remarkably, the disaster occurred on a full sunny day without preceding heavy rainfall, leaving riverside communities engaged in their ordinary morning routines and largely unaware of the impending threat. At approximately 8:40 a.m., a sudden, earth-shaking roar, likened by eyewitnesses to the sound of a rocket launch or a large aircraft crashing, abruptly transformed the landscape. One survivor recalled, "It was not merely the sound of water; it was the terrifying noise produced by rocks and mud violently colliding, a sound that shook us to the core. We ran outside thinking an earthquake had struck, but before our eyes the river suddenly rose as high as a mountain" (ICIMOD, August 26, 2026).

For survivors in Timure and Syabhrubesi, the spectacle was almost incomprehensible, resembling a horrifying cinematic animation rather than a real-world disaster. The enormous surge swept away the historic Friendship Bridge connecting Nepal and China, the customs office, and hundreds of freight trucks and electric vehicles (EVs) parked along the border corridor. Eyewitnesses described the destruction as occurring within moments: "The market and the houses of our neighbors that we had seen every day disappeared in the blink of an eye. As we screamed helplessly, people vanished into the river together with the houses in which they had sought shelter". Such testimonies illustrate not merely the physical magnitude of the flood but also its extraordinary velocity and the profound psychological shock experienced by affected communities.

The disaster also inflicted severe damage on the hydropower infrastructure concentrated across Rasuwagadhi, Chilime, and Nuwakot. Thirteen hydropower projects, eight operational and five under construction, sustained substantial impacts, collectively affecting approximately 783 MW of electricity-generation capacity (prasashan.com/2026/09/04/799058/). For workers and technicians inside underground tunnels, the onset of the flood represented an immediate and existential threat. Mud, sediment, and floodwater entered tunnel systems with extraordinary speed, trapping and, in numerous cases, apparently engulfing workers. Some survivors later recalled the experience as being "at the threshold of death." One rescued worker stated, "We survived because we were trapped in a slightly elevated section of the tunnel. While suffocating inside, I felt that we would never see daylight again." More than 900 workers associated with the affected hydropower projects were reported missing, underscoring the exceptional human cost of the disaster (Onlinekhabar, August 28, 2026).

Technical Chronology of the Bhotekoshi–Trishuli Flood Event

An initial technical assessment indicates that the Himalayan Nepal-Tibet, China Tsunami affecting the Bhotekoshi River in Rasuwa on August 26, Wednesday, entered Nepal as a major surge from the Tibetan side and propagated downstream through the Bhotekoshi–Trishuli system toward the Narayani River. Flood Forecasting Division of the Centre of Hydrology and Water Resources Research, authorities received information at 9:05 a.m. that a major flood had entered the Bhotekoshi from Tibet and subsequently issued warnings across downstream districts and high-risk river corridors.

A magnitude 5.2 earthquake was recorded at 8:37 a.m. The Syabrubesi monitoring station stopped transmitting at approximately 8:50 a.m.; its last observation at 8:40 a.m. was 1.62 m, well below the 6 m warning and 9 m danger levels. SMS alerts were disseminated between 9:15 and 9:16 a.m. to communities along the Rasuwa–Nuwakot–Dhading–Chitwan corridor, reportedly exceeding 600,000 messages. The Betrawati station ceased transmission at 9:20 a.m., after recording 3.55 m.

By 11:26 a.m., the Phurke (Malekhu) station had exceeded the danger threshold. At 11:43 a.m., the flood destroyed the Phurke River bridge and other infrastructure, reaching Malekhu shortly thereafter. By 1:00 p.m., the surge had passed Mugling, prompting further warnings downstream toward Devghat. Kalikhola exceeded the danger threshold at 2:14 p.m., eventually reaching 12.3 m. By 3:20 p.m., the flood had reached the Narayani–Devghat area; Devghat peaked at 6.57 m at 4:00 p.m. before receding to approximately 4 m by 6:30 p.m.

The assessment estimates approximately 25 million m^3 of additional water entered the river system. Overall, the flood wave propagated downstream over roughly ten hours, roughly Dhunche to Narayanghat 160 km distance demonstrating the critical importance of continuous telemetry, hydrological monitoring, and timely transboundary early-warning systems.

The flood propagated with such extraordinary speed and force that many residents had virtually no opportunity to evacuate. In Betravati and Devighat, along the Rasuwa–Nuwakot corridor, some people who had gone to collect firewood near the river or who lived in lower-lying areas survived only by climbing trees or reaching the roofs of buildings. A couple rescued by a military helicopter approximately three to four hours after the onset of the disaster described their ordeal in stark terms: “Our hands had already become numb and exhausted, while the raging, muddy river below kept pulling us downward. Had our grip weakened even slightly, we would not be alive today” (Oxfam International, August 26, 2026).

Testimony of Chinese Survivor Haitao Lu

Haitao Lu, a 49-year-old Chinese worker from Henan, was rescued alive on September 5, 2026, after being trapped for ten days inside a mud-clogged tunnel at the Upper Trishuli-1 Hydropower Project in Rasuwa, Nepal, following catastrophic flash floods and landslides.

It was the tenth day of Bhadra. When the Bhotekoshi River suddenly surged in a terrifying flood and began forcing its way into the tunnel of our hydropower project, panic and chaos erupted around them. Within moments, the murky and destructive floodwater began swallowing everything in its path. There was nowhere for him to escape. He had only one objective: to survive.

He desperately began climbing toward the highest section of the tunnel. The roar of the water filled the darkness, which seemed as impenetrable as a sealed chamber. Only a few minutes earlier, the screams of our fellow workers had echoed throughout the tunnel. Then, suddenly, the entire place became eerily silent, like a graveyard, and overwhelmingly terrifying.

The ten days that followed are something he may never be able to forget for the rest of his life.

There was nothing around him except darkness. No food. Not even a single sip of clean water. The damp cold caused his entire body to tremble. Every moment, he felt that he might breathe his last right there. Yet, somewhere in the corner of his mind, a small flame of hope continued to burn. That small village in Henan, his 60-year-old elder sister, his sick wife, and his child, their faces kept appearing before his eyes. “I did not come here to die. I have to live, for them,” he repeatedly told himself.

Hunger and thirst had already drained nearly all the strength from his body. He had completely lost any sense of time. He did not know whether it was day or night. There was nothing he could do except breath and listen intently, waiting for any sound that might indicate that someone was coming.

It must have been around the tenth day when he suddenly saw a faint light in the distance. At first, he thought it was an illusion. Perhaps hunger and exhaustion were deceiving his eyes. But the light gradually drew closer.

He did not know how much strength remained in his body, but he summoned everything he had left and screamed until his throat felt as though it would tear apart: “Help! Help!”

At first, his voice disappeared into the vast darkness of the tunnel. But the rescuers continued to approach. Then, the beam of a flashlight fell directly into his eyes. He screamed even louder.

Members of the rescue team came running toward him. They included personnel from the Nepali Army and a team of South Korean specialists. When they reached him, held him, and supported his weakened body, he felt as though he had been given a second life.

The moment he emerged from the tunnel, only one word came from his lips: “Water!”

They gave him a sip of water and gently asked: “Are you Nepali?”

He was in no condition to understand or respond properly. Seeing his confusion, they asked again: “Chinese?”

He slowly nodded his heavy head and whispered: “Chinese.”

After that, the sound of the military helicopter and the hospital bed at the military hospital in Kathmandu all seemed unreal, as though he was living inside a dream.

There had been poverty at home. Our wheat and maize farming produced only a few hundred yuan a year. When working as a carpenter was no longer sufficient to pay for his wife's medical treatment and support his household, he came to Nepal last February, without even celebrating the Chinese New Year. Before leaving, he had not even been able to properly reassure his sister and his wife.

Now he hear that, in China, his sister saw a photograph of him on WeChat, his body emaciated and his hair grown long and disheveled and cried out, “They have found her brother.” When he learned that the entire family had shed tears of joy after receiving the official telephone call from Beijing, his own heart was filled with overwhelming emotion.

The Bhotekoshi flood swept away more than 900 of his fellow workers, many of whom remain missing. Their memory leaves a profound ache in his heart. Yet the new life he has received after escaping from the very threshold of death is, to him, nothing short of a miracle, a miracle made possible by the Nepali Army, the rescue teams, and his own indomitable determination to survive.

Those ten days of darkness inside the tunnel taught him one enduring lesson: “No matter how difficult life becomes, we must never allow the light of hope to die.”

Source: Surendra Limbu’s Post in Facebook dated September 8, 2026

The cascading disaster generated an unprecedented humanitarian emergency, with substantial loss of life, injuries, displacement, missing persons, and extensive destruction of physical infrastructure and livelihoods. Till September 15, 1,399 death bodies had been recovered, including 544 men, 336 women, and 519 mutilated body parts (Nepal News, September 15, 2026), while 5,130 people remained unaccounted for. Of the recovered fatalities, 104 (7.5%) deceased persons had been formally identified and their remains handed over to their respective families or authorized representatives for their final ceremony (Ratopati, September 15, 2026 and Aid Workers, September 4, 2026). Among Nepalese security personnel, reported fatalities include 45 members of the Nepal Army, 27 members of the Nepal Police, and 13 members of the Armed Police Force (ANI, August 28, 2026). The discrepancy between the number of bodies recovered and those formally identified underscores the continuing challenges of forensic identification, documentation, and family reunification. An essential point to consider is that in this deluge, youths between the ages of 18 and 40 either perished or went missing.

Rescue and humanitarian operations remained extensive throughout the reporting period. According to National Disaster Risk Reduction and Management Authority, a total of 13,737 people had been rescued: 1,499 are in Nuwakot, 825 in Rasuwa, and 94 in Dhading, housed in 33 different holding centers across the tsunami affected areas. Nevertheless, the large number of missing persons indicates that search-and-rescue operations remained a critical priority. At least 7,655 injured people had been recorded, placing additional pressure on emergency medical services, hospitals, temporary treatment facilities, and referral systems, particularly in geographically isolated and severely damaged areas (Ratopati, September 15, 2026 and www.facebook.com/watch/?v=2453137031878487). Concurrently, the Ministry of Health reported that 45,238 individuals have received psychosocial counseling and crisis support facilitated through 166 community awareness programs administered by the Nepal Police (Ratopati, 2026).

More than 21,000 security personnel have been deployed in the emergency response (Khatri, September 15, 2026). Their responsibilities extended beyond conventional search and rescue to include evacuation, recovery of human remains, transportation of survivors, security and crowd management, relief distribution, logistical support, and assistance in maintaining access to disaster-affected settlements. The establishment and operation of holding centers accommodating 4,627 people further indicate the magnitude of displacement and the continuing need for temporary shelter, protection, food, water, sanitation, health services, family tracing, and psychosocial support (The Economic Times, September 6, 2026).

In Memory of Customs Officer Karbir Gaihre, a Survivor of the Disaster

The Customs Office at Timure, Rasuwagadhi, sat approximately 100 meters above the Bhotekoshi riverbank. Karbir Gaihre, a customs officer and information officer, had arrived in Rasuwa just one day before the flood disaster. Instructed to report early on Wednesday morning, Gaihre attending an online class. That morning, he and colleague Dinesh Kumar Ghimire were assigned to monitor Electric Vehicles in transit.

At approximately 8:45 a.m., Ghimire headed down to the transit area. As Information Officer, Gaihre would typically receive early warnings from the Chinese border. However, the surge struck before any notification arrived. Gaihre noted that unlike typical floods where water levels rise gradually, this catastrophic deluge arrived without warning.

At 8:46 a.m., Gaihre felt a violent tremor while at his desk. Initially suspecting an earthquake, he looked outside and observed a phenomenon resembling a tsunami rather than a conventional flood. Water crashed violently against surrounding structures and swirled back, striking the walls with seismic force.

Urged by colleagues Ramesh Kunwar and Ganesh Chaudhary to flee, Gaihre ran uphill, reaching safety above the China–Syabrubesi–Kathmandu highway in just 10 to 15 seconds. In the rush, he left his personal mobile phone but instinctively grabbed the office mobile. Looking back, he witnessed the customs office, residential houses, and local hotels swept away instantly.

Continuing higher, Gaihre contacted his family at 8:51 a.m. In distress, he reported that his office and colleagues were submerged, warning them that ongoing landslide risks meant he might not survive, and asked them to care for his children before network signals collapsed. Climbing one kilometer above, he observed that a five-story Chinese customs office at Rasuwagadhi had completely vanished.

Security personnel rescued Gaihre at 2:47 p.m., transporting him toward Trishuli. Following a health assessment, survivors hired transport and reached Kathmandu at 9:30 p.m. Out of 41 Rasuwa Customs personnel, 15 remained missing. Finance Minister Swarnim Wagle later spoke with Gaihre, remarking that he had been granted a "new life" to dedicate to public service.

Reflecting on the event, Gaihre shared: "I survived by merely 10 seconds and therefore did not become one of those on the missing list. Thinking about that now is extremely difficult. I cannot sleep properly. The colleagues with whom I had spoken only half an hour earlier, and those with whom I had spoken merely one minute before the disaster, are no longer here. The deafening roar of the raging river continues to haunt me."

Gaihre noted that previous floods had only risen about 20 meters, leading few to anticipate a surge of this elevation. While standard procedures involved relocating vehicles upon receiving warnings, the suddenness rendered protective actions impossible.

He also dispelled rumors that China withheld warnings, emphasizing that the disaster unfolded too rapidly for conventional communication, noting heavy casualties and infrastructure damage on the Chinese side as well: "It is incorrect to spread the rumor that China provided no advance warning."

Gaihre's testimony illustrates the extreme force of the August 26 disaster and highlights the limitations of traditional flood-warning systems when abrupt, cascading hazards leave zero lead time for evacuation. Source: https://nepalkhabar.com/society/285796-2026-9-2-19-9-50?

The preliminary economic assessment places the total physical and economic damage at approximately NRs. 408 billion, while NRs. 723.31 billion is required for reconstruction. Arjun Bhandari, Joint Secretary at the National Planning Commission and RDNA Coordinator, said, "The floods damaged physical infrastructure belonging to the private sector, including numerous business establishments, residences, hydropower projects, schools, vehicles, and communication facilities. The preliminary report indicates that the private sector alone suffered losses amounting to around Rs 300 billion" (Upadhyay, September 15, 2026).

The floods have displaced 8,317 households, comprising 32,963 individuals. Nuwakot District has sustained the greatest damage, with 3,977 private buildings affected. Similarly, damage has also been recorded to 1,779 private buildings in Rasuwa, 1,451 in Dhading, 263 in Gorkha, and 100 in Chitwan (Nepal Live, September 14, 2026). The disaster completely destroyed 7,570 residential units**,** 55 km of roads**,** 41 motorable bridges, and 68 suspension bridges, while blocking the Betrawati–Syaphrubesi–Rasuwagadhi corridor and severely disrupting regional connectivity. It also damaged 48 government structures, including 18 schools, and seven health facilities (Nepalkhabar, September 13, 2026).

It destroyed approximately 1,806 hectares of agricultural land. Thirteen hydropower facilities, including the 111-MW Rasuwagadhi Hydropower Project and Upper Trishuli-3A, as well as one solar plant and two transmission lines, sustained major damage, disrupting approximately 783 MW of electricity-generation capacity. The flood also swept away the Miteri Bridge, Rasuwagadhi Customs Yard, and immigration facilities, together with approximately 500 vehicles, including cargo containers, further disrupting cross-border trade and mobility (Ministry of Foreign Affairs, September 6, 2026).

As of September 5, available report, 531 people have been reported missing following the devastating floods and landslides in Kerung (Gyirong), in the Nepal–China border region. Approximately 2,300 rescue personnel, more than 400 search-and-rescue vehicles, over 8,000 sets of specialized equipment, more than 800 drone sorties, and 24 helicopter flights have been mobilized for search, rescue, and relief operations. The deaths of 31 people have been officially confirmed. The area surrounding Kerung's immigration and customs facilities has been identified as the most severely affected zone, where extensive search-and-rescue operations remain ongoing. Those reported missing include foreign nationals from several countries, Chinese officials and workers, and pilgrims (Onlinekhabar, September 5, 2026).

Foreign nationals constitute at least 607 of the missing individuals from 34 countries. The largest reported groups of missing foreign nationals include citizens of India (189), the United States (65), Malaysia (55), Ukraine (54), China (37), Australia (33), Latvia (33), the United Kingdom (32), Canada (30), and South Korea (9). Other confirmed missing foreign nationals reportedly include citizens of Singapore (9), Germany (8), Russia (6), South Africa (6), New Zealand (5), Japan (5), France (4), and Kajakistan (3). In addition, unverified reports identify affected individuals from 18 other countries: Belgium, Belarus, Bulgaria, Finland, France, Hungary, Ireland, Israel, Italy, Kazakhstan, Lithuania, the Netherlands, the Philippines, Portugal, Serbia, Spain, Switzerland, and Sweden (Onlinekhabar, September 15, 2026, and The Guardian, August 29, 2026). A total of 310 foreign nationals, including 258 men and 52 women, were rescued safely.

This preliminary figure should not be interpreted as a final evaluation, as comprehensive damage and loss assessments are likely to reveal additional impacts on housing, roads, bridges, hydropower facilities, public infrastructure, agriculture, commerce, tourism, communication networks, ecosystems, and household livelihoods (www.mofa.gov.np/content/1876/daily-situation-update-on-the-bhote-koshi/?utm_source=chatgpt.com). Additionally, the losses that occur later and are not directly accounted for, such as halted business activities, forced relocations, loss of valuable assets, environmental damage, and rebuilding costs, could be significantly higher than the initial estimate.

3. Genesis of the Tsunami

The Bhotekoshi River Basin, situated along the steep and tectonically active Nepal–Tibet border, is one of the Himalayas' most hydrogeomorphologically dynamic and disaster-prone environments. Recurrent events, including the 1981 flood, 2016 debris flow, 2025 flood, and catastrophic flash flood of August 26, 2026, demonstrate the basin's susceptibility to cascading hazards generated by interactions among glaciers, unstable slopes, rivers, sediment, and seismic processes (Cook et al., 2018 and Weedman, 2026). The August 2026 disaster devastated river corridors and settlements in Rasuwa, Nuwakot, and Dhading districts and subsequently generated considerable scientific and political debate concerning its precise origin and triggering mechanism (ReliefWeb, August 28, 2026).

According to Professor Ranjan Kumar Dahal of the Central Department of Geology, Tribhuvan University, the initiating process was a massive snow-and-ice failure originating north of the Langtang region, near Mount Langtang Lirung. Satellite observations reportedly indicate that approximately 25 million cubic meters of frozen material and rock, across a failure zone roughly 600 meters wide at an elevation of about 5,600 meters, descended nearly 2,000 meters into the upper Lhende river catchment (Gyawali, 2026). During this descent, gravitational potential energy was converted into kinetic energy, producing a high-velocity ice–rock–debris avalanche. Its exceptionally energetic impact reportedly generated an atmospheric shockwave and a local seismic signal equivalent to approximately magnitude 5.2 (Gyawali, 2026; ICIMOD, 2026; DC, August 27, 2026; and TRN Online).

The interpretation of this seismic signal remains contested. Chinese authorities and associated media initially characterized an earthquake on the Nepali side as the primary trigger, proposing that seismic shaking destabilized high-altitude terrain and initiated an ice–rock avalanche followed by mudslides and debris flows (Ghimire, August 27, 2026).

An alternative interpretation advanced by Nepali geologists and climate specialists identifies glacier or ice–rock mass failure and associated cascading processes as the initiating mechanism, with the reported seismic signal potentially representing the impact itself rather than a tectonic earthquake. Other initial accounts considered the possibility of a Glacial Lake Outburst Floods (GLOFs) or a cascading high-altitude event originating in Tibet. These competing interpretations underscore the need for independent geophysical reconstruction based on seismic records, satellite imagery, field observations, and sedimentological evidence rather than attribution based solely on political or media narratives.

Field observations attributed to Dahal suggest that the descending mass extensively scoured and entrained sediments along a 500–800-meter downslope corridor, producing deposits reportedly 60–70 meters thick. Including this entrained material, the total volume of mobilized snow, ice, rock, and sediment has been estimated at approximately 40 million cubic meters (Gyawali, 2026). The scale of entrainment is particularly important because it transformed an initial high-altitude ice–rock failure into a substantially larger, hyperconcentrated debris-flow system.

A critical component of the disaster sequence was temporary river blockage. The ice–rock–soil mass reportedly dammed the drainage network for approximately 18–19 hours before breaching at about 8:30–

8:37 a.m. on August 26. The breach released a rapidly moving mixture of water, ice, rock fragments, sediment, and debris, generating a destructive surge that propagated toward Rasuwagadhi and subsequently downstream through the Bhotekoshi and Trishuli systems (ReliefWeb, August 28, 2026). Chinese-side CCTV footage reportedly captured the hyperconcentrated flow striking the mountain slope near the Kerung Customs and Immigration Office. Dahal estimated that the surge travelled approximately 20 kilometers from the Lhende River failure zone to river confluence at velocities approaching 180 kilometers per hour (Gyawali, 2026 and The Economic Times, August 31, 2026).

Thus, the event differed fundamentally from a conventional rainfall-induced river flood. Its destructive capacity resulted from the rapid acceleration of a water-ice–rock–sediment mixture whose exceptionally high sediment concentration and kinetic energy produced a near-instantaneous hydrogeomorphic surge. The pulverization and entrainment of material generated dense dust and mist, while the short warning interval severely constrained evacuation. The hazard therefore should be conceptualized as a cascading ice–rock–debris–flood process rather than as a simple fluvial inundation.

Remote-sensing and field observations further indicate the formation of temporary impoundments within the affected drainage. One such feature, identified by Chinese authorities as Barrier Lake–2, developed near the initial collapse zone, adjacent to Barrier Lake–1, an earlier impoundment along the Lhende river. The overtopping and breach of Barrier Lake–1 reportedly generated a precursor outburst flood into the Bhotekoshi River, while subsequent drainage and mass failure contributed to the larger cascading sequence (Gyawali, 2026 and New Age Online, August 27, 2026). These interactions illustrate how multiple transient barriers and outburst processes can amplify an initially localized high-altitude failure into a transboundary disaster.

The August 26 event has consequently exposed a broader and persistent risk landscape in Nepal’s glacier- and flood-prone regions. Accelerated glacier recession can promote the formation and enlargement of proglacial and supraglacial lakes, increasing the potential for GLOFs and other cascading cryospheric hazards. Communities already affected or displaced by previous disasters may therefore experience recurrent exposure, socioeconomic disruption, and heightened psychological insecurity. The disaster demonstrates the necessity of integrating high-resolution satellite and ground-based monitoring, real-time seismic and hydrometeorological observation, transboundary data exchange, multi-hazard early-warning systems, interdisciplinary scientific investigation, and community-based disaster-risk reduction. Such an integrated approach is essential for distinguishing triggering mechanisms, identifying cascading pathways, and reducing future losses in rapidly changing Himalayan environments (World Meteorological Organization, November 12, 2025 and ARC/JHSPH, 2013).

4. Cascading Causes of the Tsunami

It is scientifically more robust to characterize the “Tibet–Nepal Tsunami” as a multi-factor, cascading hazard system rather than as a natural disaster attributable to a single cause. The event is better understood as a sequential interaction among glacier collapse, ice–rock avalanche, debris accumulation and temporary damming, sudden dam breach, high-velocity flooding, debris-flow transformation, topographic amplification, downstream exposure, and anthropogenic vulnerability. Preliminary satellite- and field-based assessments of the August 26 indicate that a major ice–rock mass failure occurred around the Langtang Lirung massif and subsequently developed into a destructive debris-flow and flood cascade propagating through the Lhende river (McDermott, 2026).

Glacier Collapse: The initiating process appears to have been the catastrophic detachment of a substantial mass of glacier ice and underlying bedrock from the upper Langtang Lirung massif. Satellite observations and preliminary hazard assessments indicate that the failure involved both glacial ice and its substrate, distinguishing it from ordinary glacier calving. Such large-scale glacier–rock failures may result from the interaction of gravitational loading, steep topography, fractured bedrock, mechanical weakness at ice–rock interfaces, and progressive thermal degradation. The simultaneous collapse of ice and substrate provided the initial mass and energy for the subsequent cascade (McDermott, 2026).

Ice–Rock Avalanche: Once mobilized, the collapsing glacier mass could entrain substantial quantities of bedrock, boulders, moraines, sediment, soil, and other unconsolidated materials along its trajectory. The process therefore evolved from an initial glacier collapse into an ice–rock avalanche, subsequently developing characteristics of a debris-flow system. Scientific investigations of the post-2015 Gorkha earthquake avalanche in Langtang demonstrate that multi-phase avalanches involving snow, glacier ice, and rock debris can propagate rapidly and possess exceptional destructive mobility (Gnyawali et al., 2020 and Reuters Graphics, 2026).

Kinetic Energy and Rapid Mass Transformation: The descent of a large ice–rock mass down a steep Himalayan gradient converts gravitational potential energy into kinetic energy, generating exceptionally high flow velocities. Fragmentation, particle collision, frictional heating, and entrainment further modify the dynamics and increase the mobility of the mass. Importantly, however, the downstream flood volume should not automatically be attributed to instantaneous frictional melting of glacier ice. Such an interpretation requires rigorous mass-balance calculations and empirical field evidence. The more defensible explanation is a rapidly transforming, multi-phase mass-flow system involving ice, rock, sediment, and water (Reuters Graphics, 2026).

Temporary River Damming at Lhende River: The massive influx of ice, boulders, sediment, mud, and rock debris into the confined Lhende river could temporarily obstruct the river channel, creating an unstable debris dam. This introduced a secondary hydraulic mechanism into the hazard cascade in respective order: avalanche, channel blockage, upstream water accumulation, increasing hydraulic pressure, dam instability, breach, catastrophic downstream flood and debris flow. According to ICIMOD, this mechanism differs from a conventional GLOFs, in which water is suddenly released from a lake impounded by glacier, moraine, or bedrock. In this event, the evidence described in the source points instead toward an avalanche-generated temporary debris dam (www.icimod.org/floods-glofs-and-early-warning-systems/).

Sudden Breach of the Temporary Dam: Temporary debris dams consist primarily of unconsolidated ice, rock, sediment, and mud and are therefore inherently unstable. Internal erosion, overtopping, increasing hydraulic pressure, and progressive structural failure can rapidly breach such barriers. As upstream water accumulates, hydraulic head increases until the dam crest overtops or an internal breach develops, releasing a high-energy flood–debris-flow pulse downstream within a short period. This mechanism is fundamentally different from ordinary fluvial flooding and is consistent with documented Himalayan dam-breach processes described by ICIMOD (www.icimod.org/mountain/glacial-lake-outburst-flood/?utm_source=chatgpt.com).

Steep and Narrow Himalayan Topography: The steep and confined topography of the Himalayas constitutes a major hazard-amplification mechanism. In narrow valleys, floodwater has limited opportunity to spread laterally across broad floodplains and dissipate its energy. Instead, flow remains concentrated within restricted channels, maintaining high velocity, depth, and erosive power. At the same time, the flow can entrain additional sediment, boulders, and channel material, thereby increasing its destructive capacity downstream. The result may be a compound flood–debris-flow process in which the hazard progressively changes character rather than simply losing energy with distance. Nepal's Disaster Risk Reduction Portal similarly identifies steep slopes, fragile geology, rainfall, and unplanned settlement as interacting determinants of landslide and flood risk (drrportal.gov.np/).

Climate Change as a Risk Multiplier: Climate change should not be interpreted as the sole or immediate trigger of the disaster. Rather, it is more appropriately conceptualized as a background risk multiplier that progressively modifies the stability of high-mountain environments. Rising temperatures affect glacier mass balance, snow accumulation, permafrost stability, ice-cliff geometry, and freeze–thaw processes. These changes can weaken ice–rock interfaces and destabilize slopes that may previously have remained relatively stable. Long-term studies in the Langtang region indicate substantial glacier retreat and mass loss associated with atmospheric warming and changing precipitation and snowfall regimes (Rai et al., 2017 and McDermott, 2026).

Historical Glacier Retreat and Ice Loss: Long-term glacier recession provides important environmental context for understanding contemporary high-mountain instability. ICIMOD reports that the total glaciated area of the Langtang catchment declined by approximately 25 percent between 1980 and 2010, accompanied by substantial retreat of glacier fronts. For the Lirung Glacier, published research reports retreat exceeding 900 meters and approximately 1.40 km of recession between 1980 and 2014 (Rai et al., 2017). These figures should be distinguished from the frequently cited estimate of approximately 450 meters over 30 years, which requires source verification. Glacier retreat is consequential not merely because it represents ice loss, but because it exposes unstable bedrock, creates new moraine complexes, modifies meltwater pathways, and can contribute to the formation or expansion of glacial lakes, thereby increasing future GLOFs and slope-failure risks (ICIMOD, 2011 and 2019).

Fragile Geological Structures: The Himalayas of Nepal constitute a geologically highly dynamic mountain system. Due to youth mountain building (orogenesis), active tectonics**,** fractured metamorphic rocks, steep slopes, and intense weathering, many mountain slopes are inherently susceptible to landslides and rockfalls. Particularly within fractured rock masses, joints, faults, foliation planes, and discontinuities can weaken slope stability. When water penetrates these discontinuities, pore-water pressure can increase and the effective shear strength can decrease. The Government of Nepal's disaster-risk assessment has also identified steep slopes and fragile geology as the primary natural causes of landslide vulnerability (Dhital, 2015; drrportal.gov.np/; Bhujel and Rain, 2024; and spmiasacademy.com/currentaffairs/young-fold-mountains-himalayas/**)**.

Absence of Early Warning Systems: A key contributing factor to the extensive damage was the lack of automated early warning systems in high-altitude frontier regions. The absence of mechanisms to promptly detect such avalanches and river blockages, and to relay timely alerts to downstream communities, ultimately left residents with inadequate time to relocate to secure areas.

Rejection of Allegations: The Chinese Embassy in Nepal rejected allegations that a Chinese dam failure caused the flooding or that inadequate early warning was responsible. It maintained that an earthquake-induced ice avalanche and subsequent mudslides affected both sides of the border and emphasized continued transboundary information sharing. The Embassy also warned that elevated water levels associated with a barrier lake created by the avalanche could generate further downstream hazards (Onlinekhabar, August 28, 2026).

Anthropogenic Exposure, Maladaptation, and Developmental Vulnerability: Although the initiating hazards may be geophysical or hydro-meteorological, the magnitude of disaster losses is strongly conditioned by human exposure, vulnerability, land-use governance, and development practices. In Nepal, settlements, roads, and other infrastructures have increasingly expanded into riverbeds, floodplains, and other naturally hazardous areas, constraining flood conveyance and reducing effective channel capacity. Illegal encroachment and commercialization of riverbanks and *ailani* (public) land, sometimes facilitated by institutional collusion, have further intensified settlement pressure in these vulnerable zones. As channels become progressively confined, high monsoonal flows are forced beyond their natural pathways, increasing inundation and downstream destruction. Flooding along the Bagmati and Bishnumati rivers in Kathmandu, as well as disasters in Sindhupalchok and the Melamchi area, illustrates this interaction between natural hazards and socially produced vulnerability. Pathak et al. (2007) similarly demonstrated that anthropogenic modification of the Kodku Khola substantially exacerbated flood impacts.

Lack of Environmental Governance: Development practices have also increased geological and environmental risks. Although hydropower is strategically important to Nepal's economy, inadequate environmental governance has often weakened the effectiveness of Environmental Impact Assessments (EIAs) and Initial Environmental Examinations (IEEs), reducing them to procedural rather than substantive risk-management instruments. The construction of dams, tunnels, roads, and associated infrastructure in geologically sensitive terrain, without adequate consideration of watershed dynamics and cumulative environmental impacts, can increase exposure to landslides, debris flows, sedimentation, and flood-induced infrastructure failure. Such failures may generate cascading hazards and amplify downstream hazardous impacts.

Bulldozer Havoc: Unregulated "bulldozer development" has become a significant source of landscape destabilization, particularly in rural and mountainous areas. Roads are frequently excavated through steep slopes without adequate geological investigation, engineering design, environmental assessment, or slope-stabilization measures. By disrupting slope morphology, geological structure, drainage patterns, and the natural equilibrium of mountain terrain, such practices can increase susceptibility to landslides, soil erosion, and water-source degradation, even under moderate rainfall conditions.

Natural Hazard Generation: These processes demonstrate that Nepal's contemporary disaster risk cannot be explained exclusively by natural hazard generation. Rather, disasters emerge from the interaction of physical processes with maladaptive development, weak environmental governance, unregulated land-use change, institutional failures, and socially differentiated exposure. The Tibet–Nepal disaster should therefore be interpreted within this broader hazard vulnerability framework, in which human interventions can transform potentially manageable natural hazards into large-scale disasters.

Reports from the Department of Hydrology and Meteorology and various geological assessments have consistently warned that Nepal's mountainous and riverine areas are facing rapidly escalating risks. Unless riverbeds and floodplains are effectively cleared of encroachment, indiscriminate and environmentally destructive use of heavy machinery is curtailed, and stringent environmental standards are enforced for major infrastructure projects, including hydropower development, Nepal is likely to face increasingly catastrophic and potentially unimaginable losses of life, property, and critical infrastructure in the years ahead. Development must therefore be nature-compatible, environmentally responsible, and sustainable. Construction achieved through the destruction or degradation of natural systems ultimately creates the conditions for its own destruction.

5. Critical Justice Appraisals

Framed within the broader discourse on anthropogenic and climate-induced drivers of flash-flood disasters in Nepal's northern Himalayan region, the principle of intergenerational justice raises fundamental socio-ecological, ethical, political, and legal questions concerning the distribution of environmental risks, resources, responsibilities, and opportunities across generations. At its core, intergenerational justice challenges the legitimacy of present development practices that enable current populations to appropriate, deplete, and degrade ecological resources essential to the rights and well-being of future generations. This concern is particularly acute for climate-vulnerable countries such as Nepal, where marginalized communities, women, children, and future generations face disproportionate exposure to environmental hazards despite making a comparatively negligible contribution to global greenhouse-gas emissions (Laudato Si' Movement, August 28, 2026). Against this backdrop, the section critically examines the structural inequalities underlying regional climate vulnerability and assesses the implications of these disparities through the normative framework of intergenerational justice and rights.

The contemporary climate crisis is therefore not adequately explained by natural climatic variability alone. It is substantially embedded in historically accumulated patterns of resource extraction, industrialization, fossil-fuel dependence, militarization, warfare, and unequal global production and consumption (IUS Editors, April 28, 2025). Since the Industrial Revolution, industrialized economies have generated unprecedented material wealth through intensive combustion of coal, oil, and natural gas, thereby accumulating a disproportionate share of atmospheric greenhouse gases. Contemporary military-industrial production and geopolitical competition further intensify ecological pressures through resource-intensive infrastructures, weaponry, transportation systems, and technological development. Warfare consequently constitutes not only a humanitarian and security crisis but also a significant form of ecological disruption, generating environmental destruction, displacement, livelihood insecurity, and loss of civilian life, with children frequently among the most vulnerable victims (Hullinger, Undated).

This historical asymmetry raises a central question of distributive and corrective justice: why should populations in economically poor and geographically vulnerable countries such as Nepal bear disproportionate consequences of environmental degradation generated substantially beyond their territorial borders? More specifically, what conception of justice can legitimize the unequal distribution of climate risks, economic losses, ecological degradation, and human suffering between historically high emitters and communities whose contribution remains marginal? The question also has an institutional dimension: who represents and protects the rights and interests of vulnerable women, children, Indigenous and rural communities, and future generations when climate decisions are negotiated primarily among states and institutions possessing profoundly unequal economic, technological, and geopolitical power?

These inequalities are captured through the interconnected concepts of environmental injustice, climate injustice, and intergenerational injustice. States and populations that have historically contributed most to ecological degradation frequently possess greater financial, technological, and institutional capacity to protect themselves against climate impacts. Conversely, vulnerable Himalayan communities experience high exposure to extreme precipitation, floods, landslides, glacial hazards, and ecosystem degradation while possessing comparatively limited adaptive and fiscal capacity. Climate vulnerability is therefore not simply a function of geographical exposure; it is produced through the interaction of environmental conditions with historically constructed inequalities in wealth, infrastructure, political influence, technological capability, and access to finance. For Himalayan populations, the consequences extend beyond material losses to questions of dignity, equality, ecological security, human security, and the right to a sustainable existence (Khadka, October 30, 2025).

The ecological consequences of resource-intensive and luxury-oriented consumption are particularly significant for vulnerable Himalayan communities. Accelerating glacier retreat and cryospheric instability are increasing the risks associated with GLOFs and other high-altitude hazards. Such processes threaten downstream settlements, agricultural systems, roads, bridges, hydropower installations, and other critical infrastructure. They also demonstrate that the burdens of climate change are distributed unevenly across societies and generations. Communities that derive comparatively little benefit from carbon-intensive global development may nevertheless inherit its environmental consequences. Intergenerational justice consequently requires scrutiny of development trajectories that transfer ecological risks from present beneficiaries to future populations (Climate and Clean Air Coalition, Undated).

Changes in the South Asian monsoon cycle further compound these vulnerabilities by producing greater uncertainty between precipitation deficits and extreme rainfall. Torrential rainfall, flash floods, landslides, and mass-wasting events in Nepal's mountainous districts, including the Bhotekoshi corridor of Sindhupalchok, Ramechhap, Rasuwa, Dhading, and Mustang, demonstrate the increasing volatility of Himalayan hydro-climatic systems. Because a substantial proportion of Nepal's population remains directly or indirectly dependent on agriculture, both excessive rainfall and prolonged drought can undermine agricultural productivity, food security, household income, and rural resilience. Climate change therefore operates through interconnected ecological and socioeconomic pathways that can reinforce poverty and structural vulnerability. Asian Development Bank projections that persistent climate-related disruptions could reduce Nepal's annual GDP by approximately 2.2 percent by 2050 further demonstrate that climate change constitutes not merely an environmental problem but a long-term development and politico-economy challenge (Chaudhary et al., 2023).

At the international level, several principles and mechanisms have been developed to address structural inequalities and promote equitable environmental justice responsibility. The principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) provides an important normative basis for addressing these structural inequalities. Prominently articulated at the 1992 Rio Earth Summit, CBDR-RC recognizes that all states share responsibility for protecting the global environment but that their obligations should reflect differences in historical contribution, economic capacity, technological capability, and national circumstances. Its underlying logic rejects the assumption that formally equal obligations necessarily produce substantively just outcomes. States that have contributed disproportionately to historical pollution should consequently assume greater responsibilities for mitigation, adaptation, climate finance, technology transfer, capacity building, and, where appropriate, addressing loss and damage (United Nations, June 13, 1992).

27 U.S. Lawmakers Urge Expanded Rescue and Humanitarian Assistance for Nepal

On September 4, 27 members of the United States Congress urged Secretary of State Marco Rubio to mobilize additional resources for search-and-rescue operations and humanitarian assistance following devastating flash floods and landslides in Nepal. The lawmakers called on the U.S. government to deploy "all available resources" to support ongoing operations and ensure the safety, protection, and recovery of affected populations, including impacted U.S. citizens. Following a massive ice-rock avalanche and landslide in the Himalayan region on August 26, a sudden and catastrophic flood caused extensive destruction along the Trishuli and Bhotekoshi river corridors in Nepal and across the border in Gyirong, China. While welcoming the U.S. government's initial assistance, the lawmakers emphasized that the unprecedented scale and humanitarian consequences of the disaster warrant substantially expanded support.

They specifically asked the U.S. government to keep affected families informed about missing U.S. citizens, send a Disaster Assistance Response Team (DART), boost search-and-rescue efforts using drones with thermal and infrared technology, satellite images, and mobile location data, and improve coordination with Nepali and Chinese authorities to help share information, conduct search operations, provide humanitarian aid, and support recovery efforts for those affected.

Source: ekantipur.com/news/2026/08/26/17877170054081721.html

Nepal's extremely low contribution to global emissions illustrates the significance of this principle. Scientific assessments indicate that Nepal contributes less than 0.1 percent of global greenhouse-gas emissions, with estimates ranging from approximately 0.02 to 0.05 percent, while its per capita emissions remain around 0.63 metric tons. Nevertheless, the country faces severe exposure to glacier retreat, GLOFs, extreme precipitation, floods, landslides, and cascading ecosystem disruptions (Adhikari et al., December 11, 2025). The contrast between negligible contribution and disproportionate vulnerability constitutes a compelling case of climate injustice. It also demonstrates why climate governance based exclusively on formal equality is inadequate: equal obligations imposed upon radically unequal contributors can reproduce rather than remedy injustice.

The emergence of the Fund for Responding to Loss and Damage (FRLD) represents an important institutional development in this context. Originating in negotiations culminating at COP27 in Egypt and subsequently operationalized through arrangements at COP28 in Dubai, the Fund recognizes that some climate impacts exceed the limits of adaptation and produce losses that cannot be adequately addressed through conventional development assistance or domestic resources alone.

Climate finance should accordingly be understood not as charity, benevolence, or discretionary development assistance but as an essential component of a justice-and rights-based international climate regime. For highly vulnerable countries such as Nepal, financing for loss and damage should be adequate, predictable, accessible, equitable, additional, and, wherever possible, non-debt-creating. Such financing should address both economic and non-economic losses, including destroyed infrastructure, livelihood disruption, displacement, cultural losses, biodiversity degradation, ecosystem impairment, and the erosion of ecological functions. A persistent gap nevertheless remains between international normative recognition and practical implementation. Institutional commitments have yet to correspond to the scale, urgency, and structural character of climate-related losses confronting vulnerable countries (UNFCCC, 1992; United Nations, COP27; United Nations, COP28; and UNDP Nepal, June 11, 2011).

On August 31, the Government of Nepal formally requested the immediate deployment of emergency funds requesting to the FRLD. In a joint correspondence addressed to the Co-Chairs of the Board, Minister for Finance Dr. Swarnim Waglé and Minister for Agriculture, Forestry, and Environment Gita Chaudhary pointed out the complex nature of the disaster and the compounding humanitarian crisis. The letter states: "In consideration of the extraordinary gravity and scale of this disaster, the Government of Nepal respectfully urges the Board of the Fund for Responding to Loss and Damage to adopt a special resolution to ensure an expedited, direct, and effective response in accordance with its operational modalities" (Onlinekhabar, September 1, 2026; Aryal, Indira, September 1, 2026; and Giri, September 1, 2026).

Evidence concerning Nepal's changing climatic conditions reinforces the urgency of these claims. Studies associated with Nepal's Department of Hydrology and Meteorology and the International Centre for Integrated Mountain Development indicate significant warming, with Nepal's average annual temperature increasing at approximately 0.06°C per year, while warming in parts of the Himalayan region is more pronounced. Concurrent glacier retreat threatens downstream hydrology, water security, ecosystem stability, and disaster resilience. Projections of substantial long-term ice loss across the Hindu Kush Himalayan cryosphere challenge the assumption that mountain ecosystems will continue providing stable environmental foundations for human settlement and economic development. Nepal's glaciers are retreating at an average rate of more than 30 meters annually. Consequently, the World Bank has warned that the Hindu Kush Himalayan region could lose up to two-thirds of its total ice cover by 2100 (Karki, Mool, and Shrestha, 2009).

Variations in monsoon patterns and precipitation alone account for approximately 19 percent of fluctuations in Nepal's economic performance and changes in GDP. Floods and landslides triggered by unseasonal and extreme rainfall have consequently inflicted substantial damage on hydropower projects and physical infrastructure (Chhetri and Adhikari, 2024). The recent tsunami-like surge in the narrow valley of the Bhotekoshi River produced an unprecedented and devastating flood that not only caused extensive destruction to human settlements and physical infrastructure but also raised profound academic and scientific questions regarding the stability, resilience, and long-term sustainability of the Himalayan ecosystem (Dhakal, August 31, 2026).

Cryospheric change is accompanied by permafrost degradation, slope instability, and compound geo-ecological hazards. Warming can weaken frozen ground, destabilize rock structures, alter hydrological regimes, and increase the probability of landslides, rockfalls, ice-rock avalanches, debris flows, and related hazards. Such processes often develop cumulatively before manifesting suddenly as catastrophic events. The Bhotekoshi disaster can therefore be interpreted as evidence of a broader transformation in high-altitude environments in which hazards historically regarded as exceptional becomes increasingly recurrent. This possibility requires a transition from reactive disaster management toward anticipatory, ecosystem-based, and climate-resilient risk governance (The Sensemaker, August 28, 2026).

The enormous quantities of mud, sediment, debris, and rock transported downstream by extreme floods generate another dimension of loss and damage. By modifying riverbeds, channel morphology, sediment regimes, and water-flow patterns, such events can fundamentally transform aquatic ecosystems. The destruction of habitats supporting native fish, aquatic insects, microorganisms, and aquatic vegetation constitutes ecological loss that cannot be adequately captured through conventional inventories of destroyed buildings or financial infrastructure. Ecological restoration may require decades, while some biodiversity losses may be irreversible. Loss and damage must therefore be conceptualized broadly to include non-economic ecological losses and the degradation of ecosystem functions upon which human societies depend (Nepal News, August 27, 2026).

Similarly, watershed degradation and vegetation loss intensify cascading vulnerability. Rapid-onset floods and landslides can remove riparian vegetation and forest cover, accelerate soil erosion, increase sediment transport, and weaken riverine ecosystems. Disturbance to one ecological component can consequently generate secondary and tertiary impacts across rivers, forests, soils, biodiversity, agriculture, infrastructure, and settlements. Such cascading dynamics expose the limitations of fragmented administrative approaches to disaster governance. Effective risk reduction requires integrated watershed management, ecosystem restoration, land-use regulation, and coordination across sectors and jurisdictions (Aryal and Panda, August 27, 2026).

This devastating catastrophe raises fundamental questions regarding the safety and long-term sustainability of unregulated private residences, government facilities, hydropower installations, and physical infrastructure built along the river basin. Anthropocentric development practices had increasingly overshadowed ecocentric paradigms. The situation had escalated to such an alarming degree that when the Balen-led Government attempted to clear settlements along the riverbanks, traditional political parties triggered significant uproar, fearing the displacement of their key political cadres and vote banks. These development models, constructed in blatant disregard of natural hydrological flows and sediment cycles, have proven remarkably fragile in the face of dynamic Himalayan geomorphology. Ultimately, humanity is now bearing the consequences of neglecting river ecosystems in infrastructure planning. Infrastructure planning must therefore incorporate ecocentric principles and recognize ecological systems as foundational components of territorial governance (Frantz, Rego, and Barbas, 2025).

The flash flood further demonstrates the limits of adaptive capacity. Human communities and native species may develop adaptive relationships with environmental variability, but adaptation has biophysical and temporal limits. When the magnitude, velocity, frequency, and compound character of hazards exceed historical ranges, socio-ecological systems may cross critical thresholds beyond which recovery becomes increasingly difficult or impossible. Extreme floods, debris flows, landslides, and glacial outbursts can therefore transform temporary shocks into long-term ecological and social crises. The possibility of irreversible Himalayan degradation should consequently be treated as a central issue of ecological security, human security, and intergenerational justice rather than as a peripheral environmental concern (Nepal News, August 30, 2026).

A profound question has emerged concerning how geopolitical boundaries can be reconciled with the inherently transboundary character of ecological systems and integrated early-warning mechanisms to ensure comprehensive ecological and ecosocial security. The current flash-flood crisis, originating in the shared Himalayan borderlands of Tibet and Nepal, demonstrates the fundamental disconnect between politically demarcated territories and ecologically interconnected systems (Anand, August 28, 2026).

Nature does not recognize political borders, territorial ambitions, or jurisdictional divisions. Consequently, ecological disturbances occurring in an upper-riparian territory, whether driven by accelerated glacier degradation, GLOFs, or related hydrological hazards, can propagate downstream, producing cascading and potentially catastrophic consequences for ecosystems, infrastructure, and human lives in lower-riparian communities (Zhang, et al., March 21, 2025).

The crisis therefore exposes a critical gap in transboundary environmental diplomacy and governance, particularly the absence of sufficiently robust, institutionalized mechanisms for real-time scientific data sharing, joint risk assessment, coordinated early warning, and emergency response (Nepali Times, August 27, 2026). Strengthening such mechanisms is essential not merely for disaster preparedness but for reconceptualizing Himalayan governance through an integrated, ecosystem-based approach. Such an approach should transcend rigid geopolitical boundaries, recognize shared ecological vulnerability, and institutionalize cooperative responsibility for preventing and mitigating cascading disaster risks.

Ultimately, effective transboundary ecological governance is indispensable to safeguarding Himalayan ecosystems, protecting vulnerable communities, and advancing long-term ecosocial security.

The foregoing analysis of climate, spatial, and intergenerational justice can be extended to the institutional production of legitimacy (Dillard, July 27, 2021). In climate ethics, "discounting" ordinarily refers to the reduced social or economic weight assigned to future consequences in policy analysis; however, the underlying normative concern is broader: whose interests are recognized, whose harms are counted, and whose claims are excluded from the baseline of decision-making (Caney, 2009 and 2014). This concern has direct relevance to philanthropic and advocacy institutions.

From a Fair Start perspective, institutional 'impact' cannot be adequately assessed through conventional outcome metrics alone. Where impact assessments exclude unaccounted harms, structurally disadvantaged children and communities, future generations, or more-than-human interests, they risk reproducing the very inequalities they purport to correct by measuring institutional performance against an incomplete and potentially unjust baseline" (Fair Start Movement, December 9, 2024 and December 30, 2025). The issue is therefore not merely whether an intervention produces measurable benefits, but whether the baseline against which those benefits are measured is itself legitimate. From this perspective, donor accountability must extend beyond financial stewardship and programmatic outcomes toward scrutiny of institutional assumptions, excluded interests, externalized harms, and the distribution of voice and power (Uddin and Belal, 2019; Dillard, 2023; and Fair Start Movement, March 13, 2025). This provides a conceptual bridge between intergenerational climate justice and the donor's critique of "illegal discounting" and "legitimacywashing (fairstartmovement.org/model/?utm_source=chatgpt.com).

For more than a decade, the Fair Start Movement (FSM) has advocated publicly for intergenerational justice, grounding children's equal access to rights, opportunities, and democratic participation at birth. FSM's central premise is that formal legal equality is illusory when children enter the world from fundamentally unequal ecological, social, economic, and institutional baselines. True justice requires guaranteeing every child an equal, sustainable, and well-resourced starting point in life.

Consider a simple illustration of structural baseline inequality. Suppose three children, a four-foot-tall girl, a three-foot-tall girl, and a third girl who uses a wheelchair, are asked to watch a football match from behind a three-foot-high barrier. While all three are formally offered identical access to the match, the four-foot-tall child can view the game unhindered, whereas the other two face physical barriers. Treating all three children identically under the guise of formal equality merely reproduces existing disadvantage.

To establish substantive equality, structural barriers must be dismantled, or baseline conditions must be recalibrated. The child who is three feet tall needs a platform that is one foot high, and the child who is in a wheelchair needs a platform that is two feet high or a ramp that is easy to get to. Genuinely equal opportunity is achieved only by reconstructing the environmental baseline or providing proportionate support calibrated to the initial position of each child.

This principle directly applies to child rights and disaster response. Following Nepal's recent flash floods, children are denied their right to education not merely by the immediate destruction, but because pre-existing baseline inequalities magnify their losses. When disaster leaves families stripped of essential resources, children return to classrooms lacking desks, textbooks, uniforms, and basic infrastructure, compounding prior disadvantages.

Governments, multilateral organizations, and development partners need to ensure that basic justice is part of their plans for responding to and recovering from disasters. Universal, uncalibrated assistance fails to deliver equity; post-disaster policies must instead restore and elevate the foundational conditions necessary for child development. An ethical recovery requires more than reconstructing pre-disaster vulnerabilities, it demands fulfilling every child's fundamental human right to a fair, sustainable, and equal start in life.

From the perspective of CBDR and historical responsibility, climate finance should not be framed as charity, benevolence, or discretionary rights and development assistance. For climate-vulnerable countries such as Nepal, it constitutes an essential component of a justice-based international response to unequal responsibility and unequal impacts. This obligation is particularly compelling in relation to loss and damage, encompassing economic losses, ecosystem degradation, cultural disruption, displacement, and other harms that cannot be adequately addressed through adaptation alone. Financial mechanisms must therefore be adequate, predictable, accessible, equitable, and, wherever possible, non-debt-creating.

Within this framework, the Bhotekoshi inundation should be understood not simply as a localized natural hazard but as an expression of interconnected climatic, ecological, developmental, and governance injustice and vulnerabilities. It raises a critical question concerning whether the Hindu Kush Himalaya is approaching thresholds of systemic ecological destabilization. Responding effectively requires an ecocentric development paradigm integrating transboundary water governance, watershed restoration, ecosystem protection, regional early-warning systems, and cooperative disaster-risk governance.

Nepal's investments in hydropower, renewable energy, green infrastructure, and electric mobility demonstrate elements of domestic commitment to mitigation and sustainable development for intergenerational justice. Nevertheless, national action cannot independently resolve vulnerabilities generated by a historically unequal global climate regime. Intergenerational justice requires that present generations neither externalize ecological costs onto future generations nor permit vulnerable communities to inherit escalating climate risks. Historical high emitters must therefore combine rapid emissions reductions with substantial, accessible climate finance, technology transfer, capacity building, and effective loss and damage mechanisms. Only by operationalizing CBDR through enforceable financial and institutional commitments can international climate governance transform climate justice from a declaratory principle into a substantive framework for protecting Himalayan ecosystems, communities, and future generations.

6. Conclusion

This cataclysmic event constitutes one of the most devastating environmental crises in Nepal's modern history. Beyond the immediate destruction of critical infrastructure, arable land, and livestock, the inundation fundamentally destabilized the socio-economic foundations of the affected regions. The demographic impact was uniquely severe, disproportionately claiming individuals aged 18 to 50. As the primary drivers of household income and community resilience, the sudden loss of this productive cohort, submerged beneath the massive sediment and debris transport of the Bhotekoshi River, inflicted a profound structural shock on local economies.

The catastrophe had a devastating impact on the industrial labor force, especially within the hydropower, transport infrastructure, and hospitality sectors. For surviving kin, the eradication of primary breadwinners and intergenerational support systems has institutionalized long-term economic precarity and psychological trauma. By rendering thousands homeless and fracturing familial structures, the disaster has left an enduring socio-emotional void. Given the scale of livelihood displacement and the erosion of family security nets, the destabilizing ramifications of this event are projected to persist as a multi-generational crisis, impeding comprehensive recovery for decades.

Following the Bhotekoshi flash flood, Nepal has received solidarity and assistance from many countries, as well as major international organizations. While some countries have provided essential humanitarian assistance, others have extended financial support and delivered critical relief supplies and humanitarian materials. On September 4, 2026, the Ministry of Foreign Affairs organized a press briefing. The press release stated that countries that extended timely solidarity and assistance during the disaster include India, China, the United Arab Emirates (UAE), the United Kingdom, Japan, the United States, Qatar, Singapore, the Republic of Korea, Australia, Germany, Latvia, Luxembourg, Malaysia, Myanmar, Bhutan, Bangladesh, Pakistan, Norway, Israel, Canada, Sri Lanka, Thailand, Viet Nam, New Zealand, Denmark, Switzerland, Ireland, and the Czech Republic (Ujyalokhabar, September 6, 2026).

In addition, the European Union, the Asian Development Bank, the World Bank, the United Nations, and other friendly states and international organizations have provided various forms of assistance. Individuals and civil society organizations have likewise announced support for Nepal. The work of search and rescue team from Australia is highly appreciated. The Government of Nepal has expressed its sincere appreciation to all countries, organizations, institutions, and individuals for their solidarity and assistance during this humanitarian crisis. Similarly, MoA says that forensic teams from India, China, Singapore, and South Korea have arrived in Nepal to expedite the collection, analysis and identification of DNA from the bodies of the victims (Onlinekhabar, September 4, 2026).

At a ministerial meeting of the 44 Least Developed Countries (LDCs) in Dili, Timor-Leste, took place from September 1 to 3, 2026, Nepal highlighted the catastrophic loss and damage caused by the Bhotekoshi flash flood and called for urgent international support. Agriculture, Forests, and Environment Minister Gita Chaudhary emphasized that Nepal cannot independently address the disaster's extensive and potentially irreparable economic and non-economic losses, particularly in Rasuwa. She urged Australia, as co-host of COP31, to facilitate grant-based adaptation finance and requested expedited financial assistance from the Fund for Responding to Loss and Damage. Nepal also called for stronger international solidarity, equitable climate finance, and sustained attention to Himalayan climate vulnerabilities. The appeal underscores the principles of climate justice, international responsibility, and compensation for climate-induced loss and damage (Radio Nepal, September 3, 2026).

The contemporary political economy of climate governance can further be examined through the lens of ecosocial colonialism, or "green colonialism," whereby powerful states and transnational corporations may appropriate natural resources, land, labor, and ecological assets in developing countries through the institutional language of sustainability, climate mitigation, and green transition. Such arrangements risk reproducing historical patterns of unequal extraction in which industrialized economies accumulated wealth through carbon-intensive development while vulnerable societies in the Global South increasingly bear the ecological and socioeconomic consequences. Climate governance must therefore avoid reproducing colonial asymmetries under a green-development paradigm.

In conclusion, the Himalayan Nepal-Tibet Tsunami serves as a stark case study for climate justice and accountability. The catastrophic tsunami, triggered by glacial collapse along the trans-Himalayan border, illustrates the severe vulnerability of developing nations that contribute negligibly to global greenhouse emissions. Resolving this crisis requires going beyond short-term humanitarian relief to establish direct, non-debt-creating compensation for victims through the FRLD. Operationalizing predictable financial reparations is essential to rebuild ruined infrastructure, restore devastated local livelihoods, and uphold the fundamental human rights of vulnerable frontline victims in communities.

The wounds inflicted by Tsunami extend far beyond visible physical destruction; they penetrate the psychological and social fabric of affected individuals and communities. Beneath damaged bodies, homes, and infrastructure lie less visible scars of grief, fear, trauma, displacement, loss, damage, and enduring insecurity. These psychosocial wounds may persist long after the physical landscape has been reconstructed, shaping memory, identity, relationships, livelihoods, and perceptions of safety. Thus, tsunami must address not only material reconstruction but also the restoration of dignity, psychological well-being, social cohesion, and hope through equitable justice to all.

References

1. Adhikari, Santosh; Raut, Sweccha; Basnet, Umesh; Bhusal, Bhawana; Pokhrel, Anju; and Bhandari, Subash. (2025, December 11). "Status of Economic Loss and Damaged Caused by Climate Change in Nepal: Patterns, Impacts, and Imperatives". *The Loss and Damage Collaboration*. Retrieved September 1, 2026, from https://www.lossanddamagecollaboration.org/resources/status-of-economic-loss-and-damage-caused-by-climate-change-in-nepal-patterns-impacts-and-policy-imperatives.
2. Aid Workers. (2026, September 4). *Two workers rescued alive from a tunnel in northern Nepal*. Retrieved September 4, 2026, from https://www.aidworkers.com/aid-news/nepal-bhotekoshi-avalanche-flood-20260826/.
3. Aljazeera. (2026, August 27). *Nepal-Tibet floods: What happened, what caused them and who is missing?* Retrieved August 28, 2026, from https://www.aljazeera.com/news/2026/8/27/nepal-tibet-floods-what-happened-what-caused-them-and-who-is-missing.
4. An, Baosheng; Wang, Weicai; et al. (2022, April). "Process, mechanisms, and early warning of glacier collapse-induced river blocking disasters in the Yarlung Tsangpo Grand Canyon, southeastern Tibetan Plateau". *Science Direct*. Retrieved September 4, 2026, from www.sciencedirect.com/science/article/abs/pii/S0048969721067280?utm _source=chatgpt.com.
5. Anand, Dibyesh. (2026, August 28). "Nepal floods: China's strict control of Tibet makes it harder to prepare for Himalayan disasters". *UNDRR*. Retrieved September 1, 2026, from https://www.preventionweb.net/news/nepal-floods-chinas-strict-control-tibet-makes-it-harder-prepare-himalayan-disasters.
6. ANI. (2026, August 28). *Death toll reaches 389 in Nepal's Bhote Koshi flood, 977 people missing. The Tribune*. Retrieved August 29, 2026, from https://www.tribuneindia.com/news/bodies/death-toll-reaches-389-in-nepals-bhote-koshi-flood-977-people-missing?
7. Arasu, Sibi. (2026, August 27). "Nepal floods highlight growing glacier risks in warming Himalayas". Retrieved September 4, 2026, from https://apnews.com/article/nepal-flash-floods-glaciers-climate-change-d8c11c2215ea0792e3612bf791e4299f.
8. ARC/JHSPH. (2013). *Community Based Disaster Risk Reduction Monitoring Guide*. Retrieved September 3, 2026, from https://preparecenter.org/sites/default/files/2013_monitoring_guide.pdf.
9. Aryal, Indira. (2026, September 1). "Nepal demands urgent climate funds after Bhotekoshi flood". *The Rising Nepal*. Retrieved September 2, 2026, from https://risingnepaldaily.com/news/85910.
10. Aryal, Saroj Kumar and Panda, Jagannath. (2026, August 27). "The Tibet-Nepal Flood Is a Himalayan Climate Security Warning". *The Diplomat*. Retrieved September 1, 2026, from https://thediplomat.com/2026/08/the-tibet-nepal-flood-is-a-himalayan-climate-security-warning/.

11. Bhujel, Balaram and Rain, Md Faisal. (2024). "Engineering Geological Complications of the Nepal Himalaya". *KTFT Journal*. Volume 14.
12. Caney, S. (2009). "Climate change and the future: Discounting for time, wealth, and risk". *Journal of Social Philosophy*. Volume 40. Issue 2. https://doi.org/10.1111/j.1467-9833.2009.01445.x.
13. Caney, S. (2014). "Two kinds of climate justice: Avoiding harm and sharing burdens". *Journal of Political Philosophy*. Volume 22. No. 2. https://doi.org/10.1111/jopp.12030.
14. Chaudhary, Ruchi; Sharma, Nakul; Shrestha, Sonam; Parajuli, Barsha, and Khanal, Prashanta. (2023). Climate Change and Urban Resilience in Nepal: Looking Through a Lens of Urban Poor. Retrieved September 1, 2026, from https://cansouthasia.net/climate-change-and-urban-resilience-in-nepal-looking-through-the-lens-of-urban-poorclean-energy-nepal-cen-cansa/.
15. Chhetri, Santosh and Adhikari, Gyan Mani. (2024). "Impact of Temperature and Precipitation Anomalies on Growth Performance: A Case of Nepal". *Economic Journal of Nepal*. Vol. 47. No. 3-4. Retrieved September 30, 2026, from https://www.nepjol.info/index.php/EJON/article/view/88854?utm_source=chatgpt.com.
16. Climate and Clean Air Coalition. (Undated). Retrieved September 1, 2026, from www.ccacoalition.org/partners/nepal.
17. Cook, Kristen L.; Andermann, Christoff; Gimbert, Florent; Adhikari, Basanta Raj; & Hovius, Niels. (2018, October 5). "Glacial lake outburst floods as drivers of fluvial erosion in the Himalaya". *Science 362*. Retrieved August 31, 2026, from https://wpg.forestry.oregonstate.edu/sites/default/files/seminars/cook_etal_2018_glacial_outburst_erosion.pdf.
18. D.C., Ram Kumar. (2026, August 27). "How the Bhotekoshi flood unfolded over 10 hours." *The Kathmandu Post*. Retrieved August 27, 2026, from https://kathmandupost.com/national/2026/08/27/how-the-bhotekoshi-flood-unfolded-over-10-hours
19. Dhakal, Binod. (2026, August 30). *Bhote Koshi catastrophe: A 360-degree look at what happened, what went wrong and what comes next*. Retrieved August 31, 2026, from https://english.nepalnews.com/s/explainers/bhote-koshi-catastrophe-a-360-degree-look-at-what-happened-what-went-wrong-and-what-comes-next/.
20. Dhital, M. R. (2015). *Geology of the Nepal Himalaya: Regional Perspective of the Classic Collided Orogen*. Springer.
21. Dillard, Carter. (2021, July 27). *The Constitutive Fallacy: We Cannot Achieve Justice and the Freedom It Brings After Power Relations Have Already Formed.* Retrieved September 7, 2026, from https://fairstartmovement.org/the-constitutive-fallacy-we-cannot-achieve-justice-and-the-freedom-it-brings-after-power-relations-have-already-formed/.
22. Dillard, Carter. (2023). *The Basic Fair Start Ask: Two Easy Moves to Ensure Stanford Is Acting in a Fundamentally Just Way*. Fair Start Movement.
23. Fair Start Movement. (2024, December 9). *What is a Fair Start in Life?* Retrieved September 9, 2026, from https://fairstartmovement.org/what-is-a-fair-start-in-life/?utm_source=chatgpt.com.
24. Fair Start Movement. (2025, December 30). *An Open Letter to Mercy for Animals: Ensuring On Balance Public Interest Assessment and Reporting.* Retrieved September 8, 2026, from https://fairstartmovement.org/an-open-letter-to-mercy-for-animals-ensuring-on-balance-public-interest-assessment-and-reporting/?utm_source=chatgpt.com.

25. Fair Start Movement. (2025, March 13). *Fact/Value Checking Cass Sunstein on Climate Justice. Urge His Daughter to Tell the Truth*. Retrieved September 9, 2026, from https://fairstartmovement.org/fact-value-checking-cass-sunstein-on-climate-justice-urge-his-daughter-to-tell-the-truth/.
26. Frantz, Patricia; Rego, Francisca, and Barbas, Stela. (2025). *Ecocentrism vs. Anthropocentrism: To the Core of the Dilemma to Overcome It*. National Library of Medicine. Retrieved September 1, 2026, from https://pmc.ncbi.nlm.nih.gov/articles/PMC12152000/.
27. *Fund for Responding to Loss and Damage*. (Undated). Retrieved August 28, 2026, from https://unfccc.int/fund-for-responding-to-loss-and-damage.
28. GC, Laxmi. (2026, September 2). *August 26 Rasuwa Tragedy Witnessed by Customs Officer Ghimire While Escaping Death*. Retrieved September 5, 2026, from https://nepalkhabar.com/society/285796-2026-9-2-19-9-50?
29. Ghimire, Pratik. (2026, August 27). “What caused the Bhotekoshi flood?” *The Annapurna Express*. Retrieved August 29, 2026, from https://theannapurnaexpress.com/story/66704/.
30. Giri, Anil. (2026, September 1). “Nepal seeks urgent climate finance after Bhotekoshi flood”. *The Kathmandu Post*. Retrieved September 2, 2026, from https://kathmandupost.com/national/2026/09/01/nepal-seeks-urgent-climate-finance-after-bhotekoshi-flood.
31. Gnyawali, Kaushal Raj; Xing, Aiguo; and Zhuang, Yu. (2020, February). *Dynamic analysis of the multi-staged ice–rock debris avalanche in the Langtang valley triggered by the 2015 Gorkha earthquake, Nepal*. Retrieved September 4, 2026, https://www.sciencedirect.com/science/article/abs/pii/S001379521931302X?utm_source=chatgpt.com.
32. Gyawali, Krishna. (2026, September 2). “The glacier detachment at the source of the Lhende River measures approximately 25 million cubic meters.” *Onlinekhabar*. Retrieved September 3, 2026, from www.onlinekhabar.com/2026/09/2008746/the-iceberg-that-fell-at-the-head-of-the-lhende-river-is-25-million-cubic-meters.
33. Hullinger, Jessica. (Undated). *The Industrial Revolution and Climate Change*. Retrieved September 1, 2026, from https://www.oerproject.com/OER-Materials/OER-Media/HTML-Articles/Climate/Unit1/The-Industrial-Revolution-and-Climate-Change.
34. ICIMOD. (2011). *Glacial Lakes and Glacial Lake Outburst Floods in Nepal*. Retrieved September 4, 2026, from https://lib.icimod.org/records/2kqn5-yrm13?utm_source=chatgpt.com.
35. ICIMOD. (2019). *Glacier retreat in Langtang Catchment in Nepal (1980-2010)*. Retrieved September 4, 2026, from https://lib.icimod.org/records/71phb-a6c67?utm_source=chatgpt.com.
36. ICIMOD. (2026, August 26). *Major flash flood sweeps through Nepal’s Rasuwa district, raising fears of further downstream flooding*. Retrieved September 5, 2026, from https://www.icimod.org/press-release/major-flash-flood-sweeps-through-nepals-rasuwa-district-raising-fears-of-further-downstream-flooding/.
37. ICIMOD. (Undated). *Floods, GLOFs and early warning systems*. Retrieved August 31, 2026, from https://www.icimod.org/floods-glofs-and-early-warning-systems/?utm_source=chatgpt.com.
38. ICIMOD. (Undated). *Glacial Lake Outburst Floods*. Retrieved September 2, 2026, from https://www.icimod.org/mountain/glacial-lake-outburst-flood/?utm_source=chatgpt.com

39. ICIMOD. (Undated). *The Hindu Kush Himalaya*. Retrieved September 4, 2026, from https://www.icimod.org/who-we-are/the-hindu-kush-himalaya/.
40. IUS Editors. (2025, April 28). *Militarism: A Leading Cause of Environmental and Climate Crises*. Retrieved Setember 2, 2026, from https://www.iuscientists.org/militarism-and-climate-crises/.
41. Karki, M.; Mool, P; and Shrestha, A. (2009). *Climate Change and its Increasing Impacts in Nepal*. Retrieved September 1, 2026, from https://lib.icimod.org/records/etess-1m962.
42. Khadka, Shradha. (2025, October 25). "The Nepal Trend: Climate Justice or Injustice." *Governance Monitoring Center Nepal*. Retrieved August 31, 2026, from https://gmcnepal.org/blogs/the-nepali-trend-climate-justice-or-injustice/.
43. Khatri, Purushottam. (2026, September 15). "Security agencies restore temporary connectivity". *The Rising Nepal*. Retrieved September 15, 2026, from https://risingnepaldaily.com/news/86561.
44. Laudato Si' Movement. (2026, August 28). *Nepal produces just 0.1% of global emissions. Why is it paying such a terrible price?* Retrieved September 29, 2026, from https://laudatosimovement.org/news/.
45. Mathema, Paavan. (2026, September 4). *Nepal's 'Himalayan Tsunami': What We Know*. Barron's. Retrieved September 4, 2026, from https://www.barrons.com/news/nepal-s-himalayan-tsunami-what-we-know-c39a9a05.
46. Mcdermott, Jennifer. (2026, August 28). "Satellite images show bedrock and glacier collapsed on Nepal-China border, then rivers flooded". *AP News*. Retrieved September 4, 2026, from https://apnews.com/article/climate-change-nepal-tibet-glacier-collapse-floods-b3eda9410f9941f69add384944047bc3.
47. Ministry of Foreign Affairs. (2026, September 4). *Daily Situation Update on the Bhote Koshi River Floods*. Retrieved September 5, 2026, from https://www.mofa.gov.np/content/1876/daily-situation-update-on-the-bhote-koshi/?utm_source=chatgpt.com.
48. Ministry of Foreign Affairs. (2026, September 6). *Daily Situation Update on Bhote Koshi River Floods- 05 September 2026*. Retrieved September 6, 2026, from mofa.gov.np/content/1877/daily-situation-update-on-bhote-koshi-river/.
49. Nepal Disaster Risk Reduction Portal. (Undated). Retrieved September 4, 2026, from http://drrportal.gov.np/.
50. Nepal Live. (2026, September 14). *Report on the Rasuwa–Bhotekoshi Flood: Nearly 33,000 People Displaced and Approximately 7,500 Private Homes Damaged*. Retrieved September 15, 2026, from https://nepallive.com/story/350335.
51. Nepal News. (2026, August 27). *Technical report: 20 million cubic meters of excess surge swept down Bhote Koshi-Trishuli-Narayani river system*. Retrieved September 1, 2026, from https://english.nepalnews.com/s/nation/technical-report-20-million-cubic-meters-of-excess-surge-swept-down-bhote-koshi-trishuli-narayani-river-system/.
52. Nepal News. (2026, August 30). *Call for Climate Finance to Support the Rehabilitation of Flood-Affected Areas*. Retrieved September 2, 2026, from https://nepalnews.com/2026/08/30/climate-finance-demanded-for-rehabilitation-of-flood-affected-areas/.
53. Nepal News. (2026, September 15). *Bhote Koshi flood: 1,399 bodies recovered so far; 4,089 still missing*. Retrieved Setpember 15, 2026, from https://english.nepalnews.com/s/nation/bhote-koshi-flood-1399-bodies-recovered-so-far-4089-still-missing/.

54. Nepali Times. (2026, August 27). Retrieved August 31, 2026, from https://www.facebook.com/nepalitimes/posts/the-catastrophic-flash-flood-on-the-bhote-kosi-on-wednesday-seems-to-have-been-t/1699438825522082/.
55. Nepalkhabar. (2026, September 13). *Bhotekoshi Flood: Damage to 7,500 Private Homes Across Five Districts Displaces Nearly 33,000 People*. Retrieved September 14, 2026, from https://www.nepalkhabar.com/society/economy/286817-2026-9-13-13-33-11.
56. New Age Online. (2026, August 27). *Nepal Flood: At Glance*. Retrieved September 3, 2026, from https://www.newagebd.net/post/south-asia/311336/nepal-floods-at-a-glance.
57. Onlinekhabar. (2026, August 28). *Chinese Embassy warns flood risk still high, urges vigilance*. Retrieved August 29, 2026, from https://english.onlinekhabar.com/chinese-embassy-warns-flood-risk-still-high-urges-vigilance.html.
58. Onlinekhabar. (2026, August 28). *These are the hydropower projects damaged by the floods and the number of uncontacted individuals*. Retrieved September 5, 2026, from https://www.mofa.gov.np/content/1876/daily-situation-update-on-the-bhote-koshi/?utm_source=chatgpt.com.
59. Onlinekhabar. (2026, August 31). *Government Appeals to the Climate Loss and Damage Fund for Emergency Financial Assistance*. Retrieved September 1, 2026, from https://www.onlinekhabar.com/2026/08/2008076/government-sends-letter-to-climate-change-fund-to-provide-emergency-funds?
60. Onlinekhabar. (2026, September 15). *607 tourists from 34 countries missing since Bhotekoshi floods*. Retrieved September 15, 2026, from https://english.onlinekhabar.com/607-tourists-from-34-countries-missing-since-bhotekoshi-floods.html.
61. Onlinekhabar. (2026, September 3). *Langtang Lirung glacier was moving unusually fast before Bhotekoshi flood, Chinese study finds*. Retrieved September 3, 2026, from https://english.onlinekhabar.com/langtang-lirung-glacier-moving.html.
62. Onlinekhabar. (2026, September 4). *Nepal receives emergency relief and financial aid from 29 countries*. Retrieved September 6, 2026, from https://english.onlinekhabar.com/nepal-receives-emergency-relief-and-financial-aid-from-29-countries.html.
63. Onlinekhabar. (2026, September 5). *31 dead, 531 missing on the Chinese side in the Kerung flood*. Retrieved September 6, 2026, from https://www.onlinekhabar.com/2026/09/2010995/31-dead-531-missing-in-kerung-floods-on-china-side.
64. Oxfam International. (2026, August 26). *Nepal Flash Flood Crisis*. Retrieved September 5, 2026, from https://www.oxfam.org/en/what-we-do/emergencies/nepal-flash-flood-crisis.
65. Pathak, D., Gajurel, A., & Shrestha, G. (2008). "Study of river shifting of Kodku Khola in Kathmandu Valley using remotely sensed data". *Journal of Nepal Geological Society*. Volume 36. No. 28. Retrieved September 4, 2026, from https://www.nepjol.info/index.php/JNGS/article/view/788.
66. Radio Nepal. (2026, September 3). *Bhotekoshi flood issue raised in LDC ministerial-level meeting*. Retrieved September 6, 2026, from https://radionepalonline.com/en/2026/09/03/435330.html.
67. Rai, S. M.; Upreti, B. N.; Dhakal, S.; Bhattarai, T. N.; Adhikari, B. R.; Bajracharya, S. R.; and Yoshida, M. (2017). "Climate Change Impact on Glacier Retreat and Local Community in the Langtang Valley, Central Nepal". *ICIMOD*. Retrieved September 4, 2026, from https://lib.icimod.org/records/ks3m9-e5d69?utm_source=chatgpt.com.

68. Ratopati. (2026, September 15). *Bhotekoshi Flood: 1395 Bodies Recovered, 5,130 Missing*. Retrieved September 15, 2026, from https://english.ratopati.com/story/79277/bhotekoshi-flood-1395-bodies-found.
69. Reliefweb. (2026, August 28). *IRDR Rapid Analysis Report - Scientific Anatomy of the 26 August 2026 Bhotekoshi Flash Flood*. Retrieved August 30, 2026, from https://reliefweb.int/report/nepal/irdr-rapid-analysis-report-scientific-anatomy-26-august-2026-bhotekoshi-flash-flood.
70. Retrieved September 2, 2026, from https://www.youtube.com/watch?v=rTHwn5Us_Z4&t=17s.
71. Retrieved September 3, 2026, from https://www.instagram.com/dtemagazine/p/Dc0PAOgiasw/.
72. Retrieved September 5, 2026, from https://www.facebook.com/watch/?v=2453137031878487.
73. Retrieved September 5, 2026, from https://www.mofa.gov.np/content/1876/daily-situation-update-on-the-bhote-koshi/?utm_source=chatgpt.com
74. Retrieved September 8, 2026, from https://fairstartmovement.org/model/?utm_source=chatgpt.com.
75. Reuters Graphics staff. (2026, August 27). *How a glacier collapse triggered a deadly landslide and flooding along the Nepal-China border*. Retrieved August 28, 2026, from https://www.reuters.com/graphics/NEPAL-FLOODS/MAP/byvrdywwlve/.
76. Reuters. (2026, August 28). *US offering 'any help' Nepal needs, Trump says*. Retrieved August 29, 2026, from https://www.reuters.com/world/nepal-floods-live-nearly-1500-missing-including-tourists-death-toll-rises-2026-08-27/.
77. Soderberg, Mattias. (Undated). *Climate induced loss and damage is a harsh reality in Nepal (Press release COP26)*. Retrieved September 2, 2026, from https://actalliance.org/act-news/climate-induced-loss-and-damage-is-a-harsh-reality-in-nepal-press-release-cop26/.
78. Subedi, Abhi. (2026, August 29). "The intersection of human agency, political dynamics and ecological challenges in the Bhotekoshi flood". *The Kathmandu Post*. Retrieved September 2, 2026, from https://kathmandupost.com/columns/2026/08/29/the-intersection-of-human-agency-political-dynamics-and-ecological-challenges-in-the-bhotekoshi-flood.
79. Sunuwar, Dev Kumar. (2026, September 3). *Deadly Flood, Dubbed "Himalayan Tsunami," Leaves Over 1,300 Dead and Thousands Missing in Nepal*. Retrieved September 3, 2026, from https://www.culturalsurvival.org/news/deadly-flood-dubbed-himalayan-tsunami-leaves-over-1300-dead-and-thousands-missing-nepal.
80. The Economic Times. (2026, August 31). *What is a glacial collapse? The science behind the Nepal-Tibet floods*. Retrieved September 3, 2026, from https://economictimes.indiatimes.com/news/international/world-news/nepal-tibet-disaster-how-common-are-glacial-collapses-in-the-himalayas/articleshow/133582834.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.
81. The Economic Times. (2026, September 5). *US lawmakers urge State Secy to boost Nepal flood relief, deploy DART, rebuild aid of $4-5 billion*. Retrieved September 5, 2026, from economictimes.indiatimes.com/news/international/world-news/us-lawmakers-urge-state-secy-to-boost-nepal-relief-deploy-dart-rebuild-aid-of-4-5-billion/articleshow/133784722.cms?utm _source=contentofinterest&utm_ medium=text&utm_campaign=cppst.
82. The Guardian. (2026, August 30). *Search continues as number missing in Nepal-Tibet floods rises to 2,478 – as it happened*. Retrieved August 31, 2026, from

www.theguardian.com/world/live/2026/aug/28/nepal-tibet-flash-floods-hundreds-dead-missing-day-three-live-updates.

83. The Hindu Bureau. (2026, August 31). *Nepal flash floods LIVE: Death toll goes past 900; over 4,000 still missing*. Retrieved August 31, 2026, from https://www.thehindu.com/news/international/nepal-flash-floods-aftermath-live-udpates-rescue-work-august-31-2026/article71409646.ece.
84. The Hindu Bureau. (2026, August 31). *Nepal flash floods updates: Death toll reaches 788; rescuers drill through debris towards trapped tunnel workers*. Retrieved August 31, 2026, from https://www.thehindu.com/news/international/nepal-flash-floods-live-updates-death-toll-rescue-operation-missing-person-tibet-border-glacier-collapse-news/article71406948.ece.
85. The Sensemaker. (2026, August 28). "Why deadly flash floods have been made more likely by climate change". *The Observer*. Retrieved September 2, 2026, from https://observer.co.uk/news/the-sensemaker/article/why-deadly-flash-floods-have-been-made-more-likely-by-climate-change.
86. TRN Online. (2026, August 27). *Nepal-China need improved mechanism for coordinated disaster response: Ambassador Zhang*. Retrieved August 29, 2026, from https://risingnepaldaily.com/news/85634.
87. *Tsunami*. Retrieved September 2, 2026, from https://www.britannica.com/science/tsunami.
88. U.S. Geological Survey (USGS). (2026, August 27). *2026 Nepal Debris Avalanche and Flash Flood*. Retrieved August 29, 2026, from https://www.usgs.gov/programs/landslide-hazards/science/2026-nepal-debris-avalanche-and-flash-flood.
89. Uddin, M. M., and Belal, A. R. (2019). Donors' influence strategies and beneficiary accountability: An NGO case study. *Accounting Forum.* Volume *43*. *No. 1*. https://doi.org/10.1080/01559982.2019.1589905.
90. Ujyalokhabar. (2026, September 6). *29 countries stand with Nepal in disaster; relief and financial aid mobilized*. Retrieved September 6, 2026, from https://ujyaalokhabar.com/archives/50016.
91. UN Women. (2026, August 31). *Nearly 160,000 women and girls impacted by Nepal flash floods*. Retrieved August 31, 2026, from https://www.eco-business.com/press-releases/nearly-160000-women-and-girls-impacted-by-nepal-flash-floods/.
92. UNDP Nepal. (2025, June 11). *From Melting Glaciers to Global Action: Loss and Damage in Nepal*. Retrieved August 30, 2026, from https://www.undp.org/nepal/blog/melting-glaciers-global-action-loss-and-damage-nepal.
93. UNFCCC. (1992). Retrieved August 29, 2026, from https://unfccc.int/process-and-meetings/united-nations-framework-convention-on-climate-change.
94. United Nations COP27. (2023). Retrieved August 28, 2026, from https://www.un.org/en/climatechange/cop27.
95. United Nations COP28. (2023). Retrieved August 28, 2026, from https://www.un.org/en/climatechange/cop28.
96. United Nations. (1992, June 13). *United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992*. Retrieved August 29, 2026, from https://www.un.org/en/conferences/environment/rio1992.
97. Upadhyay, Khem Raj. (2026, September 15). *Total damage from Bhote Koshi floods amounts to Rs 408 billion across public and private sectors*. Retrieved September 15, 2026, from https://paschimtoday.com/news-details/98882/2026-09-15.

98. Weedman, Darcy. (2026, August 2026). "Bhote Koshi Flood 2026: A Reconstruction from Open Satellite Data". *GEOPERA*. Retrieved August 31, 2026, from https://geopera.com/blog/bhote-koshi-flood-2026-satellite-analysis.
99. *Why Are the Himalayas Called Young Fold Mountains?* (Updated). Retrieved September 3, 2026, from https://spmiasacademy.com/currentaffairs/young-fold-mountains-himalayas/.
100. World Metrological Organization. (2026, November 12). *Global Status of Multi-Hazard Early Warning Systems 2025*. Retrieved September 2, 2026, from https://wmo.int/resources/publication-series/global-status-of-multi-hazard-early-warning-systems/global-status-of-multi-hazard-early-warning-systems-2025.
101. Xinhua. (2026, August 28). *Xi extends condolences over mudslide disaster in Nepal*. https://english.www.gov.cn/news/202608/28/content_WS6a91448bc6d00ca5f9a0cd5e.html?utm_source=chatgpt.com.
102. Zhang, Tiantian; Gibson, Luke; Ma, Jun; Sreekar, Rachakonda; Lindenmayer,David; and Liu, Jiajia. (2025, March 21). *Global patterns of border protected areas reveal gaps in transboundary conservation efforts*. Retrieved August 29, 2026, from https://www.sciencedirect.com/science/article/abs/pii/S2590332225000326.