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Nepal’s Climate Crisis Is Becoming an Economic Crisis

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Nepal’s climate crisis is no longer something that can be discussed only in terms of melting glaciers, disappearing snowlines or unusually violent monsoons. It is increasingly showing up in places economists understand very well: damaged power plants, washed-out roads, disrupted trade, weaker farm output, higher food prices, lost tourism income and a reconstruction bill that competes directly with schools, hospitals and other development priorities.

The Bhotekoshi disaster of August 26, 2026 has made that shift unusually visible. A catastrophic mass movement high in the Himalaya sent ice, rock, mud and water down a river system that supports settlements, roads, trade routes and hydropower. The

human toll has been immense. The financial toll is now coming into view as well.

A government-led Rapid Damage and Needs Assessment estimated about Rs408 billion in physical damage and economic losses and put recovery and reconstruction needs at roughly Rs723 billion, or about US$4.8 billion. The Ministry of Foreign Affairs said on September 11 that long-term reconstruction alone was expected to require about US$4.71 billion. Those are preliminary figures, not a final audited bill, but they are large enough to change the national economic conversation.

For years, climate policy in Nepal was often treated as an environmental subject sitting beside the “real” economy. That distinction is becoming harder to maintain. When climate-related hazards destroy assets, interrupt electricity, close highways, raise insurance risks or force the government to borrow for reconstruction, climate is economic policy.

> Climate crisis framework showing damaged assets, interrupted services, fisca
> Guide illustration: Nepal Digest.

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Climate crisis: A disaster can erase years of investment in hours

Nepal has spent decades trying to overcome a structural disadvantage: difficult terrain makes infrastructure unusually

expensive to build, maintain and replace. Roads, bridges and transmission lines often have to cross steep slopes and river valleys. Hydropower plants depend on the same mountain water systems that make the country attractive for renewable energy.

Climate change does not create all of Nepal’s natural hazards. Earthquakes, unstable geology and steep topography existed long before modern warming. But higher temperatures, changing rainfall patterns, glacier retreat and a more unstable cryosphere can amplify existing risks. That matters because Nepal’s economic model increasingly relies on assets placed directly in exposed landscapes.

The recent floods damaged 13 hydropower projects and five solar plants, according to the government assessment. Roads and bridges were also badly hit. The immediate cost is the physical asset that has been destroyed. The second cost is what that asset can no longer do.

A damaged power plant stops producing electricity and revenue. A washed-out road delays food, fuel and construction materials. A broken bridge can isolate a community from markets, schools and hospitals. A damaged border corridor slows trade. A closed trekking route affects guides, lodges, transport operators and restaurants far beyond the point where the original damage occurred.

This is why disaster losses can spread much further than a map of destroyed buildings suggests.

Hydropower shows both Nepal’s promise and its vulnerability

Hydropower is central to Nepal’s economic ambitions. More generation can reduce dependence on imported fossil fuels, support electric transport and industrial growth, and create export revenue from electricity sales to India and Bangladesh. It is one of the few sectors in which Nepal possesses a clear natural comparative advantage.

But the same sector is physically exposed to rivers, landslides, sediment, changing flows and mountain hazards.

After the August disaster, Nepal moved from exporting electricity to needing additional imports. India approved exports of up to 654 megawatts to Nepal for 18 hours a day through the end of 2026 to help cover the shortfall. That reversal illustrates the economic risk vividly: an asset class designed to generate export earnings can, after a disaster, create an import requirement.

The lesson is not that Nepal should stop building hydropower. The opposite may be true. Clean electricity remains one of the country’s strongest long-term opportunities. The lesson is that climate resilience has to become part of the project’s economics from the beginning.

Site selection, sediment management, slope stability, access roads, transmission design, emergency planning and insurance all influence the real cost of a power project. A cheaper plant that repeatedly fails under extreme conditions may prove far more expensive than a resilient one built with higher upfront standards.

Roads are economic infrastructure, not just engineering

The same logic applies to transport.

The World Bank’s Country Climate and Development Report for Nepal warned that climate damage to the transport sector could cost as much as US$250 million a year. That figure matters because Nepal’s roads carry almost everything: workers, tourists, vegetables, cement, fuel, imported goods and exports.

When a highway closes, the economic loss is not limited to the repair bill. Trucks wait. Perishable goods spoil. Bus journeys lengthen. Factories receive inputs late. Tourists change plans. Ambulances take longer. Workers lose hours.

These secondary losses are often harder to measure than a collapsed retaining wall, but they accumulate across the economy.

Nepal therefore faces a difficult budgeting question. Is it better to build more kilometres of road quickly, or fewer kilometres engineered to survive more intense rainfall and slope failure?

Politically, new construction is easy to display. Maintenance, drainage and slope protection are less visible. Economically, however, the less glamorous investments may produce the larger return.

The private sector is carrying much of the loss

Another important feature of the Bhotekoshi assessment is where the damage landed.

A preliminary government analysis reported by the Kathmandu Post estimated that more than two-thirds of the losses fell on private businesses, households and privately owned infrastructure. Nearly 4,800 commercial establishments were affected. Hotels and restaurants, retailers, manufacturers, schools, financial institutions and energy companies were among those reporting damage.

This matters because climate risk can alter investment behaviour long before another disaster occurs.

A business deciding whether to build a hotel beside a river, finance a hydropower plant, expand a warehouse or buy vehicles has to consider not only expected profit but the probability of losing the asset. Banks have to consider the same risk when extending loans. Insurers have to price it. Investors eventually demand higher returns for projects seen as vulnerable.

In other words, climate risk can increase the cost of capital.

That is a particularly serious problem for Nepal, where businesses already complain about expensive finance, difficult logistics and uncertain project execution. If banks and insurers conclude that certain locations or sectors carry rising disaster exposure, financing may become more expensive precisely where new investment is needed.

Farm losses become food-price problems

Climate damage also enters the economy through agriculture.

Nepal remains heavily dependent on farming for livelihoods even as food imports rise. The sector is sensitive to monsoon timing, floods, drought, heat, pests and water availability. When production falls, the result is not confined to the farmer whose field was damaged.

Lower domestic output can push up market prices, increase imports and widen pressure on household budgets. Poor households feel food inflation more intensely because food absorbs a larger share of their income.

The Asian Development Bank’s December 2025 macroeconomic update already expected slower agricultural growth in FY2026 after delayed monsoon conditions in Madhesh and earlier flood damage affected paddy output and food supply chains. That is a

reminder that the economic effects of climate variability do not require a once-in-a-generation catastrophe. Smaller disruptions repeated across seasons can also weaken growth.

For Nepal, climate-smart agriculture therefore is not a fashionable development slogan. Better irrigation, water storage, crop choices, weather information and insurance can become forms of macroeconomic protection.

The government faces a fiscal trap

Every major disaster creates an uncomfortable choice for the state.

Money has to be found quickly for rescue, temporary housing, roads, water systems, schools and electricity. But government budgets are finite. Reconstruction money that is not covered by grants, insurance or dedicated disaster financing may have to come from borrowing or from spending originally intended for other priorities.

This is how climate shocks can slow development twice: first by destroying existing assets, and then by consuming money that could have built new ones.

Nepal has begun constructing financial buffers. In 2024, the World Bank approved a US$150 million catastrophe deferred drawdown facility designed to provide rapid liquidity after disasters and

reduce the need to divert funds from ongoing development programmes. Such instruments are useful, but a disaster with recovery needs measured in billions of dollars demonstrates the scale mismatch.

Nepal has also secured approval for US$20 million through the Fund for Responding to Loss and Damage under proposals submitted before the August flood, while a separate emergency request related to the latest disaster was still awaiting a decision as of early September.

Twenty million dollars is meaningful assistance. Against a reconstruction estimate approaching US$4.8 billion, it is also a reminder of how limited the international loss-and-damage architecture remains compared with the potential bill.

Climate justice is also a financing argument

Nepal’s case carries a global contradiction.

The World Bank has estimated that Nepal accounts for only around 0.1 percent of global greenhouse-gas emissions. Yet its geography makes it highly exposed to a warming climate. Glaciers, steep river systems, intense monsoons and fragile slopes place communities and infrastructure in the path of changing hazards.

This is why Nepali officials increasingly frame climate finance as a question of justice rather than charity. The argument is straightforward: a low-emitting country should not have to finance the full cost of damage associated with a global problem it did little to create.

That argument is politically powerful, but it does not remove Nepal's own responsibility to spend wisely. International finance will be easier to justify if reconstruction is transparent, projects are resilient and new infrastructure is not rebuilt to the same vulnerable standards.

Climate justice and domestic accountability are not competing ideas. Nepal needs both.

The real risk is slower growth over decades

One disaster, however costly, does not define a national economy. The deeper concern is accumulation.

The World Bank's climate modelling has estimated that, without stronger action, Nepal's GDP could be at least 7 percent smaller by 2050 than it otherwise would have been because of climate impacts. The effect comes through multiple channels: flooded infrastructure, lower labour productivity during heat, stress on crops and livestock, damaged transport and other disruptions.

That number should be read carefully. It is a modelled long-term scenario, not a prediction that Nepal will “lose 7 percent of GDP” in a single year. Its significance is that repeated climate shocks can gradually lower the path of economic growth.

A road repeatedly repaired is money not invested elsewhere. A farm that becomes less productive generates less income. A hydropower plant that produces less reliably earns less revenue. A tourist who cancels because of disrupted access spends nothing. An investor who judges a project too risky may place capital somewhere else.

Each effect can look manageable in isolation. Together they can become a structural drag.

Resilience needs to be treated as an investment

Nepal’s policy debate often frames adaptation as a cost: stronger bridges cost more, early-warning systems require budgets, river management takes money and safer settlement planning can be politically difficult.

A better economic comparison is between the cost of resilience and the cost of repeated failure.

A resilient bridge is expensive until the cheaper bridge is washed away twice. An early-warning system is a budget line until it gives

communities time to evacuate. Better drainage can look mundane until a road remains open during extreme rain. Relocating development away from a high-risk floodplain can appear restrictive until the next flood arrives.

The government’s current reconstruction assessment includes significant spending for disaster-risk reduction and river management. The crucial test will be whether “build back better” becomes an engineering and budgeting rule rather than a phrase used after emergencies.

Nepal can still turn vulnerability into economic strategy

There is a more optimistic side to the argument.

Adaptation spending can create jobs. Better roads improve ordinary commerce as well as disaster resilience. Stronger electricity networks support industrialisation. Better water management can raise farm productivity. Modern weather services help airlines, trekkers and farmers. Risk mapping can improve urban planning. Strong building standards protect both lives and bank collateral.

In that sense, climate resilience is not separate from development. Done well, it is development.

Nepal also has strengths to build on: a large hydropower resource, extensive community forestry experience, growing digital infrastructure, local governments with substantial implementation responsibilities and an international profile as a country on the front line of Himalayan climate change.

The challenge is to convert those advantages into institutions and investments before each emergency forces the country back into recovery mode.

Emergency finance reduces the first shock, not the whole bill

After the August 26 disaster, the World Bank said on September 23 that it had made up to US$170 million in emergency financing available to support Nepal’s immediate response and begin restoring critical infrastructure and services. That support matters because rapid liquidity can prevent government from delaying urgent repairs while waiting for slower reconstruction finance.

But emergency money should not be confused with a complete recovery package. When estimated reconstruction needs run into several billion dollars, even large emergency facilities cover only part of the gap. Nepal still faces decisions about borrowing, grants, budget reallocations and the order in which damaged infrastructure is rebuilt.

Insurance will become more expensive where risk is clearer

The Bhotekoshi disaster also raises difficult questions for insurers and banks. When flood, landslide or glacial hazards become easier to map, financial institutions may price those risks more explicitly. Premiums can rise, deductibles can increase and lenders may demand stronger engineering before financing projects in exposed locations.

This is economically rational and socially complicated. Higher risk pricing can encourage safer investment while making finance harder to obtain in communities that already have limited alternatives. Public policy may therefore need better hazard data, targeted risk-pooling and clearer building standards so the cost of safety does not fall only on individual households.

Food security shows how climate shocks spread into households

Government assessments after the floods reported damage to farmland and expected reductions in food production in affected areas. The immediate loss belongs to farmers; the wider effect can appear later through higher prices, reduced local supply and greater dependence on imported food.

This transmission matters because poorer households spend a larger share of income on food. Climate adaptation in agriculture is therefore also social protection. Irrigation, resilient seeds, storage, crop insurance and better forecasts reduce the chance that one weather shock becomes a household nutrition crisis.

Tourism is exposed even when hotels remain standing

Tourism losses do not require a hotel to be destroyed. A damaged road, closed trail or international headline about danger can reduce bookings far from the original disaster zone. The September floods showed how quickly access problems in Rasuwa could affect Langtang trekking and how national perceptions can spread beyond the places directly damaged.

This makes transport resilience, accurate public information and rapid route restoration part of tourism policy. Visitors need to know which areas are affected and which are operating normally; businesses need confidence that one disaster will not erase an entire season through confusion alone.

Local governments need climate budgets, not only disaster budgets

Municipalities are often the first institutions dealing with damaged local roads, water systems, schools and settlements. Yet

adaptation can remain dependent on project funding or emergency transfers rather than routine local budgeting.

A more resilient model would integrate drainage, slope protection, hazard mapping and maintenance into ordinary capital planning. The goal is to spend before the emergency in ways that reduce what must be spent after it.

The climate story is now an economic story

The Bhotekoshi disaster will rightly be remembered first for the lives lost and communities shattered. Economic analysis should never reduce a human tragedy to a balance sheet.

But ignoring the balance sheet would create another mistake.

Climate risk now influences Nepal’s electricity supply, public debt, infrastructure planning, food prices, insurance, private investment, tourism and trade. That makes it one of the country’s central economic questions.

The old way of thinking separated environment from growth. Nepal can no longer afford that distinction.

The country’s next generation of roads, hydropower plants, settlements, farms and cities will be built in a climate that is already different from the one in which many existing standards

were designed. The economic choice is therefore becoming clearer: pay more for resilience before disaster, or pay much more for reconstruction after it.

Nepal will still need international climate finance, better global emissions cuts and a fairer loss-and-damage system. But at home, the most important shift may be conceptual.

Better data can lower the cost of uncertainty

Investors, insurers and local governments make stronger decisions when hazard data is current and usable. Flood maps, rainfall records, slope assessments and glacial monitoring can help distinguish genuinely high-risk sites from places that are simply perceived as dangerous because information is poor.

This matters economically because uncertainty itself has a price. When lenders cannot estimate risk confidently, they may charge more, demand greater collateral or avoid a project altogether. Better public data can therefore support investment as well as safety.

Reconstruction is a chance to change standards

Disasters create pressure to rebuild quickly, especially when families, roads and electricity systems need immediate

restoration. Speed is necessary and can reproduce the same vulnerability if old designs are restored without considering how hazards have changed.

The economic logic of resilient reconstruction is strongest where assets are expected to last decades. A bridge, transmission line or hydropower access road built today will operate through a climate that continues changing. Designing only for historical conditions can lock future repair costs into the project from the beginning.

Climate policy now belongs in finance ministries too

When climate risk affects debt, insurance, food prices, public investment and energy imports, it can no longer remain mainly the responsibility of environment agencies. Finance ministries, planning bodies, banks and regulators all need climate risk inside ordinary economic decision-making.

That institutional shift may be less visible than a new climate programme, but it is more consequential. Resilience becomes durable when it is embedded in budgeting, lending and infrastructure standards rather than depending on one project or donor cycle.

The bill for inaction does not arrive in one place. It appears across electricity, food, insurance, roads, tourism, household savings and public debt. That is exactly why the response has to move beyond

one ministry or one disaster.

Climate resilience must stop being treated as an environmental add-on and start being treated as economic infrastructure.

Sources and further reading: Ministry of Foreign Affairs, Nepal — September 11, 2026 briefing; World Bank — Nepal Country Climate and Development Report; World Bank — Disaster Response and Resilience financing; Kathmandu Post — private-sector losses from the Bhotekoshi flood; Kathmandu Post — Loss and Damage Fund support.

Assessment scope: Different damage assessments use different dates, coverage and methods. The October 2026 World Bank update reports a separate GRADE estimate of direct physical damage. It should not be treated as interchangeable with government estimates that combine physical damage, economic losses and reconstruction needs. Climate exposure also does not, by itself, attribute the cause of an individual disaster to climate change.

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