# Bhutan Three-way Bridge



## Overview

Cantilever beams were developed in order to cross increasingly wide streams or rivers, where simple wooden beams had a limited range of about 10 meters. Two arms with timber superimposed are built on either side of the river, above the highest flood-level point, while being weighted to allow an increasingly large cantilevering, and solid wooden beams are then fixed on each end of the arms with wooden pegs.

## Key Takeaways

The Punakha Bazam is Bhutan's iconic wooden cantilever bridge, celebrated as the world's longest of its kind, connecting Punakha Dzong to the main road.

### Overview and Historical Significance

The Punakha Bazam spans the confluence of the Phochhu and Mochhu rivers, linking the historic Punakha Dzong, one of Bhutan's most revered architectural landmarks, to the main road. Originally built in the 17th century, the dzong served as Bhutan's capital and seat of government for over three centuries and continues to function as the summer residence of the Central Monastic Body. The bridge itself is a traditional Bazam, a covered wooden cantilever bridge, which in Dzongkha combines "Ba" (cattle) and "Zam" (bridge), reflecting the cantilever beams' resemblance to cattle noses.

### Design and Engineering

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Traditional Bhutanese cantilever bridges were developed to span wide rivers in mountainous terrain, where simple timber beams could only reach about 10 meters. The Punakha Bazam uses cantilever techniques, with two timber arms projecting from each riverbank, weighted and joined with solid wooden beams and pegs to create a stable, unsupported span. The bridge measures approximately 55 meters (180 feet) in length and rises about 180 feet above the river, making it the longest wooden cantilever bridge in the world.

Its reconstruction blends authentic Bhutanese woodworking with modern reinforcements to withstand floods and twisting forces, ensuring both safety and historical accuracy.

### Reconstruction and Resilience

The original bridge was destroyed by a glacial lake outburst flood in 1958, and again in 1994, which also damaged the dzong. For decades, a simple steel cable suspension bridge provided access. In 2000, the German non-profit Pro Bhutan was entrusted with rebuilding the bridge in its traditional style.

Construction began in 2007 after dismantling the steel bridge, and the new Bazam opened to the public on May 12, 2008, symbolizing Bhutanese resilience and craftsmanship.

### Cultural and Architectural Importance

Beyond its functional role, the Punakha Bazam is a cultural icon, reflecting centuries-old Bhutanese engineering, spiritual heritage, and community connectivity. It not only links the dzong to the surrounding villages but also serves as a living testament to Bhutan's dedication to preserving traditional architecture while integrating modern safety standards. In summary, the Punakha Bazam exemplifies Bhutanese ingenuity, combining historical significance, architectural mastery, and cultural symbolism in a single, breathtaking structure.

## Article Content

Punakha Bazam: The World''s Longest Wooden

The rebuilt Bazam is celebrated as the longest wooden cantilever bridge in the world with an unsupported span — a striking testament to Bhutanese craftsmanship

Punakha Bazam: World''s Longest Wooden Cantilever

Connecting the dzong to the main road is the iconic Punakha Bazam—today celebrated as the world''s longest wooden cantilever bridge with

List of bridges in Bhutan

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Bridge Building Heritage of Bhutan — BhutanWiki

The most celebrated tradition is that of the iron chain suspension bridges attributed to the 15th-century Buddhist master Thangtong Gyalpo, but Bhutan also has a rich history of wooden cantilever bridges

A Walk Above the Clouds: Discover the Magic of

The Punakha Suspension Bridge, one of Bhutan''s longest, stretches gracefully over the Pho Chhu River, offering breathtaking views of lush valleys and verdant hills.

Resurrecting the Ancient Bridge in Punakha – Orog Travel

Modern technology was combined with the best of traditional techniques in resurrecting this ancient bridge in Punakha. Invisible steel elements were

Punakha Suspension Bridge – How to Reach, Best

Plan your visit to Punakha Suspension Bridge in Bhutan. Learn how to reach, the best times to go, and tips for the perfect travel experience.

Punakha Suspension Bridge in Punakha

Linking Punakha Dzong to Shengana, Samdingkha, and Wangkha villages across the Tsang Chu River (aka Po Chu), this is one of the longest

Punakha Suspension Bridge Wangdue Phodrang,

It is the longest suspension bridge in Bhutan, stretching across the Mo Chhu River and offering incredible views of the valley and the surrounding natural beauty.

Thangtong Gyalpo is more than just a legendary iron bridge builder of ...

He is most notably known for being the first to construct a suspension bridge with iron chains. On top of that, he also founded Tibetan opera, amongst other things.

New two-way lane bridge replaces ageing Diana Bridge, enhancing ...

Samtse district now has a new two-way lane bridge over the Diana River, replacing the old one, which was a suspension bailey bridge. The Minister for Infrastructure and Transport and the

Hiking the Newly Restored Trans Bhutan Trail Is the

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The newly restored Trans Bhutan Trail weaves through verdant countryside, the Himalayas, sacred temples, local guesthouses, and five-star

Tachog Lhakhang Iron Bridge — BhutanWiki

Tachog Lhakhang (Temple of the Hill of the Excellent Horse) and its iron chain suspension bridge were built in the 15th century by the legendary Tibetan polymath Thangtong Gyalpo near Paro, Bhutan.

Bhutanese Bridge Over the Illgraben in Leuk

Specifically, the Bhutanese Bridge symbolized the friendship between the canton Wallis in Switzerland, country of the Alps, and the Kingdom

Punakha Suspension Bridge: A Marvel of Bhutanese Engineering

Explore the breathtaking Punakha Suspension Bridge, the longest in Bhutan, and experience stunning views of the Himalayas and vibrant local culture.

Khasadrapchu and Begana bridges inaugurated as part of

Six bridges under the 12th Five Year Plan''s Construction and Replacement of Bridges Project have been constructed so far. Two such bridges were inaugurated today at Khasadrapchu

The 4 Major Rivers of Bhutan

Being a small country nestled in the Himalayas, the four major rivers of Bhutan cover 10% of the country''s area, constantly nourished by the

History of Bridges in Bhutan

Photograph 3: Bamboo Cane Bridge at Taksha over Harachu, Wangdi (Author 2015) While the modern bridge construction in Bhutan started with technical degree of maturity like the rest

Related Video Reference

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## Additional source notes

Cantilever beams were developed in order to cross increasingly wide streams or rivers, where simple wooden beams had a limited range of about 10 meters. Two arms with timber superimposed are built on either side of the river, above the highest flood-level point, while being weighted to allow an increasingly large cantilevering, and solid wooden beams are then fixed on each end of the arms with wooden pegs. Bridges o…

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