

Deepak Gyawali, Ajaya Dixit, and Madhukar Upadhyaya, eds. 2004. *Ropeways in Nepal*. Lalitpur: Nepal Water Conservation Foundation (NWCF) and Kathmandu Electrical Vehicle Alliance (KEVA).

Since the first modern ropeway commissioned by Prime Minister Chandra Shamsheer in 1922, ropeway development in Nepal has advanced only 48 kilometers in 80 years, an average of only 0.6 kilometers a year. Out of that, only two ropeways totaling 6 km are operational today.

In the last fifty years Nepal focused largely on the development of roads, but even with roads, progress has not been very impressive. Nepal has built 16,042 km of roads, a figure that looks impressive only when compared to ropeways. Only 4,577 km of roads are paved. In spite of the crusade to build roads there are more remote areas in Nepal, as defined by lack of access, than there are accessible areas. This is true not only for mountainous and hilly regions where roadway development is difficult and expensive, but also in the Tarai where poor villagers still whip their bullock-carts on paths that trucks and cars dare not tread.

In this light, the book *Ropeways in Nepal* is a breath of fresh air and a critical addition to the annals of transportation in Nepal. With enough technical information but written in simple language, the book is designed to attract and influence entrepreneurs, policy makers, and planners. It advocates focusing more energy on ropeways and argues that in a mountainous country like Nepal, ropeways make more sense because, compared to an equivalent roadway system, they are much cheaper and faster to build, operate, and maintain and are extremely energy efficient. Even as it lobbies for ropeways, the book is honest about the underlying complexities and the difficulties of implementing ropeway projects. It is critical of the lack of interest in ropeways shown over the last five decades by both the Nepal government and the international aid community. It finds inspiration in two remarkable Nepali ropeway entrepreneurs: Bir Bahadur Ghale and Rajesh Babu Shrestha. It recommends that Nepal should explore the development of small and flexible ropeways – the “Gaun-Besi ropeways.”

In the first chapter the late Toni Hagen—Swiss Geologist and a dedicated Nepal enthusiast—claims that Nepal, unlike Switzerland, took a wrong turn by pursuing roads at the expense of multi-modal development of roads, ropeways, and railways. Switzerland, a country one-third the size of Nepal has almost five times as many roadways, eighty-six times as many railways and almost 500 times as many ropeways. To be fair, we must consider the disparity in wealth between the two countries. A little web surfing revealed that the Swiss GDP per capita in 1950 (US \$8,939) was six times higher than Nepal’s GDP per capita today (US \$1,400). The Swiss GDP per capita today is approximately US \$32,800. Understandably Switzerland, with its financial resources, could pursue multiple infrastructure projects simultaneously. But Nepal’s financial constraints, I believe, are all the more reason for it to develop alternative and cost effective modes of transportation.

Nepalis who travel abroad are awed by the road networks of Europe and America and return home with a feeling that we too should fill our country with roads. There is nothing wrong with learning from others. Other countries have mimicked each other too. In the US General Dwight Eisenhower returned from World War II impressed by wide German roads that seemed invulnerable to bomb attacks. Upon becoming President in 1953, Eisenhower began building the legendary US interstate highway system largely to serve military purposes. Today, there are some 2.5 million miles of paved road including 42,000 miles of interstate highways in the US. For Americans, life without cars and roads is unimaginable.

In Nepal, however, we need to think differently. We need to be smart about providing access to more people with limited resources. L. Barnaby Smith, Former British Ambassador to Nepal, makes a distinction between building roads and providing access. "While roads seem like an obvious answer" says Smith, "the obvious answer may not be the right one." To be sure, more than fifty percent of Nepalis live in the hills or mountains that comprise two-thirds of the country. Many mountain districts are classified as "remote areas" due to difficulty in transporting people and goods. Building and maintaining roadways in this mountainous terrain is cost prohibitive. "Given Nepal's weak economy" argues economist Surendra Lal Shrestha, "these remote areas will not see motorable roads for a long time to come."

In this context, the book argues that the only way to make remote areas accessible may be to build ropeways that connect villages and hamlets to road heads, airports, and hospitals/health centers or business/administrative centers. Instead of dreaming of a huge network of ropeways, it would be prudent to put our efforts in small-scale and more flexible ropeway projects much like the micro-hydro power plants that are sprouting up in Nepal. In fact, micro-hydro power plants go hand-in-hand with small ropeways. Experience with micro-hydro has shown that there is not enough demand to sustain it financially. Villages use electricity mostly during the night while during the day, power is not consumed. Ropeways, on the other hand run throughout the day and create demand for the unused electricity. Thus the ropeways, in addition to providing transportation, help another struggling local industry and vice versa. The Barpak Ropeway is a perfect example of this relationship.

Running the ropeways on electricity does not pollute the environment like petroleum-run vehicles do. In addition, ropeway construction creates negligible environmental impact and requires less land disturbance.

Construction work on the ground is minimal. In contrast even a simple two-lane road requires significant cut-and-fill and destruction of forest and wetlands in its path. In hilly terrain this means huge costs and severely magnified environmental consequences. It is not uncommon for major chunks of highways to be washed away by floods and landslides. Once the roadways are damaged, it takes significant time and money to repair them.

Although ropeways are simpler, easier, and more cost effective, there is a level of complexity with ropeways, as with any other infrastructure project. They need to be properly planned. The economics of supply and demand apply to ropeways too. Financing even small ropeways can be quite complex. Planners must garner community support by working with the community to understand their issues and needs. Local participation and proper management of ropeways are key to their success. The success and failures of community ropeways like Barpak and Bhattedanda ropeways highlight these nuances. The failure of the Hetauda-Kathmandu Ropeway, on the other hand, reveals the Nepal government's lack of commitment, unnecessary political interference, and personnel mismanagement.

The lack of emphasis on ropeways in Nepal is striking. The National Planning Commission puts ropeways in the category of "other transportation" and Nepal's five year plans have traditionally allocated funding in the range of 0.5 – 0.9 percent of the transportation budget to this category. This is a shame given that two-thirds of the country is hills or mountains. This is sad because it deprives people of the opportunity to better their lives. The example of the Bhattedanda Milkway demonstrates that having quick access to market centers is important even for villagers in remote areas. The ropeway enabled villagers from Ikudol and Bhattendanda to earn extra income from selling milk, vegetables, and other farm products, whereas without the ropeway they were drowning in debt. Without the ropeway, villagers were forced to convert milk to *khuwa* by cooking it for hours. "Making *khuwa*" writes Madhukar Upadhya, "was a lose-lose situation." *Khuwa* took longer to make, burnt more firewood, and sold for three times less than fresh milk. On one occasion the ropeway even saved the life of a pregnant woman. Given such benefits it is hard to understand why ropeways are such a low priority.

If the goal is to reduce the degree of remoteness of hamlets in the hills and mountains, national policy must be aligned with the goal. The government must encourage ropeway development via tax incentives,

credit financing, and subsidies. Even in developed countries governments subsidize infrastructure projects with taxpayer money for the larger good of the nation.

But even in the best of times the governments in any country are slow and resistant to change. To expect Nepal's government to become a ropeway entrepreneur overnight would be a folly. Major changes have to be brought about by individual leadership. Some Nepali entrepreneurs may have helped set the stage for this kind of change in the ropeway industry. The story of Bir Bahadur Ghale is singularly impressive. After reading his chapter I am convinced that Bir Bahadur is a true leader with incorrigible optimism and determination. Bir Bahadur was the champion of both the micro-hydro power plant and the ropeway in Barpak. Even major setbacks like the fatal accident that closed down the ropeway have not discouraged Bir Bahadur from making future plans to reopen the ropeway.

Rajesh Babu Shrestha, the entrepreneur behind the Manakamana Ropeway, provides an account of the difficulty he had in dealing with the government and how, in spite of many hurdles, he was finally able to pull the project through and demonstrate that ropeways too can be profitable ventures. With his vision and perseverance Shrestha made Manakamana more accessible to many pilgrims, especially the elderly who would otherwise have said "*ṭāḍhai bāṭa namaskār.*" A four-hour arduous trek was reduced to a 15-minute comfortable ride on a ropeway. The ropeway also generated more commerce and did not impact local porters' livelihoods.

While it is good that individuals have started a new trend, the government must recognize their contribution and make policy changes that encourage more people to follow in Ghale and Shrestha's footsteps. Nepal's policy makers and transportation planners must take notice. Other private businesses too must learn from these examples. This also presents a great opportunity for Non-resident Nepalīs (NRNs) to make a tangible difference in the country by investing in ropeway projects.

Just as ropeways are important for improving the daily lives of many Nepalīs, ropeways are important for developing tourism both locally and nationally. Our tourism market is far from saturated and we have not done enough to promote it. I am sure that Nepal does not get as many tourists as it should or could. While trekking in Nepal is a major attraction, ropeways could be an additional and alternative attraction. Toni Hagen was seduced by the idea of cruising along in a high altitude ropeway

enjoying the scenic beauty of the Himalayas and believed that no other country could offer such an attraction.

Information on the benefits of ropeways must be disseminated to all Nepalis through multiple channels such as newspapers, FM-radios, television, and so on. In remote areas, the most effective medium may be through word of mouth. Our Gaines (aka *gandharbas*) could traverse the country singing the gatha of Bir Bahadur Ghale in a positive note to the tune of “*tyo Bir Bahadur le hera, Barpak dāḍāma tyati nai khera....*” Planning and engineering students should take the opportunity to learn and conduct academic and practical exercises on ropeways. Institutions like ICIMOD that are well equipped with GIS tools should partner with educational institutions and NGOs to prepare thematic maps and network plans that could help policy makers and planners make decisions.

Yet even as we pursue more studies, we have to remember this finding of the book: many ropeway studies were carried out but never implemented, while the projects that were actually implemented were not the result of any studies. It is important to act now and learn as we build. Another lesson I take from this, like Bir Bahadur Ghale, is that for ropeways to be successful they have to carry both people and goods.

Ropeways may have made very little progress in the last eighty years, but they have the capacity to make rapid progress in the future and come out of Chandra Shamsheer's shadow.

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