GLOBAL IDEAS

'Vertical University' re-imagines villages as classrooms

A unique education project aims to restore the forests of eastern Nepal by turning villages into learning grounds and preserving indigenous knowledge on native species and habitats.

You might call it the world's most expansive campus. Starting in the floodplains of Koshi Tappu in southeastern Nepal near the Indian border, a visitor can trek from one village to the next, learning about the distinct ecosystems as he or she travels a network of educational trails leading north toward Mount Kanchenjunga.

The interconnected villages form the "Vertical University" - a place of informal outdoor education, where indigenous knowledge is passed down from one generation to the next. The teachers are local farmers and residents who possess intricate knowledge on native species and habitats.

Conservation, education and livelihood are central to every classroom - also known as a "learning ground," says Rajeev Goyal, former American Peace Corps volunteer and co-founder of KTK-BELT, the umbrella organization that founded the project. KTK-BELT has purchased at least 100 acres of land in 20 different locations to be developed into living classrooms.

Knowledge of native species in their area is also providing alternative sources of livelihood for the locals. In the village of Dahar, for instance, the discovery of essential plant oils and Himalayan soapnuts has created incentives for villagers to market and sell these products sustainably.

Ecosystems like Dahar are common in Nepal. "If you move 50 meters in any direction, there's a new microclimate, there's a new thing you can learn," explains Goyal. "So how can you just have one [learning] site?"

The region's gradient land formation, from the vast Himalayan mountain range in the north to the lowlands in the south, has created diverse habitats that allow animals ranging from cranes and vultures to tigers, elephants, rhinos, and the elusive snow leopard to coexist.

Scouting ecosystems

Goyal sees himself as the university's "scout" - he explores and discovers villages and ecosystems suitable as learning grounds.

One of the most active learning grounds is in Rangcha, a small village of 50 families situated in the tropical foothills of Yangshila, where people mainly grow corn, rice, millet and vegetables.

The learning grounds are all located at different elevations and in very different ecosystems

For six years, plots of land lay barren there before KTK-BELT set up a permaculture farm on three acres. That will soon contain tropical fruit species like mangos, jackfruits, coconuts, and pineapples.

But a keen local population and availability of land weren't the only factors that made Goyal chose Rangcha as a classroom. It was also selected to protect the community's biodiversity.

"In speaking to the local farmers, we discovered that a great many species that used to exist in this region are now highly threatened," said Goyal.

This was due to habitat fragmentation, poaching and lack of education about the critical importance of these species to the ecosystem, Goyal said.

Only 30 years ago, the area was alive with tigers, bears and wild buffalo. "It was also extremely rich in bird diversity, with various kinds of pheasants and the now endangered Great Indian Hornbill," Goyal added.

Illegal logging, fuel wood consumption, and road construction have also led to deforestation, according to Nepal's Ministry of Forests and Soil Conservation. Forest data gathered by Mongabay shows that Nepal lost 25 percent of its forest cover between 1990 and 2005.

Goyal hopes to use the land purchases to preserve cohesive forest areas. They want to keep very large existing forests intact, and work to design roads around the buffer zones and the national parks.

Helping youth and girls

Providing educational and skills development opportunities for youth is another priority for the KTK-BELT team. The organization currently supports numerous volunteers and five youth fellows who receive stipends.

One of these youth fellows is Ganga Limbu. Her hunger for learning was apparent from her first meeting with Priyanka Bista, design director and co-founder of KTK-BELT. In a country where women and girls face entrenched gender stereotypes and are often restricted to domestic work and chores, the skills development provided through KTK-BELT is the exception rather than the rule.

Since she began working part-time for KTK-BELT, Limbu has been mapping and researching scientific names and uses for plants. She helped catalogue 600 different species, and conducted surveys on farmers and communities the organization is partnering with.

The curiosity and work ethic of youth like Limbu give Bista hope for the project. "We have to tell her to go home because she just won't stop working," she says.

Basic challenges

The biggest challenge for establishing a learning ground isn't convincing the villagers of the university's model, says Goyal. It's the daily logistics: many of the sites have no electricity, and Internet access is rare in some remote locations. It took a year just to get the laser cutter needed to make labels for the 6,600 plants found in the eastern region and to mark educational trails.

Youth fellow Ganga Limbu is mapping the sikti trail. She works part-time at KTK-BELT and receives a stipend from the organization to continue her studies

Another unexpected obstacle was the catastrophic earthquake that occurred in Nepal one year ago. Nepal's National Planning Commission, which formulates development policy in Nepal, had initially signed off on additional support for the Vertical University - but when the earth shook in April 2015, those plans were put on hold.

Goyal and Bista became relief workers in Kathmandu and the nation's resources were directed towards rebuilding.

No mountains required

Setbacks aside, Goyal and Bista see a lot of potential to apply the model they have developed in other places as well. An obvious choice would be western Nepal, which has a similar geography and richness of species.

Overseas, the team can see the model applied in Asian countries like Bhutan and Indonesia or an archipelago nation like the Philippines where it could be adapted to oceanic and underwater habitats.

DW RECOMMENDS

Nepal between reconstruction and conservation
The people of Nepal are still coping with the effects of the major April 2015 earthquake. Although reconciling reconstruction and environmental protection is challenging, forest committees are helping. (03.05.2016)

Biodiversity's treasure chest

WWW LINKS

Belt Project

Birdlife International

Critical Ecosystem Partnership Fund

Mongabay