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Dam Building Threatens China's 'Grand Canyon'

By **JIM YARDLEY**

DIMALUO, China — The highest villages in the mountains above the Nu River seem to hang in the air. Farmers grow cabbage and corn nearly a quarter-mile up, as if cultivating ski slopes. Necessity has pushed them into the sky; land is precious along the river.

They may have to move higher still, perhaps into the clouds.

The Nu, which flows through a region that is home to old-growth forests, some 7,000 species of plants and 80 rare or endangered animal species, is the latest waterway coveted by a Chinese government that is planning to build a new generation of dams to help power its relentless, booming economy.

Unlike the Three Gorges Dam, the world's largest hydroelectric project and the subject of a bitter international debate, the Nu River plan has barely stirred a ripple outside China. But in China the project, which calls for 13 dams in all, has unexpectedly touched a nascent chord of environmental awareness and provoked rare public rifts within the government.

The reason is that the Nu is one of the last pristine rivers in one of the world's most polluted countries, running through a canyon region unlike any other, which a United Nations agency has designated a World Heritage Site. Last year, China's State Environmental Protection Agency and the Chinese Academy of Sciences publicly criticized the Nu project.

"If this river system is destroyed, it would be a terrible blow," said Li Bosheng, a prominent Chinese botanist. "This area has been called the Grand Canyon of the Orient. It forms one of the world's most special canyon environments."

For China, which already has more large dams than any other country,

environmental awareness has been slowly growing since the long fight over the Three Gorges, where ground was broken a decade ago for a project that will cost at least \$25 billion and displace more than a million people by the time it is finished in 2009.

No estimate has been made public for the cost of the Nu project. In Yunnan Province in southwest China, the Nu project would force the relocation of as many as 50,000 people, many descended from Lisu, Nu, Drung, Tibetan and other ethnic hill people. Many are farmers and herders who cannot speak Chinese and who choose to live on the land as their ancestors did.

"If people are forced to move around because of the projects, they are going to lose the way of life that makes them special," said one villager, Alou, an ethnic Tibetan. "It's inevitable that people will lose their traditions if they move away."

From its beginnings in the Tibetan high plateau, the Nu runs through one of China's most remote areas as it carves canyons through the rugged mountain ranges east of the Himalayas. It drops like a roller coaster, a descent of nearly a mile, plunging through gorges as the powerful current scrapes boulders white, as if with a steel brush.

Nor is it alone. It is in the family of rivers flowing out of the Tibetan plateau that become some of the most celebrated and important waterways in Asia: the Dulong, which becomes the Irrawaddy in Myanmar, formerly Burma; the Jinsha, which becomes the Yangtze; the Lancang, which turns into the Mekong in Southeast Asia; and the Nu, which becomes the Salween as it flows into Myanmar and along the border with Thailand.

China is moving to tighten its grip on many of these rivers. It has already drawn downstream protests for dam projects on the upper reaches of the Mekong. Plans are also under way to build several major new dams on the Jinsha nicknamed the "Double Three Gorges" because combined, they would generate twice as much power as the earlier project.

Opponents of the Nu project say their best chance may be to influence the project rather than to stop it. The political momentum to develop such projects in China is simply too powerful, particularly because China is facing a growing energy shortage.

The country is outstripping its power supply and suffering isolated blackouts and power shortages. It is also under heavy international pressure to shift from dirtier coal to cleaner energy sources.

But to critics, the government's answer to its energy problems — developing the vast natural resources in China's west to power the economic boom in the east — smacks of naked exploitation. Chinese environmentalists warn that China will have nowhere left unspoiled for future generations.

"The west development program has turned into the west destruction," said Wu Dengming, whose environmental group, the Chongqing Green Volunteer Union, collected 15,000 petition signatures opposing the Nu dams.

In early February, the switchback trails slicing up the mountains above the Nu in Yunnan were filled with villagers lugging pieces of roofing to mend their houses.

Village women washed their hair in the drainage ditch by the river, while a small boy used a bamboo pole to practice his calligraphy in the road. Many villagers still lived in huts built with strips of woven bamboo.

Hu Huashen lived in Yonglaga, a village of about 200 people on the coveted level land by the riverbank. He walked lightly down a concrete irrigation ditch, past wooden shacks built on stilts above pens of pigs and chickens, before stopping at a small tongue of land. He said that land, maybe three or four acres, allowed his village to survive.

"These fields may be flooded, and then we've got to move up in the hills," said Mr. Hu, a teacher. "What can we plant up there?"

Most villagers, he said, have no idea where the dams are to be built or whether their village will have to move. "It's useless caring anyway, because nobody cares what we think," Mr. Hu said. "If the government wants to go ahead with dams, there's nothing peasants can do about it."

Resettlement is always a bitter issue in dam projects, and villagers often complain that officials do not fully deliver promised compensation and other benefits. Wu Fan, a provincial official in Yunnan, said people from the Nu River would be resettled in nearby townships.

"They shouldn't be living totally detached from the modern world," said Mr. Wu, a deputy director general of the Yunnan Development Planning Commission. "If it were not for the founding of the People's Republic, these people would still be living a primitive way of life, like monkeys or ape-men."

Unemployment is a huge problem in China, and the Nu River prefecture is among the country's poorest. Half of the population earns less than \$80

a year. Mr. Wu, though, predicted that the resettled villagers, many of them illiterate and untrained in anything other than farming, would quickly find work.

"They can either join the tourism industry, the service industry or a tertiary industry," he said. "That will raise their incomes."

In winter the Nu changes from blue to jade to milky green, turning yellowish brown only after the river rises with the spring melt. The river's humid upper reaches pass through Gaoligongshan National Park, considered one of the world's least disturbed temperate ecosystems, where the cliffs are thick with ferns and leafy stalks of bamboo that rise like green plumed fingers.

The area designated a World Heritage Site, located in this region, is named the Three Parallel Rivers, because the Jinsha, Lancang and Nu run beside one another, in some stretches carving gorges nearly two miles deep.

At least a fourth of China's indigenous plant species and half of its native animal species can be found here, including the snow leopard.

"It is one of the most biodiverse regions in the world," said Edward Norton of the Nature Conservancy, which is acting as a consultant to the Chinese government in developing Gaoligongshan as a national nature preserve.

The dam proposal became public last August after reports appeared in the Chinese news media, including China Environment News, the official newspaper of the national environmental agency. It ran several front-page articles, including one titled "The Pristine Environment of the Nu River Should Be Preserved."

Experts who attended closed government-sponsored meetings on the project said the fact that critics were allowed to voice concerns represented a significant change for China. Still, they expect the project to be approved in some form and are pushing for an independent environmental review and other safeguards.

Mr. Wu, the Yunnan official, said the government was committed to environmental protection. He said that relocating villagers would end slash-and-burn farming and added that hydropower was a "clean" power source that would generate the annual equivalent of 37 million tons of coal. "We should not go to extremes in terms of either environmental protection or development," Mr. Wu said.

Up in the mountains, the village of Dimaluo may already be glimpsing the future. A few months ago workers began building a dam on a tributary that flows from a glacier. The dam, separate from the Nu project, came with little warning, and officials have not explained what will happen to the 20 families that must move to higher ground.

Alou, the villager who has been critical of the dams, said officials had promised that the dams would create jobs and provide more electricity, but he is skeptical.

"As far as I can see, no jobs will go to the locals," said Alou, who like many Tibetans uses only one name. "The reason is local education hasn't kept up with the modern world."

The 2,400 villagers in Dimaluo are divided among Lisu, Nu and Tibetans, many of whom live in wooden shacks where dirt pits are built on the wood floors so that fires can be lighted for cooking and heat.

"We're used to life here, so we don't find it very difficult," said one woman, Ba Wenhua. "The river gives us water to drink, and the mountain gives us food to eat."

Aluo says he doubts that many villagers would ever leave the only life they have ever known. He has earned extra money as a tracking guide, and environmentalists are pushing eco-tourism as a way to lift living standards along the Nu.

But Aluo doubts that eco-tourism alone is a solution and says the dam will be even worse. "I told villagers that it's going to be like dropping an atomic bomb on the village," he said.