Building a Bridge to AFGHANISTAN

A Hartford Professor Helps His Homeland Recover
Afghanistan. Sandwiched between Iran to the west and Pakistan to the east, it is a rugged, landlocked country about the size of the state of Texas. High, mountainous terrain and wind-swept deserts make up two-thirds of the landscape of what is one of the world’s poorest countries. The primary sources of income are agriculture and raising sheep and goats. The climate is harsh, and there is an average of 50 earthquakes each year.

Yet Afghanistan’s history is one of wave after wave of invasion and occupation by conquerors—from Alexander the Great and Genghis Khan to the British Empire and the Soviet Union. Its strategic location amidst the Middle East, Central Asia, and the Indian subcontinent has made it a desirable possession since the beginnings of the ancient Silk Route more than 2,000 years ago.

In modern times, the people of Afghanistan have suffered under the Soviet occupation (1979–89) and the years of civil unrest leading up to the rise of the Taliban, whose hard-line religious regime was overthrown in November 2001 with the support of a U.S.-led international coalition.

After nearly a quarter-century of war and political unrest, the country is in ruins and dependent on foreign aid. More than 10 million land mines, a legacy of the constant warfare, pose a daily hazard to Afghans. Roads are in bad repair from frequent use by heavy military vehicles. Many bombed-out bridges have not been re-built, and much of the country is without reliable electricity. Afghanistan’s minister of irrigation, water resources, and environment, Yusuf Nuristani, said recently that only one in five Afghans nationwide has access to safe drinking water.

Urgent attention needs to be focused on irrigation, transportation, agriculture, sewage and water systems, communications, and power generation. It is a monumental job, made even more difficult by the country’s critical shortage of engineers.

One University of Hartford professor is determined to see that aspiring engineers in Afghanistan receive the education they need to help rebuild their country. M. Saleh Keshawarz, an associate professor of civil and environmental engineering at the University, grew up in Afghanistan. He has made many trips back to his native country since 2001 to lend his expertise in such areas as water resources management and irrigation. Most recently, he has turned his attention to revitalizing engineering education at Herat University in western Afghanistan.

Since the fall of the Taliban government, much of the international aid to Afghanistan has been in the form of security and emergency relief. Keshawarz is concerned that these efforts will not have a lasting effect and that the country will revert to the prior conditions of poverty and anarchy that led to the rise of the Taliban.

“I am reminded of an old Afghan saying: ‘If you use clay to fill in a puddle, you will be able to pass today, but the clay will dissolve in the water by tomorrow.’

“To have an impact, the international community must establish priorities with an eye toward the long term. Providing food is not enough. Aid programs must help rebuild agricultural capacity so that Afghans can feed themselves. Also, in addition to building roads, bridges, and hospitals, we must establish the educational infrastructure needed to train engineers and doctors.”

Keshawarz points out that more than 80 percent of the population lives in the countryside and relies on agriculture to survive. Calling agriculture the “mainstay of the Afghan economy,” Keshawarz argues it should get top priority for reconstruction and rehabilitation.

“Our survey of five provinces found that nearly 25 years of war has devastated the farming community. For
example, the majority of irrigation systems are either dysfunctional or operating at about 20 percent of capacity. Since a major portion of Afghanistan’s cereal crop is produced on irrigated land, repairing the irrigation systems is essential.” And in order to do that, Afghanistan needs engineers.

Like many other parts of the infrastructure in Afghanistan, the country’s higher education system is ailing. Herat University, one of the country’s major educational institutions, has an antiquated engineering program, buildings damaged by years of war, no computer lab, and few supplies. “The condition of Herat University is not good at this time,” says Keshawarz. “Faculty are demoralized and that affects the quality of education provided.”

At the request of the local Afghan government and with the support of the University of Hartford, Keshawarz has focused on overhauling Herat’s struggling engineering program. Most engineering faculty at Herat have only bachelor degrees and are using a 30-year-old curriculum. Yet civil engineering is the second most popular major, after medicine, at Herat.

According to Thomas K. Grose, writing about Keshawarz’s efforts in Prism (February 2003), a publication of the American Society for Engineering Education, enrollment in the civil engineering program at Herat University nearly doubled, from 52 to 92 students, between 1995 and 2001. Grose also reported an “appreciable influx of women students” since 2001, after years of Taliban rule that banned women from both the workplace and the schoolroom.

Keshawarz plans to revitalize engineering education in Afghanistan through a proposed partnership between the University of Hartford and Herat University. Hartford would take a leadership role in training faculty and updating Herat’s curriculum. Last December, Keshawarz met with Sharif Faez, Afghanistan’s minister of higher education, to discuss the proposed collaboration.

Under the proposal, Herat University professors would come to the University of Hartford to earn most of their credits toward a master’s degree. A final independent study project, related to a topic about Afghanistan, would be completed at Herat and supervised by a University of Hartford professor through the Internet.

“Afghanistan needs more engineers, medical professionals, and agriculturalists,” Keshawarz says, “to help rebuild the country. Expatriates from various other countries are now filling this void. Should they leave tomorrow, the Afghans would be left trying to pull themselves up by their own bootstraps without the expertise they need to succeed.”

Keshawarz needs $500,000 in funding for his proposal to train the faculty, overhaul Herat’s curriculum, and provide textbooks and computers. He says it will take at least three years to fund the proposal through government agencies, foundations, and other sources. The University of Hartford has asked the U.S. Agency for International Development (AID) and the Asian Development Bank for funding. So far, no funds have become available. The lack of resources has severely curtailed Keshawarz’s efforts.

“My work is now limited to providing my personal books and guidance to the faculty,” he says.

Other U.S. universities are also taking an interest in helping to rebuild Afghanistan. Purdue University is attempting to establish a distance-education program for faculty development at Kabul University.

Keshawarz has also been working on a project with Cornell University faculty, conducting workshops and traveling seminars in Afghanistan to address best-management practices in water, soil, and crop management. Cornell has given him a visiting professorship at its College of Agriculture and Life Sciences, Department of Soil, Crop, and Atmospheric Sciences, for the duration of this project.

A 1978 graduate of Kabul University’s engineering college, Keshawarz holds a master’s degree from Tennessee State University and a Ph.D. from the University of Oklahoma. He has taught at the University of Hartford since 1988 and was chairman of the civil engineering department from 1996 to 2002. He has been active in Afghan reconstruction efforts for the past 10 years.

In Afghanistan from March to June of this year, Keshawarz will return there in August and continue his relentless efforts to rebuild his native land.

“I am hoping the international community will finally realize that without a stronger commitment to higher education, Afghanistan will not benefit in the long run. We must ensure that military victory in Afghanistan leads to long-term economic success. Otherwise, all our efforts will be like clay dissolving in a puddle,” says Keshawarz.