As Iraq recovers from years of war, the country is looking to 21st century methods to rebuild. A unique collaboration with Oregon State University, the state of Oregon, and a nonprofit foundation could make Iraq a model for sustainable engineering within the Middle East.

The partnership is the first link between the war-torn country and a U.S. university or state. Collaboration between OSU, the Iraqi Ministry of Higher Education, and the Michael Scott Mater Foundation began in 2008, when Oregon State graduate Joshua Mater was serving in Iraq with the U.S. Army's Special Forces. A professor at Dhi Qar University in Nassiriya told Mater that bombings had destroyed all of the school’s engineering textbooks.

Mater organized a textbook drive with OSU, which was both his alma mater and where his mother, Catherine Mater, served as the director of sustainability for the College of Engineering. The drive provided more than $30,000 worth of engineering and computer science textbooks to the Iraqi university. The Michael Scott Mater Foundation, which Joshua Mater had created to honor his father—a PE in mechanical engineering whose work had focused on sustainable forestry development—paid to ship the books to Iraq.

From that success came the idea to showcase some of Oregon State’s advancements in sustainable research, technology, and application to Iraq. The foundation secured funding from the state of Oregon, the U.S. State Department, and OSU alumni to bring 19 Iraqi delegates from universities all over the country to the U.S. for two weeks of training in sustainable engineering and green-built design.

According to Catherine Mater, the Iraqi faculty were “gleeful” to meet in person because of limited opportunities to do so at home. In addition to attending lectures at OSU and other area schools, the Iraqis visited top U.S. construction and architectural firms to view practical applications of theory.

The Iraqi university faculty then wanted to further develop their learning. They approached Iraq’s Minister of Higher Education, a unique step in the top-down culture of Iraqi education, and convinced him to create the Iraqi National Education Program in Sustainable Engineering.

In November 2010, both Maters visited Baghdad, along with then-Oregon Governor Ted Kulongoski and OSU engineering Dean Ron Adams. The visit resulted in a memorandum of understanding between the Ministry of Higher Education, OSU, the Michael Scott Mater Foundation, and the state of Oregon for a five-year collaboration to help develop the sustainable engineering initiative.

The agreement will help Iraq implement sustainable engineering education, research, and outreach in rebuilding efforts, including building and infrastructure design and construction, natural resource use, water use, and renewable energy.

The effort will expand testing laboratories in 23 universities to teach materials testing approaches, serve as collaborative research centers, and enable testing for reconstruction efforts in Iraq. In addition, the labs will provide jobs to students working as technicians.

The U.S. partners will help replace laboratory testing equipment that had been destroyed, train faculty, and update curriculum. The initiative will also include student and faculty exchanges.

Joshua Mater, whose foundation has launched other initiatives such as green microloans that can provide capital to Iraqi entrepreneurs, thinks Iraq is at a crossroads. Now the country has enough capital to take infrastructure development to the next level, he says. “It’s imperative to start on the right track and build a country that can sustain itself for the foreseeable future and beyond.” He believes Iraq can do that and become a regional leader in the sustainability movement.

Adams of OSU’s College of Engineering says the collaboration is an inspiring opportunity for students and faculty to make a substantial international impact and to walk the sustainability talk.

For more about the Michael Scott Mater Foundation, visit www.msmf.org.