A picturesque inland lake, Ghana’s Volta Lake borders Digya National Park on the western side of its 5,200-kilometre shoreline. Home to 90 per cent of Ghana’s inland fishery, 80,000 fishers ply its blue waters. But beneath that expansive surface stands another prize: an underwater forest.

There’s the occasional sign of its existence, with trees poking from the surface here and there, looking like crooked fingers. For the most part, the massive forest remains submerged, a state it’s been in since 1965 when the lake – actually a reservoir resulting from the damming of two rivers – was created. But now harvesters are bringing those trees surface-side again with the help of a B.C. company.

Triton Logging Inc. specializes in underwater logging and is set to begin logging the timber that remains perfectly preserved in the lake. And Triton is using its SHARC system (see sidebar, page 19), which includes a Caterpillar excavator, to get the job done.

Triton got its start in the underwater logging business, which traditionally involves small operations with divers using hydraulic chainsaws, when it saw the opportunity to mechanize the process. Using patented technology systems to harvest underwater timber improves safety and productivity.

“The SHARC system, with the Caterpillar equipment, allows us to take proven forestry equipment and to add some unique and proprietary components to it. We place it over the underwater forest and achieve similar productivity that you would find with land-based mechanical logging,” says Jim Hayhurst, Triton’s vice president, business development and global services.
The flooding of hydro dam reservoirs around the world is where Triton uses that equipment, as the oxygen-deprived environment means wood-decaying fungi and microbes are unable to attack the wood, leaving trees dead, but in a preserved state.

Triton estimates that some 300 million trees exist around the world in such underwater forests, a resource worth $50 billion. “It’s a huge resource, especially in a shrinking fibre basket, where living forests are more and more important,” says Hayhurst, whose company has completed forestry projects in underwater forests from British Columbia to Southeast Asia.

In addition to Ghana, Triton is currently working in Brazil, where a number of large hydro electric facilities and reservoirs have flooded areas of rainforest. “We have agreements with governments and with hydro managers to look at harvesting on three reservoirs in Brazil,” says Hayhurst.

As Triton expands its project scope and builds more SHARC systems, Finning will benefit from the growth of the underwater logging company. So too, it seems, will many others. “The environmentalists love it because we’re not impacting natural habitats,” says Hayhurst. “The technology geeks love it because it’s kind of cool, and the business people love it because there are really good returns and it’s a big opportunity.”

Finning got involved when Triton first approached the company to aid in the development of the SHARC system.

“Finning was great,” says Hayhurst. “I think they were really curious about the project when we approached them – but we’ve known them and they’ve known us for a bit. Previously, we were just using their machinery in traditional ways, so when we said ‘this is what we want to do, we have the designs and we’d like to use the Cat system as the basis of it,’ they worked with us to integrate that system.”

Another benefit of working with Finning, says Hayhurst, is the company’s worldwide network. “We’re based in B.C. but the majority of our harvesting actually takes places overseas. Having that global network is really important to us.”

Triton’s Ghana project is its biggest job yet. The company has 20 employees working there, and expects to deploy more equipment and people to the country. “We’ll be working hard to ensure that the value of Volta Lake grows exponentially over time,” says Hayhurst. In March, Triton began working under a 25-year har-
vesting license for 350,000 hectares of the submerged forest – an underwater resource that is the largest and most valuable of its kind in the world. "The base log value we believe is about $1.5 billion," says Hayhurst.

The project is significant for both Triton and the country of Ghana, where Volta Lake serves as a huge transportation corridor. "As you can imagine, with trees sticking out of the lake, it’s quite dangerous," says Hayhurst. "They’ve had a lot of accidents and deaths in the past from people hitting trees with their boats. So part of our project is also about clearing channels, and clearing areas where boat traffic can go and not have to worry about hitting trees."

After Triton’s SHARC system brings up logs from the underwater forest, the wood will go to both international and local markets. The wood is treated like any other wood: cut, dried, and then used in a variety of ways, "anything that regular wood gets used for," says Hayhurst.

"There’s probably a couple dozen tree species that we’ll find underwater in Ghana and many of them are quite valuable, as they are species that are difficult to find on land," Hayhurst says.

Because of the low environmental impact of the SHARC system, which doesn’t disturb the lake bed or kick up dirt in the water, the wood can be certified by the Rainforest Alliance’s SmartWood Rediscovered Wood program, making it a sought-after product for anyone seeking an environmentally sound wood choice.

"It’s in demand around the world for its environmental credentials and also because it’s kind of a cool story," Hayhurst says. "People can say, 'I have wood that came from a forest that was flooded 40 years ago', and that’s quite remarkable."

Wood harvested from Volta Lake will be available locally for use by Ghanaian companies, while other wood will be sold in high-end markets around the world. Wood harvested by Triton has previously been used to make a temple in Japan, a green building development in Victoria, and has been sold to high-end luxury resorts and furniture companies.

"At the end of the day, it’s just like any other wood," Hayhurst says, "except it comes with this incredible story and this great environmental benefit."