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Green School: The Greenest on Earth

Walking over the bridge, I am astounded by the amazing architectural details and colors… Photo by Nathan DeHart/Silent Images

GREEN SCHOOL: "The Greenest on Earth"

by Aran Baker

In 2012, Ecotecture contributing author Aran Baker, spent four months at Green School in Bali, Indonesia, conducting research. She sought answers to questions such as, "how does architecture affect and support the quality of eduction?," and "how are buildings helping connect teachers and students with the natural world?" She also looked at the relationship of traditional Balinese architecture to sustainable design.

Here's what she found:

Green School is not an easy place to get to. The bumpy, narrow, potholed road through the jungle belies nothing of what lies ahead. After about ten minutes of bouncing around on my motorbike, I turn left and drive over some sharp cobblestones, following directions I had scrawled on a piece of paper.

I park my bike in a small parking lot overlooking a patch of vegetable gardens and make my way down to Green School's new bridge, the design of which is inspired by the traditional Minang (short for Minangkabau) house in Sumatra, famous for its curved roof shape. Walking over the bridge, I am astounded by the amazing architectural details and colors—the light and dark bamboo shafts playing against one another and the intricate lattice work.

The Ayung river rushes by below, particularly high this time of year. After crossing the bridge, I pass a student-tended rice field, followed by more vegetable gardens as I head up the hill to Heart of School, one of the largest bamboo buildings in the world.

An international school for children from pre-kindergarten through grade twelve, Green School's mission is to provide a holistic education while, "empowering global citizens and green innovators who are inspired to take responsibility for the sustainability of the world." Located in Sibang Kaja, an un-touristed part of Bali about thirty minutes south of Ubud, the campus is comprised of a number of open-air buildings designed entirely out of bamboo.

Green School, “The Greenest School on Earth”

On April 20th, 2012, Green School announced an award from the United States Green Building Council (USGBC) for the “Greenest School on Earth.” A representative from the Center for Green Schools (under the USGBC) presented the award to Green School’s co-founder John Hardy during the school’s Earth Day assembly celebration. The criteria for the award includes three categories: Environmental Impact, Health, and Environmental Literacy. The award was originally created for “The Greenest School in America,” but none of the submissions from within the US came close to meeting the criteria.

So what makes Green School the Greenest School on Earth?

The architecture leads the way. Open air, curved bamboo buildings enable kids to have an intimate connection with nature. Heart of School, designed after the shape of a double-helix, has three circular towers intersecting in the center. My first impression is one of awe—it is not like any other building I have ever seen. With its gigantic alang-alang (traditional grass) roof set against lush green grass and gardens, Heart of School looks like something out of a fairy-tale, Swiss Family Robinson style.

Open air, curved bamboo buildings enable kids to have an intimate connection with nature. Photo by Nathan DeHart/Silent Images

Upon entering the building, layers of complexity and visual detail unfold, accented by light coming down from several skylights. After some time, this sense of awe wears off and is replaced with a unique subtlety; the building feels strong and yet barely there, a sheltering presence, almost like a watchful mother hen.

From a design perspective, the project has proven to be a successful pioneering effort in bamboo. In 2010, Green School was named a finalist for the Aga Khan Award for Architecture, given every three years to projects around the world that set new standards in architecture, planning, historic preservation, and landscape architecture. The award focuses on areas of the world where Muslims have a significant presence. Specific attention is given to projects that use local resources and appropriate technology in new and innovative ways.

John Hardy’s Elora daughter heads Ibuku, the design company behind Green School. She says of bamboo, “Even sustainable timber can’t begin to compare with bamboo as a conscientious building material. With very few resources or attention a bamboo shoot can become a structural column within three years, and that house could stand strong for a lifetime.”

Walking around the building, I am continually impressed by the attention to detail and refined craftsmanship. The roofs are constructed in the traditional Balinese way, with ties holding the alang alang to the bamboo purlins. A set of beautiful, curving stone stairs leading up to Heart of School were laid by a local farmer.

Green School: Small Carbon Footprint

Green School prides itself on its small carbon footprint. It plans to have 100% of its electricity generated by solar photovoltaic panels and vortex hydro technology which diverts water from the Ayung river and channels it through a turbine. Heart of School (including a fully-equipped computer lab and administrative offices) is already powered entirely by solar. The solar panels follow the contour of the earth, making them look more like an art installation than a solar field. Even the smallest design details seem carefully considered.

Ibuku is now working on a project called Green Village, a community of luxury bamboo homes within walking distance to Green School. All of the construction is done by hand by local artisans who use no steel (even whittling individual bamboo pegs in place of nails) and a minimal amount of concrete. John Hardy set up the Meranggi foundation to supply the bamboo. The foundation works with local Balinese rice farmers, supplying them with bamboo seedlings to plant in shady areas and ravines on their land.

After four or five years, the bamboo has sufficiently hardened and is ready to be harvested. In order to prevent insect and mold infestation, they preserve the bamboo with borax (sodium borate) diluted with water. Borax is considered to be the safest and most environmentally friendly preservation method.

Green School: An Educational Village

Green School was conceived in 2006 by John and Cynthia Hardy. Inspired by reading Alan Wagstaff's *Three Springs* concept for an educational village, the Hardys (who have lived in Bali over 30 years) decided to sell their successful jewelry business and found the school in order to take action and "serve as a model for schools all over the world."

They said, "We are building Green School to create a new paradigm for learning. We want children to cultivate physical sensibilities that will enable them to adapt and be capable in the world. We want children to develop spiritual awareness and emotional intuition, and to encourage them to be in awe of life's possibilities."

We want children to cultivate physical sensibilities that will enable them to adapt and be capable in the world. Photo by Nathan DeHart/Silent Images

The school opened its doors in 2008. Helping pioneer sustainability within education, Green School offers hands-on arts programs and "green studies" classes, where students learn how to grow vegetables, plant rice, and take care of goats and pigs.

I spoke to one green studies teacher who said that often a snake or a large insect will wander into class, and the kids gather around, trying to figure out the animal's species, so the class becomes about that. The students seem genuinely happy to be there. As I waited in line for coffee at the school's Warung (Cafe), one student excitedly told me, "You should order the turtle slushie—it is coffee blended with coconut cream. The proceeds go to a sea turtle fund set up by my global perspectives class."

Alan Wagstaff, author of the *Three Springs* document that helped inspire the Hardys to build Green School, acts as Learning Manager. Alan brings over forty years of expertise in helping develop student-centered learning.

Of course, like any pioneering effort, there are some downsides. The *Greenest School on Earth* comes at a hefty price. The annual tuition, for grades six through twelve is just over $12,000. In the past few years many have come for only one year, en-route to somewhere else. They have a scholarship program for Balinese students, but so far they comprise only 10% of the student body.

Next year will mark their first official graduating class. Green School states their purpose as helping "educate young leaders in global citizenship." How will these students go forth in the world? What will be their contribution as global citizens and stewards? What will it be like for them to enter into a college in the United States or Europe, where classrooms have walls and nature is not at their fingertips? Will Green School inspire a movement of other green schools around the world?

The award for the *Greenest School on Earth* says they are doing something right.

Upon leaving, I walk back through Heart of School… Photo by Nathan DeHart/Silent Images

Upon leaving, I walk back through Heart of School, the gold afternoon light illuminating the layers of bamboo and creating intricate shadows on the floor beneath my feet. Most of the students have already left for the day, and an unusual quiet permeates the building. I stop and look at some of the student artwork. One fanciful painting depicts someone running through the forest. It reads, "The time to be happy is now. The place to be happy is here!"

Find out more about Green School here: http://www.greenschool.org/
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