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BUILDING GREEN

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MANILA, Philippines – The buzz about being sustainable grows louder because our environmental choices are now dwindling to critical proportions from repeated human abuse of natural resources.

Now is the time, says the Philippine Green Building Council (PhilGBC), to conserve nonrenewable resources by rethinking architecture and construction methods, by going green, and building with sustainability in mind.

Organizations work in specific environmental areas such as solid-waste management, water management, sanitation, renewable energy, or building envelope design—areas all demanding crucial, past-due solutions to green our vulnerable surroundings.

Environmental activists advocate countless approaches to sustainability, but the rule of thumb is simply to "return what you remove from the earth."

The idea of going green is really not a new one. Our ancestors practiced it. Green is an orientation we have lost and therefore must relearn.

Take a look at the traditional Philippine bahay-kubo, a perfect example of a totally green structure that has been around for a very long time.

The structure is built out of totally renewable natural material, bamboo and nipa, resources that grow abundantly around the area where the house is constructed.

Tall, sloping roofs of thick dried palm leaves, nipa, anahaw or other varieties, or grass (cogon) thatch insulate the entire structure from the hot tropical sun. Wide, exaggerated roof overhangs amply shade window openings, keeping rain out and cooling the ambient breeze before it is let in.

Because monsoons bring torrential rains and floods, the structure's single room is raised above the ground for protection, leaving the bonus of an open, covered space underneath for sunny-day family use.

In the hot, damp tropics, proper air circulation is essential to cool the interiors of houses. Bamboo slats floor the kubo's single room, drawing cool air from underneath the house to circulate throughout the entire dwelling area.

Shade is essential to keep the bahay-kubo cool. Around clusters of rural dwellings are planted large trees that eventually grow tall enough to add another layer of shade, as oasis of cool in hot, sun-drenched rural areas.

The bahay-kubo is a house totally suited to and absolutely compatible with its environment.

From 'kubo' to 'bato'

Spanish-era builders took cues from the bahay-kubo to incorporate into the bahayna-bato built during their time.

Roofs, now of terra-cotta tile, were still designed high, peaked, and oversized with wide overhangs that keep out rain and sun. The family quarters, now enlarged, were still completely on the second floor, and what used to be an open ground area beneath was closed in with stone walls.

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Air circulation, still at a premium for tropical comfort, was ensured with large windows in the living area that slid completely open, exposing the interior to the breezes around the house, while adding ventanillas, sliding windows between the floor and bottom window sill to allow more air to enter the house.

The air-circulation system didn't stop at the exterior walls of the house. Within the house, large doors swung open, connecting rooms to each other. Wooden fretwork, delicate lace-like cutouts on the top portion of walls, further increased air circulation.

Although many houses had wells, rain water channeled into large cisterns was stored for family use.

American-period builders in the early years of the 20th century still maintained the same bahay-kubo environmental sensibility. Although the houses were smaller than the bahay-na-bato, they still maintained the same roof, overhang and air-circulation features.

These houses, called chalets, still constructed mostly of wood but now incorporated with the modern concrete bases of the era unlike the stone bases of earlier homes.

Even the modern buildings during the Commonwealth days, designed in the latest Art Deco style, were "tropicalized" with many of the same architectural and environmental principles seen in the architecture that preceded it. These were still days of learning from past traditions and adapting them to current design trends.

During the frenzied post-World War II building-reconstruction days when being "modern" was the rage, past traditions were forgotten. Houses followed western styles that were totally unsuited to the tropics, and that is where the disconnection with the environment began.

In keeping with the style of the times, roofs and ceilings were lowered and windows made smaller. Air circulation was a thing of the past since air-conditioning dealt with the heat that the cooped-up interiors generated and the lack of air. Anyway, power was cheap in those days.

Those days didn't last and power didn't stay cheap. Forests vanished. The supply of building materials of old ran out, affecting environmental conditions. Weather changed, for the worse, many said.

So environmental sustainability became the call of the 21st century.

To do

Design architecture that does away with excessive use of energy. Get maximum sunlight into buildings to save on lighting. Tap and circulate natural ventilation throughout the interiors to take advantage of natural cooling breezes. Use building materials that are sustainable.

Buzzwords developed. Advocacy groups mapped out campaigns and strategies. People became sensitized. Green is the only way to go if we still expect to have anything from this earth to bequeath to the next generation.

What this generation could do is look at what those who have gone before us have done, to see how those simple environmental precepts they followed in building houses and in organizing them into communities are still absolutely valid for 2007.

We've been green for a long time. It's now time to go back and relearn everything that we have unlearned.

Information about green architecture and construction is available at the Philippine Green Building Council, a nonstock, nonprofit organization that aims to introduce environmentally sensitive practices in designing, building, and managing the built environment. The organization champions environmental building practices and serves as the forum for promoting, formulating, and testing green building ideas. Contact them at info@philgbc.org.

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