

# Green Sensibilities

Story : Voralak Suwanvanichkij  
 Photography : Nakarin Banjerdjin  
 Images : courtesy of projects and resorts



Tamarind Village, Chiang Mai

From natural to high tech, green initiatives are catching on among Thailand-based developers, especially those in resort and coastal areas. Offsetting carbon footprints, preserving natural surroundings, and reducing impact are moving from rhetoric to reality, thanks to heightened environmental consciousness and consumer demand.

## Close to Home

In addition to the broader global urgency in addressing climate change, hard-hitting issues close to home have spurred the need for greener, more sustainable practices.



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 Head of Construction, Boutique Asset Management

Rampant development and unchecked growth often tax an area’s infrastructure and natural environment, with dire consequences.

Phuket, for example, generates more than 500 tonnes of garbage each day but only possesses around half the resources to handle this amount of trash. The island’s sole incinerator spews up to forty times the acceptable level of hazardous dioxin, a major cause in the rise of cancer cases among residents.

Also, an Office of Natural Resources and Environmental Policy and Planning (ONEP) survey of Thailand’s coastlines revealed that, during seasons of low rainfall, about forty percent of coastal waters are contaminated with coliform

bacteria. Attributed to untreated wastewater being dumped into waterways and the sea, coliforms may indicate a high risk of pathogens being present in the water, causing human illness and killing aquatic life.

Extensive clearing of natural habitats exacerbates calamities such as drought and flooding. Last November, torrential rains pounded the island of Samui and resultant floods severely damaged roadways and public utilities. Samui incurred a THB 100 million cleanup bill, and district officials blamed the severity of the flooding on deforestation and construction of haphazardly located buildings that hampered natural water flow.

## Green Design

“Green design is nothing new in Thailand,” says Sathit Seupsuk, head of construction for Boutique Asset Management, the firm behind the Citadines and Oakwood serviced apartments in central Bangkok. He continues, “It has always been around but in the past ten years, it is being applied on a much larger scale.”

Sathit cites the example of Professor Soontorn Boonyatikarn of Chulalongkorn University’s Faculty of Architecture. “Professor Soontorn is Thailand’s eco-architecture pioneer who was designing and constructing sustainable buildings long before anyone else. People used think he was mad.”

Indeed, fifteen or twenty years ago, the professor’s ideas stood out in this traditionally conservative field. His own house is designed

not only to be energy efficient but to also harvest energy. 62.5 square metres of solar panelling provide more than enough power for the home, and Soontorn sells surplus electricity to the national power grid.



Solar cell

The design of the home maximises use of natural light and airflow. It also sports a charcoal water recycling

system, insulation that collects rain and condensation for reuse, and a system that channels heat from the air conditioning to warm the pool and heat water.



Sathit Seupsuk  
 Head of Construction, Boutique Asset Management



Chris Clayton  
 Managing Director, Kensington

## Eco-conscious Consumers

These days, many of Soontorn’s implementations appear in new building projects, reflecting a shift in consumers’ interest and preferences. “Green attitudes came in when outside hotel and resort operators changed their environmental approach. It started in response to the demands of visitors but it’s also picking up because of rising energy costs,” remarks Sathit.

Additionally, homebuyers seek greener alternatives. “From my experience, it is affluent foreigners, especially Europeans and Americans looking to invest in Thailand, retire or have a holiday property,



The River

whom are more keen on lessening environmental impact," says Chris Clayton, Managing Director of Kensington, a local construction firm focused on green initiatives. He adds, "Developers are becoming more conscious, realising they have to compete as buyers are requesting solar and other remedies in regards to energy issues."

While foreign, up-market buyers appear to be driving green developments, mainstream consumers are not as keen because of the cost. "You're inevitably paying more for a solar-electric array or double-pane windows," says Sathit, "But we are increasingly seeing greener technologies, such as more energy-efficient air conditioning, being employed. When it makes sense from the cost perspective, you get mass uptake."



### High tech high-rises

One project that is adopting the green concept on a massive scale is the Ocean 1 Tower in Pattaya, slated for a 2011 completion. Developed by Siam Best Enterprises, the 91-storey luxury condominium features a number of energy-efficient measures, from powering its retail spaces with solar energy to lighting the deck with electricity harvested from the momentum of the lifts.

Like in Soontorn's home, supplemental water heating is a by-product of heat generated by the building's air conditioning system. Also, eighty percent of used shower and tap water is treated and reused to flush toilets, fill fountains, and water the grounds.

Raimon Land's The River is another prominent development with a number of eco-friendly initiatives. Situated on the Chao Phraya River in Bangkok, the 73-storey residential condominium is currently under construction. The building employs solar panels to power its common areas and utilises water-cooled air conditioning, with central tanks pumping water throughout the building. Raimon Land is also working with the Plant-A-Tree Today (PATT) Foundation, a UK-based charity, to offset its carbon emissions.

### From Organic Gardening to Coral Regeneration

Eco-initiatives also encompass a wide range of natural activities. A number of resort and residential developments have implemented creative, sustainable practices.

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SunParadise



SunParadise



West Sands

At Six Senses Hideaway in Samui, used vegetable oil from the kitchens is recycled to make bio-diesel for powering gardening trucks and other light vehicles. The resort also makes its own bio-gas, converting gases from composting and sewage into enough energy to run a small generator.

An on-site water treatment plant supplies clean, recycled water to the organic garden. Herbs, vegetables, and fruits that are grown are served in the restaurants, used in spa products, or simply left as part of the landscaping.

West Sands, an exclusive villa and condo development on Phuket's west coast, devotes about half of its 100-rai land to greenery, preserving its natural, beachfront surroundings and providing plots for residents to grow their own organic produce.

Energy efficient air conditioning, water conservation systems, solar energy, double glazing, and biodegradable refuse plants help reduce running costs by about twenty percent. West Sands recently won the Green Development Award at the Thailand Property Awards. It also aims to be the first

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development in the country to achieve the Leadership in Energy and Environmental Design (LEED) Silver Rating, a set of international standards for environmentally sustainable construction.

The Banyan Tree resorts also won environmental accolades, especially for conservation and environment rehabilitation efforts. The Banyan Tree Phuket was built on a former tin mine, a site once labelled as toxic and un-developable. In Maldives, on-site experts engage in coral regeneration, including spawning and transplanting, and turtle conservation.

The company also implemented "Greening Communities", a group wide programme aimed at raising awareness of environmental issues and global warming. As part of its agenda, each resort must



The Banyan Tree, Phuket



Tamarind Spa Restaurant - The Banyan Tree, Phuket



plant 2,000 trees in its vicinity each year. The Banyan Tree's Green Imperative Fund also matches guests' contributions, further expanding conservation and community development efforts.

### Coordinated Regulatory Efforts

Used extensively in Thailand, the Environmental Impact Assessment (EIA) must be approved before construction permits can be granted. EIA terms are often vague but subject to rigid interpretation that may not be feasible. One such measure, for example, stipulates that developers are to plant trees proportionate to the air-conditioning capacity of its constructed buildings. Other grievances include the lack of rules on public participation and failure to address specific environmental issues.

Nevertheless, community-based management strategies appear to be increasingly employed, involving public agencies, international organisations, NGOs, and local residents, especially in regard to large-scale developments. In Phuket, an investigation as to whether a marina should be built at Cape Yamu is being developed as a "test case" for similar projects in the future.

At a public hearing, local villagers and relevant agencies discussed whether the eastern cape could support a 39-berth marina, hotel covering 100 rai, and other facilities. They considered the effects of construction on quality of life, traditional livelihoods, and the

surrounding environment. Parties also debated whether coastal zoning should be implemented, an especially heated topic for investors and land preservationists.

### Minimising Impact

Compared to the West, Asia has lagged in eco-friendly construction, but the situation is shifting. There is now a wide range of options (and costs) developers can employ to mitigate environmental impact, save energy, and build in a greener fashion.



From less expensive "passive" steps to the latest technologies, the following are some eco-minded tips to consider:

- Design with natural light, heat, and humidity levels in mind.
- Position the building and its windows and doors according to wind direction for optimal and controllable ventilation.
- Keep rooms cooler through use of window shades, roof overhangs, or sensors that adjust electrical lighting according to the amount of daylight in a room.
- Install appropriately-sized, high-efficiency air conditioning systems that channel compressor heat towards heating water.
- Select environment-sensitive and long-lasting materials, including recycled and/or locally sourced products.
- Promote water efficiency, from collecting rainfall for use in the garden to dual-flush toilets.
- Harvest energy from "untraditional" sources, whether it is in the form of homemade bio-diesel, sunlight, or wind.
- Control waste from building construction to management, reuse and recycle if possible.

Going green certainly adds cost and requires extra effort up front. Yet if large-scale developers sense its feasibility, then such eco-initiatives should pay off in the long run. Whether it is consuming less electricity, reducing garbage through composting, or employing sustainable building products, benefits should materialise over time. And in this case, they extend way beyond monetary savings.