

Aiming for Green

Though popular around Asia, golf is often seen as an environmental nightmare. PAUL SPENCER SOCHACZEWSKI explains why it doesn't have to be so

THE WORLD HAS NO SHORTAGE OF ARGUMENT-generating themes: Politics, religion and the idea that golf is bad for the environment are favorites. The first two are endless discussions.

But I'm more concerned with the golf debate, since anti-golf proponents seem as numerous as golfers themselves.

Taking a positive approach to the topic is Greg Norman, the highly successful Australian professional golfer who also designs courses. "Golf courses can be community assets. Not only can they elevate property values, create jobs and provide tax revenues, they can also provide green spaces, filter air, purify water and create wildlife habitat."

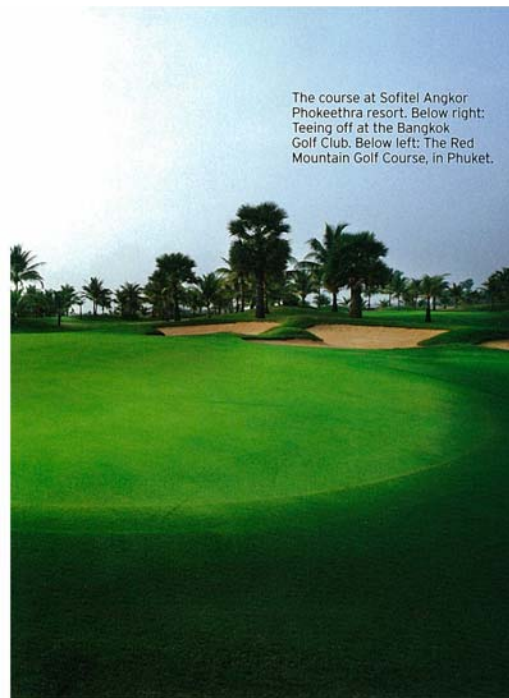
Still, I needed more than that to be convinced so I went to Singapore in search of my own answer. At the city's Keppel Club, and elsewhere throughout Southeast Asia, are indications that suggest "good" golf courses exist, and that a well-managed course can be beneficial both for nature and for people.

These are not insignificant issues, given that there are an estimated 18 million golfers in Asia who play on 3,700 18-hole courses—more than a quarter of them built since 1990—according to the R&A, a St. Andrews, Scotland-based organization that serves as the game's rules and development body. With many more courses under development throughout Asia—Vietnam alone has 18 golf courses open for business, 58 under construction, with a further 68 having applied for licenses—the questions revolving around golf and the environment take on more gravity.

Water use; contamination from fertilizers, pesticides and herbicides; and land conversion are the main issues surrounding golf courses, and all lead towards the question of long-term environmental impact. "Courses get developed and the land and communities are changed, though not necessarily permanently," says Christopher Plante, director of environmental programs at The Asia Foundation. "In the last 15 years, I have walked through abandoned golf courses in Southeast Asia that have pretty much returned to their original state, including a revitalized watershed capacity and wildlife habitat cover."



LEFT: COURTESY OF RED MOUNTAIN GOLF COURSE. ABOVE: COURTESY OF SOFITEL ANGKOR PHOKEETHRA GOLF AND SPA RESORT. OPPOSITE: COURTESY OF BANGKOK GOLF CLUB



The course at Sofitel Angkor Phokeethra resort. Below right: Teeing off at the Bangkok Golf Club. Below left: The Red Mountain Golf Course, in Phuket.

Like all of Singapore's 32 courses, the Keppel Club must **ADHERE** to stringent environmental regulations



Plante adds that golf courses can be environmentally friendly, with careful planning. "Communities should be involved earlier and more often in the development," he says.

I'll be the first to admit that I am biased. As well as an avid golfer, I work in the nature conservation field and am chairman of the Swiss-based International Golf and Life Foundation (IGOLF), a nonprofit organization that promotes eco-friendly golf. I had been told that Singapore's Keppel Club is one that sets a good standard. Within sight of Sentosa Island, the club was established in 1904 and now has some 4,000 members playing about 5,500 rounds a month. As I tee off on the hilly, lush and difficult inner-city course, my mind overflows with mental baggage. I have the usual golfing thoughts clamoring around my head—straight back, bend right elbow, follow through. But I also have a head full of information that indicates Keppel has got it right.

When he took over as the club's president, Edwin Khew instituted a "Go Green" master plan to make Keppel an "environmental standard bearer." Khew, a nominated MP, engineer and industrialist specializing in transforming waste into renewable energy, explains that the plan includes extensive planting of trees and shrubs, which encourages birds, butterflies and animals to reproduce; waste management; outreach to the community and to members; and "green operations" such as energy saving and recycling. Such efforts, he says, can also benefit the bottom line. Recycling organic waste and turning it into bio-compost, for instance, saves several thousand dollars annually.

From the elevated open-air restaurant next to the first tee, I could see how several of Keppel's holes parallel Berlayer Creek, a significant mangrove swamp. Desmond Chua, Keppel's deputy general manager, explains that not only does the club help work with the city to manage the mangrove, but it has instituted awareness programs with upstream residents and local schools, to inform them about the importance of this scarce natural resource, which lies on club property.

While this sounds like an almost-utopian situation, in recent years Singapore's outspoken conservation groups have vocally opposed new golf courses. Alan OwYong, a consultant in the satellite communications industry and a member of Keppel Club, says "Things are better now, largely because there is more dialogue. Courses are listening to the advice given by the conservationists."

Admittedly, Keppel Club doesn't have much choice in whether or not to be a good environmental citizen. Like all of Singapore's 32 courses, Keppel must adhere to stringent environmental regulations—in Asia, only Japan has similarly tough rules. Of particular importance in Singapore is the maintenance of an independent water supply. Each of Singapore's golf courses borders on one of the country's 15 reservoirs and must comply with stringent pollution-control requirements, which are strictly enforced in the city-state. »

'All land use has an *impact* on the environment. The trick is to minimize damage and enhance natural VALUES'



Keppel Club's conservation work has been recognized by the Nature Society (Singapore), which, in a 2008 report, noted "although it is not itself a wildlife sanctuary, it has over the decades of its existence become increasingly indispensable as a wildlife corridor ... for birdlife."

THE PICTURE IS FAR MORE CONTENTIOUS elsewhere in Asia. Golf developments have become a hot-button issue. South African Gary Player, another golf legend who also has his own golf-course design business, predicts that water issues will be the key factor in whether new golf courses get construction permits from local authorities. "A course's irrigation needs can keep 60,000 people in water for a year," Player says. "Everyone thinks that if you put a tap on there's water to be had, but that is coming to an end." Part of the solution, he feels, lies in using effluent, or "gray," water for irrigation, along with other conservation measures.

"Golf courses—like many things—are not simply good or evil," Bruce Tolentino, a director at The Asia Foundation, points out. Some are wasteful or environmentally destructive, while others are as environmentally friendly as current technology allows. "As we learn more about the environmental impact of what we do," Tolentino says, "we see courses adjusting in response."



I still needed to see for myself. So I went to Cambodia to see how to handle the challenge of building a course in a seasonally dry region. In designing the new Phokeethra course in the historic city of Siem Reap, Thai architect Weerayudh Phetbuasak worked with Sofitel, the resort's managing company, to provide adequate water without harming the ecosystem or jeopardizing the water supply of local farmers. To do so, he created 19 lakes holding 800,000 cubic meters to collect rainwater for irrigation, and a pumping system to channel the water through all the water hazards on the course.

Other Asian courses have addressed environmental challenges in different ways. Red Mountain Golf Course on Phuket was built on a disused tin mine, a good example of restoration ecology in which a devastated, empty landscape has been transformed into a vibrant relatively natural ecosystem. Today the course has become a haven for wild birds seeking a sanctuary on an island where green space is fast disappearing.

Vietnam Golf and Country Club, outside Ho Chi Minh City, takes a "minimalist approach" to fertilizer and pesticide use, according to Blair Cornthwaite, the club's general manager. One innovative strategy is to use the organic by-product produced by a nearby monosodium glutamate factory to produce liquid organic fertilizer.

Bangkok Golf Club has taken a pro-active route to promoting biodiversity—they have planted some 2,500 species of plants and trees and introduced a wide variety of local waterfowl and other birds to create an "all-natural" aviary.



Jeffrey A. McNeely, chief scientist of the Swiss-based International Union for Conservation of Nature, and a keen golfer, recognizes the need for responsible golf development, but thinks it's possible to create sustainable courses in the future. "All land use has an impact on the environment. The trick is to minimize damage and, where possible, enhance natural values," he says. "While there is no standard global certification process, an increasing number of people in the conservation movement recognize that golf is here to stay and urge that golf courses take steps to improve the site on which they are built. They can do it, but it takes some effort, planning and commitment."

I got a good indication of the Keppel Club's strategic importance on the course's par-4 8th hole. Just 100 meters behind the tee-box, Singapore is adding a new station to its subway system. Behind that building site, cars whizzed past on the West Coast Highway, and behind that the Singapore skyline stood in all its steel-and-glass prominence.

But turning my back on "new" Singapore, I tee up and spot a broad green expanse on the right side of the uphill fairway. It's the Belayar Creek mangrove, and as I walk to my ball I smell the moldy, musky scent of a living mangrove, where the vegetation grows and deteriorates in a satisfying, never-ending cycle. I read a signboard posted by the club that told me that the rare Tanimbar cockatoo, *Cacatua gollini*, which is listed as "near threatened" internationally by conservation experts, has been sighted here, just one of the 58 bird species which have been recorded within the club's territory. This isn't just a golf course after all. +

Green Designs Below: On the verandah at Sofitel Angkor. Left: The Vietnam Golf and Country Club. Far left: Players at dusk at the Bangkok Golf Club.



JUDGING A GOLF COURSE

As with anything else, the best way to uncover how environmentally sound your favorite golf course is to ask as many questions as possible.

sufficient in water? Does it use gray water for irrigation? Can the course's reservoirs provide water to neighboring communities during dry spells?

• **CHEMICALS:** How knowledgeable is the course superintendent on subjects like choosing and applying chemicals properly, selecting the right turf grass and applying principles of integrated pest management?

• **ENERGY:** How does the course get its energy – from public utilities or from its own generating plant? Does it use alternate energy sources, such as solar or wind, or attempt to conserve energy?

• **WILDLIFE:** Do you see birds, butterflies, dragonflies? Is there a variety of trees? Is part of the course set aside as an ecological no-go zone? Is there vegetation growing on the edge of lakes and in between fairways?

• **RECOGNITION:** Has the course been recognized by groups such as Royal and Ancient, IGOLF or Audubon International? Have key staff attended environmentally related training programs? Do the club's members support environmental initiatives?

• **WATER:** Is the course self-