By Alex Hess

**ADDITIONAL REPORTING BY REHAB EL-BAKRY**

The vibrant coral reefs of Egypt’s Red Sea coast are a huge draw to recreational divers, but the development of these areas is attracting an ever-broadening range of tourists and putting a strain on finite natural resources. Fortunately, the various stakeholders have recognized the importance of conservation for sustainable development, and are taking steps to protect the reefs that provide their bread and butter.

In 1952, Jacques Cousteau, inventor of the Aqua-lung – the precursor to modern, closed-circuit scuba gear – filmed the first underwater color film on a dive in the Red Sea. The footage was included in his Academy Award-winning documentary *The Silent World*, which brought the beauty of the Red Sea to millions for the first time. Since then, and with refinements in scuba technology, underwater exploration has become accessible to adventure-seekers worldwide. And the allure of the Red Sea’s treasures continues to draw them.

While Cousteau had Egypt’s coral reefs to himself, today’s underwater adventurers are finding the waters increasingly crowded. Last year, 9.1 million tourists visited Egypt, of which nearly a third spent time on the Red Sea. This has put tremendous stress on the delicate reef ecosystems – and there is no indication that tourism growth will slow down. On the contrary, the Red Sea resort cities of Sharm Al Sheikh, Hurghada and Dahab are growing so fast they are hardly recognizable from one visit to the next. Even the remote Deep South – the coral-fringed coastline running from Al Quseir to the Sudanese border – is in the midst of a development boom.

The Red Sea has become one of the country’s strongest selling points, attracting divers, snorkelers and sun-lovers. According to the Egyptian Tourism Federation (ETF), there are now over 106,000 rooms along the Red Sea’s coasts with another 91,000 currently under construction. But as development proceeds, stakeholders in the Red Sea’s future have recognized that protecting the delicate reefs is not only ethical environmental practice, it is a smart investment. After all, the reefs are the reason tourists come in the first place.

**Paradise lost?**

Much of Egypt’s dive tourism is concentrated in South Sinai between Dahab and Sharm Al Sheikh – an area now famous for its rich marine biodiversity, calm waters and dramatic reef walls. But 25 years ago, Sharm Al Sheikh was little more than a fishing village, with primitive infrastructure and almost no amenities. The handful of diving junkies camped on its fringe knew they had stumbled onto one of the diving community’s best-kept secrets.

Eventually the secret got out. In the mid-1980s, the private sector and later the government recognized South Sinai’s potential to be a world-class diving destination and began pumping capital into the region to attract and accommodate tourists. Today, the 230-kilometer coastline from Sharm Al Sheikh north to Taba is peppered with resort hotels, each having carved its own swath of beach.

Divers reminisce about the “good old days” when trips involved bumpy 4x4 rides to isolated Bedouin beach camps, where divers could pick any spot along the coastline and hit the water. “We used to drive to a beach, park the truck and go diving,” recalls Magdy El Araby, owner of Maadi Divers. “Now we have to use boats because of all the hotels [blocking beach access].”

Resorts have rushed to occupy prime coastal real estate and declare the reef concessions lying just...
offshore off-limits except to clients of their on-site diving centers. Coastal encroachment has changed the nature of the diving game, not just in Sinai, but in Hurghada and the remoter Deep South. “More and more hotels are charging to do shore dives. In the next two or three years there will be no spots left,” says Frank Fuchs, manager of Coraya Divers in Marsa Alam, itself located in a hotel with a proprietary house reef. He explains that economic constraints have made it impossible for dive centers to simply allow divers to go off and explore. “All the operators are in hotels. They are paying high rents and they want to keep people under control.”

Restricted from beach access, independent operators have had no choice but to move their operations to sea – one reason for the mushrooming growth of live-aboard excursions. El Araby is one of dozen of live-aboard outfits in Egypt. In 1998, he bought a live-aboard yacht that provides customers with the services of a hotel as well as the ability to visit a variety of sites without separate fees. But he’s finding that even dive sites far offshore, such as the remote Daedelus and Elphinstone reefs, are feeling the pressure.

On any given day there are 4,000 divers in Egypt’s Red Sea waters. An increasing percentage of visitors, however, are recreational snorkelers, windsurfers and boaters. Some tourists never venture beyond the hotel beach. “Probably the greatest challenge currently facing dive centers in Egypt is the change in the kind of tourist visiting the Red Sea,” says Sam Kirby, regional manager for the Professional Association of Diving Instructors (PADI), the world’s largest dive certification provider. “Whereas even five years ago, the vast majority [of tourists] were coming into the country with a plan to make diving their holiday, now a much larger percentage [is] visiting purely for a ‘sun and fun’ type vacation.”

El Araby has also noticed the demographic shift. “The majority of tourists [who] used to come to Sharm were divers... Nowadays, the majority of people coming to an area like Sharm Al Sheikh are snorkelers... which is a complete change and shift in the tourism.”

This isn’t inherently problematic; however, it does imply that a less experienced lot of tourists is heading to sea, which increases the risk of environmental damage and accidents. El Araby points out that while veteran divers usually leave only bubbles; novice divers and snorkelers can leave a trail of destruction. Reefs are trampled on, pieces of coral are broken off to be taken home as souvenirs and inexperienced divers using faulty rental gear are turning up in decompression chambers.

Yehia Safwat, a diving instructor trainer and head of Bubbles Diving College, says snorkelers are particularly hard on the reefs. “Snorkeling leaves behind the biggest damage because anyone who can swim is convinced they can snorkel,” he told Business Monthly. “But because they are not taught how to maintain their buoyancy, too often they end up using the corals to steady themselves. This is what damages the corals the most.”

He says the problem is that while diving is a regulated activity, snorkeling is not. This leaves the corals open for damage, creates more room for injuries and can even prevent divers from fully enjoying their underwater experience. “What is needed is for the snorkeling industry to be regulated by both government and international organizations. However, government regulations should come with an ultimatum – do this or else – to ensure compliance of both snorkeling centers and snorkelers.”

One response has been the Red Sea Association for Diving & Watersports (RSADW), a nonprofit membership organization founded in 2000 that is helping to educate dive operators to be more safety conscious and better stewards of the environment. RSADW aims to regulate underwater neutral buoyancy to first-time divers and snorkelers. The relevancy cannot be understated. A 1997 study conducted in Sinai’s Ras Mohamed National Park demonstrated that pre-dive briefings reduced novice divers’ impact on reefs by 93 percent. The researchers found that without the briefing, the divers made contact with the reef an average of eight times during a routine dive; after a briefing that number fell to 1.5. Similar improvements have been reported among snorkelers.

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Surf n’ turf

The Red Sea is an extremely fragile marine ecosystem. Coral, actually the exterior skeleton of colonies of tiny polyps, grows just a couple of centimeters per year. Yet the polyps are extremely sensitive to environmental changes, dying as a result of algae blooms, changes in water temperature or abrasive contact. A hundred years of coral growth can be destroyed in an instant by a snorkeler’s curious touch or a passing diver’s misplaced flipper.

In years past, hotel developers blasted holes through fringe reefs to make room for their private marinas and – ironically enough – dive shops. While the practice has largely been stopped in Sinai, it still continues in parts of the Deep South, where the coastline is penned in by a fringe reef running almost unbroken from Al Quseir to Shalatein, 350 kilometers south. With resort hotels already...
occupying the Deep South’s handful of sheltered coves – the only places snorkelers and divers can swim out to the reefs – new developers have few options for sea access.

"The carrying capacity has already been [exceeded] because 92 percent of this coast has no access to the sea," states Hossam Helmy, chairman of Red Sea Diving Safari, who has been diving in the Deep South for two decades and now operates three diving ecologies in the region. He says some hotels without sea access are so badly situated that when they first opened they were charging E60 euros per person per day for double rooms, but have since dropped their prices to E10 per day and are still unable to fill the rooms. "This is the wrong place to build a resort," he says.

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**TREASURED TOURISTS**

Few would argue that diving is a lucrative industry. According to the Red Sea Association for Diving & Watersports (RSADW), tourists last year took 1.85 million dive and snorkel trips, spending on average between E30 and E40 per trip. By their reckoning, the industry pulled in up to E74 million (LE 520 million) directly from excursions. And this figure doesn’t account for the indirect expenditures such as accommodation and food and, not to be discounted, the cost of training.

Divers tend to spend more money than other types of tourist, notes Yehia Safwat, a diving instructor trainer and head of Bubbles Diving College. "A dive tourist can spend anywhere from E200 to E300 a week on everything from renting equipment to going on excursions, etc. If they are taking a course, this also adds to their spending," he says. "Moreover, dive tourists are also very likely to come back to Egypt specifically to dive, even when we’ve had terrorist attacks."

Safwat says there are several reasons for this return, the most important of which is the fact that Egypt is the closest premier diving destination to Europe. "We are four hours away from Europe. If you’re a diver... the next choice is Thailand, which is around nine hours away from Europe and thus more expensive [for airfare]. The other thing I would argue is that we have the best diving spots in the world right now. That’s why we really need to protect these areas, not only because they are part of the world’s heritage, but because they generate money for the country."

The root cause of the problem, according to one local environmentalist, is that the government issued building permits to developers without weighing the consequences. "The government was allocating parcels of land to hotels [that] had no sea access from the beach so their only option was to break the coral [reef wall]," he explains.

Helmy points out that a number of hotels have attempted to carve out sea access by building jetties over the reef, sometimes up to a kilometer long. He claims 16 such jetties have been built for more than a million pounds each, but due to the coast’s high swells all are practically useless because "boats cannot use the jetties, except for 60 days a year." The seas are just too rough.

Large swaths of Egypt’s Red Sea reefs have also been destroyed by careless development and almost all reefs have sustained visible damage from misplaced anchors, pollution and negligent divers. "There is no real way for anyone to put a dollar value on the damage to the coral reefs or the underwater ecosystem," says Safwat. "Putting a dollar value on damage to the coral reef or the ecosystem is naive when you think of it in terms of damage to the natural heritage and the overall environment. And putting the dollar value in terms of losses to the tourism industry is missing the point altogether."

**Safeguarding the seas**

One of the most promising trends of the last 15 years is that dive outfits that have recognized the importance of sustainable development have begun banding together to preserve the Red Sea’s marine ecosystem. The Hurghada Environmental Protection & Conservation Association (HEPCA), founded in 1992 by a group of veteran dive operators, was among the first initiatives to self-regulate an otherwise loosely regulated industry.

Amr Ali, HEPCA’s managing director, says the marine watchdog’s founders recognized that the reefs that provided their revenue were being jeopardized by the negligent practices of some dive operators, particularly by boat captains dropping anchor on reefs. "The main purpose for founding [HEPCA] was to establish mooring buoys to minimize the impact of mooring over the reefs," he says. HEPCA, initially with its own money and later under a USAID grant, set out to install buoys near popular dive sites that boats could tie to without dropping anchor. By 2005, HEPCA and its partners were maintaining 1,200 moorings in the Red Sea, the largest such buoy system in the world.

USAID’s Red Sea LIFE (Livelihood and Income from the Environment) project has taken on an even more ambitious role. The three-year, $16.5 million initiative aims to promote conservation, support sustainable tourism and encourage community development, explains John Dorr, the project’s chief of party. The big question, he says, is "how can you promote tourism and at the same time help preserve conservation [efforts] and biodiversity?"

Dorr’s solution is to attack the problem from different angles. One of the project’s main thrusts is
physical intervention, such as supporting HEPCA and the Red Sea Protectorate’s buoy initiative financially. Dorr explains that USAID sees significant value in the buoy project “because the mooring is where the most physical damage [to the reef] can come.” In fact, “it’s probably the single most important part of protecting the coral reefs,” he says.

The LIFE project has also funded the publication of a manual that hotels can follow to protect their house reefs. “Certainly there are plenty of examples of how not to manage your house reef,” says Dorr. However, the project is working closely with the government, its own experts and hotels that have successfully protected their reefs to develop its set of recommendations. "There are some hotels that are exercising very responsible practices for their house reefs because they recognize how valuable these are, what a good business investment it is to protect them."

The government has also taken measures to protect the Red Sea’s natural beauty. In recent years, it has imposed fishing bans, restricted dive boat licensing and established the Red Sea Rangers, a team that polices and safeguards the natural resources of the Red Sea coastline. The EEEA has also designated at least five potential diving areas as marine protectorates or national parks, effectively making them immune from construction and other activities that could disturb their delicate ecosystems.

Tourists are still permitted to visit these protected areas with a licensed guide in exchange for fees. The money is collected by the government and used for upkeep of the parks. "The creation of the national parks and protectorates has certainly protected many corals from being damaged because of construction or waste dumping into the water,” notes Safwat. "This was a clear indication that the government recognized that we need to protect the corals and the delicate balance of the underwater ecosystem. But this doesn’t give other areas sufficient protection."

While the partnership between the government, NGOs and businesses is at times unwieldy, it marks a strong positive step towards maintaining the integrity of Egypt’s marine ecosystems for future generations of both stakeholders and tourists. "From what I see... Egypt is very much at a cusp,” says Dorr. The reefs, mangroves and seagrass beds, particularly in the Deep South, are still pristine. "Right now, the future could be very good because these systems have been protected so far and Egypt has wisely set them apart for a national park, [but] ultimately it depends how they manage it,” says Helmy, however, argues that the efforts may be a case of too little too late. He says the government in its blind lust to cash in on the Red Sea’s tourism bounty has put a strain on finite resources. He argues that while it may be too late for Hurghada and South Sinai, there is still time to minimize the impact in the Deep South. "They urgently need to stop growth and re-do the master plan for the area,” he says. "They didn’t have enough information about the south of the Red Sea before they started master-planning."

RSADW’s Ali is more optimistic. While he admits that pitfalls are everywhere, he is upbeat about the prospect for dive tourism in Egypt. "With a little organizing and a little care from the tourists, I have hope for the future [of the industry],” he says.

DANGEROUS WATERS

The early Red Sea dive tourist was largely self-reliant – using their own kit and visiting dive centers mainly just to fill their tanks. As less experienced and prospective divers have flooded the market looking for bargain-priced rental kits and excursions, scores of dodgy operators have set up shop, raising serious safety concerns. “It seems that every masseur, perfume seller and street hawker now has a ‘brother’ of some sort offering cheap diving services,” complains Sam Kirby, regional manager of diving certifier Professional Association of Diving Instructors (PADI).

Renting gear in Egypt is like shopping at a garage sale, says Frank Fuchs, manager of Coraya Divers in Marsa Alam. It is unknown how many lives have been lost as a result of faulty equipment, but many experienced divers who have had to rent equipment for one reason or another in Egypt have encountered serious malfunctions that are potentially lethal, especially to a novice diver with minimal training. While stories of incompetence and poor safety procedures abound, the industry has worked hard with both government and private agencies to clean up its image.

Most people view diving as just another beach-vacation activity. It is that, but looked at another way it is a sport that involves a person entering a hostile alien environment with their life-support system strapped to their back. "It's a sport that has some risk and if people don't follow the safety rules, accidents happen,” says Magdy El Araby, owner of Maadi Divers and a master scuba diver trainer. While certain precautions can be taken to maximize accident prevention, one of the major concerns for divers over the years has been access to high-quality medical facilities, particularly decompression chambers.

Some see the safety situation improving. "Awareness of dive safety is much better at the moment [as a result of] diving organizations and good training,” says Dr. Wael Nasef of BaroMedical, a company operating a hyperbaric chamber and dive medical clinic in Marsa Shagra. Private
operators have seized on the demand for treatment services and have set up hyperbaric chambers and even search and rescue teams. Currently, there are chambers open to the public in Dahab, Sharm Al Sheikh, El Gouna and Marsa Shagra, as well as a number of military and oil company-run chambers available in critical emergencies.

Nasef advocates smart, safe diving. Divers are visitors in the sea but if they follow safety guidelines they should have no problems, he says. "But be a naughty guest and you get kicked out, stung or bitten."