HAILING ISLAND, CHINA—Even as Marco Polo was making his epic journey to the Far East in the late 13th century, Chinese seafarers were striking out in the opposite direction along seaways that extended as far as the Middle East. China was entering a period of trade and naval power that culminated with the 15th century voyages of Zheng He, a eunuch admiral who sailed as far as Africa in a 250-ship armada featuring massive baochuan, or treasure ships, that dwarfed European vessels.

Five hundred years later, China is again a naval power, building a modern armada while pressing territorial claims in the South China Sea and nearby waters. China casts its reemergence on the high seas as part and parcel of its “peaceful rise,” and memories of the past—buttressed by archaeology—are a key element of that storyline. Government officials and scholars have resurrected the once-forgotten Zheng He, for example, as a symbol of benevolent engagement, asserting contrary to many scholars’ views that the admiral’s voyages were goodwill missions.

And China is showering money on underwater archaeology, hoping to recover vestiges of its glorious maritime past. At a time when looting threatens many sites in the region, the outlay “is a question of protecting our heritage,” says Cui Yong, an underwater archaeologist at the Guangdong Provincial Institute of Cultural Relics and Archaeology’s Research Center of Underwater Archaeology in Guangzhou. Next month, the government will unveil a $60 million exploratory ship—China’s first dedicated to archaeological research. It is lavishing money on countries in Africa and elsewhere that are eager to work with China to excavate submerged riches. China’s program also stands out among those in Asia for not profiteering from artifacts.

But critics contend that China has ulterior motives. The burgeoning underwater archaeology program is “related to [Chinese leaders’] view of themselves, and to their power projections in places,” says Mark Staniforth, an archaeologist at Monash University, Clayton, in Australia. Several of the areas now targeted for research are the sites of international territorial disputes, and some archaeologists fear that China intends to use reclaimed patrimony to bolster its claims to disputed territories, Staniforth says: “The more cynical view would say that it is about territorial expansion.” As China uncovers archaeological treasures that promise to illuminate a key period of history, how much will the political uses of the findings distort the science?
Rock the boat. China raised the Song dynasty–era Nanhai 1 from the sea floor intact. A lavish new museum houses the wreck.

Diving in
In a hangarlike building here on Hailing Island, just off the coast of southern China’s Guangdong province, Nanhai 1, or South China Sea 1, lies encased in silt and bathed in carefully calibrated water. The sea is a few hundred meters away, just visible through an enormous glass wall.

The Song dynasty (960 to 1279 C.E.) merchant ship foundered 56 kilometers offshore, along what was once the Maritime Silk Road. From the 10th to the 15th century, Chinese ships plied routes pioneered by Arab, South Asian, and Southeast Asian traders. Sailing west across the South China Sea and Indian Ocean to the Persian Gulf, they carried porcelain, silk, and tea to the west and spices, ivory, and coral in the other direction—sometimes meeting their end in choppy waters or in one of Southeast Asia’s narrow straits. Thanks to a thick blanket of silt, Nanhai 1 is one of the better preserved wrecks from the era.

In what many consider the most ambitious foray into underwater archaeology yet, a Chinese team in 2007 lifted Nanhai 1 from the sea floor intact. The $16 million operation involved easing the vessel into a specially designed 530-ton steel container and then using Asia’s largest marine salvage engineering ship to raise it to the surface (Science, 23 April 2010, p. 424). The endeavor coincided with the construction of the $24 million Guangdong Maritime Silk Road Museum, where the boat now rests, and a $1 million replica. Throw in at least $7.4 million more for excavations and infrastructure, and “the amount of money that [China] put in there is astronomical,” Staniforth says.

China has made big strides in underwater archaeology since dredgers off the coast of Quanzhou in Fujian province—once China’s largest port—discovered a 13th century junk in 1973. The remains of the first Chinese shipwreck ever excavated promised to shed light on Song-era shipbuilding techniques. Technicians disassembled the ship, which lay under only a few meters of mud, and raised it piece by piece, along with coins, chunks of aromatic wood destined for incense production, and other bits of cargo. But China, then in the throes of the Cultural Revolution, didn’t have a single underwater archaeologist to study the relics.

They sat largely untouched for 10 years until the Quanzhou Museum of Overseas Communication (now the Quanzhou Maritime Museum) invited Jeremy Green, a maritime archaeologist at the Western Australian Maritime Museum in Fremantle, to help determine the shape and dimensions of the hull. As far as Green knows, he was the first Westerner to lay eyes on the ship, which hinted at a wealth of wrecks from China’s maritime Golden Age awaiting discovery. But China still lacked the knowledge and funds to dive in.

Things began to change a few years later, when a British salvor in 1986 illegally exported $20 million of Ming dynasty porcelain found in the wreck of a 1752 Dutch East India Trading Company ship off Indonesia. The next year, another British salvor—this time with a legal concession—unearthed Chinese vessels at the wreck site. Dublin has aided looters as well (Science, 17 May 2013, p. 802). Nowhere in the world is the pressure as intense as in Asia, says Jeffrey Adams, an independent heritage management specialist in Minneapolis: “The gold rush, such as it is, is in the South China Sea.”

China’s program “went very rapidly into overdrive because they discovered that they had sites all over the place,” Staniforth says. In 2007, researchers from NMC began salvaging Huaguanjiao 1, a Song dynasty merchant ship discovered by fishers in 1996. Then in 2009, Cui and colleagues began work on Nan’ao 1, a late Ming-era smuggling ship excavated at a depth of 27 meters—a rare find from a period in the 16th and 17th centuries when the Chinese emperor banned maritime trade.

Archaeologists weren’t the only ones discovering those sites. The sophisticated remote-sensing equipment that has helped scientists uncover new and deeper wrecks has aided looters as well (Science, 17 May 2013, p. 802). Nowhere in the world is the pressure as intense as in Asia, says Jeffrey Adams, an independent heritage management specialist in Minneapolis: “The gold

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Soft power on the high seas
One pillar of China’s program is research that sheds light on the Zheng He era. Roughly a decade ago, China marked the 600-year anniversary of Zheng He’s first voyage with a slew of cultural events, including conferences, commemorations, stamps, comics, and a musical stage show. Scientists took part as well. In 2003, archaeologists in Nanjing excavated the shipyard where Zheng He’s boats were built. They unearthed two rudders that have shed light on Ming-era shipbuilding techniques. The knowledge is now being used to create a replica of one of the admiral’s treasure ships, which later this year will set sail along an old Maritime Silk Road route.

The holy grail would be the discovery of a wreck from Zheng He’s fleet. To that end, China is looking farther afield and brokering partnerships with countries whose coastal waters the admiral’s fleet reached. In 2012, researchers from the Chinese Academy of Sciences’ Institute of Acoustics spent 2 weeks using side-scan sonar on a mostly fruitless search for wrecks in the Gulf of Oman. The first round of an even more ambitious project recently concluded in Kenya, where archaeologists from NMC and Peking University in Beijing worked with counterparts from the National Museums of Kenya (NMK) in Nairobi to excavate sites near the route traversed by Zheng He’s fleet in 1418, some 80 years before Vasco da Gama rounded the Cape of Good Hope. The $3.2 million, 3-year project searched both underwater and on land. “We have found a lot of areas that have potential,” says NMK’s Caesar Bita, one of two underwater archaeologists in the country.

The effort in Kenya has its roots in unsubstantiated reports published by Western journalists in the 1990s, says Qin Dashu, who headed up the project’s land excavations. Reporters visiting islands in the Lamu Archipelago, off the coast of Kenya, met locals who claimed to have Chinese heritage. One of Zheng He’s ships had sunk nearby, the theory went, and sailors swam ashore, eventually marrying local women. Ming dynasty texts state that the admiral’s fleet reached the kingdom of Malindi, in what is now Kenya, but they do not mention a shipwreck. In 2005, however, the Chinese government sponsored a young woman from Lamu claiming to be of Chinese descent to study in Nanjing. (Her DNA has not been tested to prove this claim, Qin notes.) The prospect of finding concrete evidence of Zheng He’s voyages to Africa intrigued the wife of a member of China’s vaunted State Council, Qin says, and the government greenlighted the archaeological project.

The team uncovered intriguing material—though not entirely what officials had in mind. Searching the waters around Lamu, the archaeologists found a local shipwreck laden with pottery. Based on a preliminary analysis of a single shard of Chinese porcelain, the archaeologists believe the wreck to be from the 14th century, too early to say anything about the Zheng He era. At a second underwater site about 40 kilometers from Malindi, they unearthed another red-herring: a remnant of a vessel with the telltale triangular sail shape common to local ships.

The notion of a Zheng He shipwreck remains “just a tale,” Qin says. But excavating onshore in Mambri, a coastal site north of Malindi, his team found other evidence of China’s influence in Africa: coins from the time of the Yongle Emperor Zhu Di, who was Zheng He’s patron, along with shards of porcelain bearing the mark of Zhu Di’s imperial kiln. Alone, the coins might simply have meant that smugglers had reached Malindi. But the porcelain suggested something more, Qin says: “It’s very unusual to find an [imperial] shard in an African site. It proves that there was some official relationship” between the kingdom and China at the time.

China hopes to broker a similar project with Sri Lanka, the site of the only known inscription referring to Zheng He outside of China. Several years ago, Sri Lanka’s culture minister met with administrators from the Chinese Academy of Social Sciences’ Institute of Archaeology to discuss collaborating in underwater archaeology. But the talks have apparently stalled. Officials on both sides may be wary of exploring a dark period for Sri Lanka. In 1411, Zheng He’s armada invaded Sri Lanka and hauled a local ruler back to the Ming court, replacing him with a puppet ruler.

Geoffrey Wade, a maritime historian at Australian National University in Canberra, notes that Chinese officials cast Zheng He’s exploits as “nonexpansionist and nonaggressive, completely unlike the European colonialists.” He and others demur, citing historical accounts of Zheng He’s fleet using military force, meddling in civil wars, and imposing unequal trading terms. The armada’s intervention in Sri Lanka, Wade says, is “one of the most obvious examples of nonpeace and nonfriendship” from the era.

Political aims?
At the Indo-Pacific Prehistory Association Congress in Hanoi in 2009, Staniforth attended several presentations by Chinese researchers affiliated with mainland government institutions and museums. Some researchers reported on archaeological efforts in the Paracel and Spratly islands, contested archipelagos in the South China Sea. The Paracels are separately claimed by China, Taiwan, and Vietnam, and the Spratlys by Brunei, China, Malaysia, the Philippines, Taiwan, and Vietnam. Chinese underwater archaeologists are now searching for wrecks in both areas—and the tone of their
reports bothered Staniforth. The thrust of the argument in Hanoi, he says, was that “these are Chinese ships, therefore this is Chinese territory.”

China is open about that agenda. Archaeological research in the South China Sea, an area rich not just in wrecks but also in oil, gas, and fishing grounds, can aim to further “national territorial sovereignty and maritime rights and interests,” according to materials published online by China’s Center for Underwater Cultural Heritage, a division of the State Administration of Cultural Heritage set up in 2012. No less a figure than China’s vice minister of culture, Li Xiaojie, has echoed that claim in comments published by state media. And at NMC, text for a display of artifacts from *Huaguangjiao 1*, discovered near the Paracel Islands, declared: “China’s sovereignty over the islands of the South China Sea has been formed over a long period of historical development.”

To beat that drum even harder, a new $160 million National Museum of the South China Sea recently opened on Hainan Island. Nearby is a planned $48 million National Underwater Cultural Heritage South China Sea Protection Base. It will be used for research and restoration of damaged relics and will “strengthen South China Sea underwater heritage protection and law enforcement,” according to the Center for Underwater Cultural Heritage’s website.

Arguments basing national sovereignty on the discovery of shipwrecks and artifacts baffle international scholars. “If the presence of Chinese ceramics were any indication of sovereignty, then the Victoria and Albert Museum in London would be part of China,” Wade says.

And they have irked China’s neighbors, who increasingly see the country as an archaeological bully. On 30 March, the Philippines filed a 4000-page arbitration brief with the United Nations, claiming that China’s so-called nine-dash line, a territorial claim that encompasses nearly all of the South China Sea, is forbidden by the U.N. Convention on the Law of the Sea. “China’s maritime territory policy is not conducive to interactions or cooperation on underwater cultural heritage between China and Southeast Asia as a whole,” says Rujaya Abhakorn, director of the Southeast Asian Ministers of Education Organization’s Regional Centre for Archaeology and Fine Arts in Bangkok. Countries in the region, he says, are now worried by rumors that “China would claim ownership of all Chinese vessels and artifacts found in Southeast Asia.”

In 2012, a Chinese marine surveillance vessel reportedly confronted archaeologists in the Scarborough Shoal, a hotly contested area of the Spratly Islands off the coast of the Philippines. Franck Goddio, an underwater archaeologist and the founder of the European Institute for Underwater Archaeology in Paris, had been exploring a 13th century Chinese wreck with a team from the National Museum of the Philippines when the ship pulled up alongside the scientists and ordered them to vacate the area, according to *The Wall Street Journal*. Goddio declined to comment, citing political sensitivities.

In the Philippines, Cui quickly silences them. Instead, he prefers to talk about the payoff from preliminary excavations of *Nanhai 1* rest in glass cases: anchors, bronze coins, and delicate ceramic pieces that were once precious cargo. Cui gestures to a paper-thin bowl impressed with an intricate floral design. “It’s just happening,” says Adams, the independent heritage management specialist. “It’s just happening.”

In rare cases, foreign archaeologists are getting in on the action. For example, Damien Leloup, an archaeologist with the Explorers Club based in Beijing, spearheaded an exploration last October in and around a river near the city of Jingdezhen, the site of China’s most famous imperial kilns. Near where the river emptied into the Yangtze, he and colleagues found a wealth of well-preserved ceramics from the Song dynasty. “I am convinced there are several shipwrecks to be found within the area,” he says.

Cui, for one, has tried to insulate himself from the politics buffeting his work. Over dinner, younger archaeologists working on the *Nanhai 1* excavation start a heated discussion about China’s recent clashes with the Philippines. Cui quickly silences them. Instead, he prefers to talk about the payoff for archaeology.

Just a short walk away, in 9000 square meters of pristine exhibition space, artifacts from preliminary excavations of *Nanhai 1* rest in glass cases: anchors, bronze coins, and delicate ceramic pieces that were once precious cargo. Cui gestures to a paper-thin bowl impressed with an intricate floral design. “It’s rare to find ceramics in this condition” from that era, he says. So far a total of 5000 relics have been removed from the ship. Thousands more are believed to be hidden in the silt.

*Nanhai 1* may be a teaser for even more splendid and illuminating relics waiting to be unearthed. Next month, China’s dedicated underwater archaeology ship will sail in search of other wrecks. The 56-meter, 500-ton vessel contains 20 sleeping berths and can store a month’s worth of food. Cui can’t wait: “I have dreamed of using a ship like that,” he says.

The vessel’s maiden voyage: the disputed waters of the Paracel Islands.

—MARA HVISTENDAHL