

Energy & Environment

Poisoned Shipments

Are strange, illicit sinkings making the Mediterranean toxic? BY MADHUSREE MUKERJEE

IN OCTOBER 2009 THE GOVERNMENT OF Italy announced that a wreck discovered off the southwestern tip of the country is the *Catania*, a passenger vessel sunk during World War I—and not the *Cunski*, a cargo ship loaded with radioactive waste, as alleged by district authorities from nearby Calabria. Few locals are reassured, says Michael Leonardi of the University of Calabria. He and others maintain that the putative *Cunski* is still out there and is just one of numerous ships full of poisonous garbage that a crime syndicate has scuttled in the Mediterranean Sea. Such a startling allegation, if true, would not only damage the tourism and fishing industries along this idyllic coast but also compromise the health of Mediterranean residents.

Processing and safely storing waste from the chemical, pharmaceutical and other industries can cost hundreds, even thousands, of dollars per ton—which makes illegal disposal highly profitable. According to the Italian environmental organization Legambiente, some waste shippers that have operational bases in southern Italy have been using the Mediterranean as a dump. While acknowledging that “no wreck has yet been found that contains toxic or radioactive waste,” physicist Massimo Scalia of the University of Rome, La Sapienza, who has chaired two parliamentary commissions on illegal waste disposal, argues that other evidence makes their existence “beyond reasonable doubt.”

Scalia contends that 39 ships were wrecked under questionable circumstances between 1979 and 1995 alone; in every case, he adds, the crew abandoned the ship long before it sank. An average of two ships per year suspiciously disappeared in the Mediterranean during the 1980s and early 1990s, according to Legambiente—and the number has increased to nine wrecks per year since 1995. Paolo Gerbaudo of the Italian daily *il Manifesto*, who is

assisting investigations, has identified 74 suspect wrecks of which he regards 20 as being extremely suspicious. (The record extends until 2001.)

One notable example of a dubious wrecking is the *Jolly Rosso*, which washed up in December 1990 near the town of Amantea, after what investigators believe was a botched attempt to scuttle it. The cargo was offloaded and allegedly buried on land. In October 2009 an environmental ministry report noted that district authorities detected dangerous substances in a nearby river valley, including a buried concrete block containing mercury, cobalt, selenium and thallium at very high concentrations—and displaying substantial radioactivity indicative of synthetic radionuclides. Authorities also found marble granules mixed in with thousands of cubic meters of earth, which was contaminated with heavy metals and cesium 137,

typically a waste product of nuclear reactors. The assemblage suggests that the *Jolly Rosso*'s cargo included radioactive waste, sealed in concrete and shielded from detection by marble dust (which absorbs radioactivity).

Significantly, the increase in the frequency of wrecking correlates with the progressive tightening of international dumping regulations. The first suspect sinking, in 1979, occurred the year after the Barcelona Convention, which restricts the disposal of pollutants in the Mediterranean Sea, came into force. Over the following decades other treaties expanded the regulations, culminating in a 1993 amendment to the London Dumping Convention that halted the ocean disposal of all radioactive waste and in a 1995 amendment to the Basel Convention that banned the deposition of the industrial world's lethal excreta in developing countries. The

Suspicious Cargo Shipwrecks, 1979–2001



SUSPECT SINKINGS have occurred in the Mediterranean. (A wreck is deemed suspicious based on location, timing, registration, ownership history and other factors.) Perhaps the most infamous is the *Jolly Rosso* (inset), which ran aground near Amantea, Italy, in December 1990; the bright red hull is the result of a repainting job after stranding, perhaps done to hide markings. The map data include known sinkings and strandings (red) and suspected wreck sites or dumping areas (black). A more detailed map appears at <http://tiny.cc/9aAVG>.

SCIENTIFIC AMERICAN. SOURCE: DATA COMPILED BY PAOLO GERBAUDO, *il Manifesto* AND DAVID BORDMAN, Massachusetts Institute of Technology (map); COURTESY OF LEGAMBIENTE (boat)

laws ruined the ambitious plans of one firm, Oceanic Disposal Management, incorporated in the British Virgin Islands, to drop tens of thousands of cubic meters of radioactive waste into the seabed off the African coast. Andreas Bernstorff, who formerly headed a Greenpeace campaign against the trade in toxic waste, reports that the number of schemes to ship such garbage to Africa fell steeply at this time, to at most one attempt per year. The drop coincides with a sudden and ominous rise in the frequency with which ships in the Mediterranean perished.

Despite profound concern in southern Italy, efforts to find the wrecks and identify their cargo have been slow. The endeavor is expensive, Scalia notes, and requires “serious engagement by magistrates and politicians”—which, but for “a few honorable exceptions,” has been lacking. Fear of violence may also have hindered investigation. In 1994 Italian television journalist Ilaria Alpi and cameraman

Miran Hrovatin were shot dead near Mogadishu, after they picked up the hazardous waste trail in Somalia, where political upheaval has kept the country from enforcing controls.

That African nation possibly holds clues to the kinds of health hazards Italians might face. “My committee heard from Somalians who said many people in that area had symptoms of poisoning and some died,” Scalia attests, referring to a stretch of highway along which Alpi and Hrovatin may have witnessed the offloading of toxic substances. The tsunami of December 2004 dredged up giant metal containers from the seabed and placed them on Somali beaches—proving that the country’s coastal waters had also received questionable trash. A United Nations report blamed fumes from these unidentified objects for internal hemorrhages and deaths of local people.

In April 2007 Calabrian authorities had temporarily halted fishing in waters off

Cetraro (where the *Cunski* lies, according to a turncoat from the ’Ndrangheta mafia) because of dangerous levels of heavy metals in marine sediment. In the region around Amantea, mortality from cancer between 1992 and 2001 exceeded that in neighboring areas, a study found; just as worrisome, hospitalizations for certain malignancies have risen in recent years.

“Almost all the coastal regions of our country may be compromised,” warned 28 Italian legislators from opposition parties on October 1, in a parliamentary motion demanding that the sunken ships be located and their contents secured. Until investigators can salvage the truth about the shipwrecks, suspicion and anxiety will plague the Mediterranean shores.

Madhusree Mukerjee is author of the forthcoming book Churchill’s Secret War, about England’s famine-inducing colonial policies during World War II (Basic Books 2010).



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