

NOAA REPORT



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New EC Import Rules: The European Community's (EC) new edible fishery import rules mandate a health certificate for each shipment of fish from other than a EC member country, and regulate the health of imported live bivalve mollusks. Currently, while the EC tests the mollusk itself, the U.S. and other countries monitor the water the mollusks grow in, rather than the end product. NMFS and the U.S. Food and Drug Administration will work with the EC on the rule's enforcement. The rule is scheduled to go into effect on Jan. 1, 1993. U.S. exports of edible fishery products to the EC totaled \$440 million in 1991.

NEWS BRIEFS

NESDIS Center Wins Award: The NESDIS Visible Infrared Spin Scan Radiometer Atmospheric Sounder Data Utilization Center was selected by *Federal Computer Week* for the Federal Leadership Award. The award recognizes federal computer systems that have made a measurable impact on the ability of its organization to accomplish its mission. The award was scheduled to be presented in a Washington ceremony on December 2.

Satellites Used to Track Turtles: In an effort that cut across NOAA lines, NMFS has used NESDIS satellites to track the ocean migration of Hawaii's green turtles. NMFS scientists attached small satellite-linked transmitters to the shells of three adult green turtles nesting in the northwestern Hawaiian islands. All three turtles were successfully tracked

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This 1986 forced landing onto an ice cap in Greenland could have meant tragedy for Dr. and Mrs. E. Jeff Justis, who were heading home from Europe. Fortunately, they carried an emergency radio beacon, which alerted COSPAS-SARSAT rescue teams to their location. They were picked up by a Danish helicopter six hours later.

COSPAS-SARSAT Turns 10; Saves 2,800 Lives Since '82

Imagine yourself in an emergency airplane landing in the frozen tundra of Alaska, or a shipwreck in the Pacific. But this is no story out of *Gilligan's Island* or *Lost Horizon*. With no food, little or no drinkable water—and running out of precious time—you sit, wait, and hope for a passing ship or plane to come to your rescue. But the rescue never comes.

That was the fate of countless victims, people who may have survived an airplane crash, but succumbed to the elements, and to time.

But since 1982, more people have been found alive, more than 2,800 lives have been saved, thanks to a NOAA participation in an international program called COSPAS-SARSAT.

Joint International Program

COSPAS-SARSAT (Search and

Rescue Satellite Aided Tracking) which celebrated its tenth anniversary last month, is an international effort headed by the U.S. and Russia, along with Canada, France, Norway, Great Britain and Denmark later joined the program. (COSPAS is the Anglicized rendering of the Russian abbreviation for the system.)

COSPAS-SARSAT uses NOAA environmental satellites, Russian satellites, and a network of earth stations to pick up distress signals from pilots or mariners who have crashed or become shipwrecked. Today, there are six operational satellites involved in the program, three U.S. (NOAA-9, -10, and -11), and three Russian (COSPAS-4, -5, and -6).

Aircraft carry an Emergency

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SARSAT Saves 2,800 Lives Since 1982

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Locator Transmitter (ELT) that is normally triggered upon crash impact. Ships and boats carry Emergency Position-Indicating Radio Beacons (EPIRBs) that activate automatically when immersed in water. Both devices can also be activated manually.

The radios transmit their emergency 121.5 MHz or 406 MHz international distress signal to one or more of the SARSAT satellites. SARSAT spacecraft orbit the earth every 102 minutes at an altitude of 528 miles; Russian COSPAS spacecraft orbit every 105 minutes at 620 miles. Calculating the location of a 121.5 MHz signal takes two satellite passes, while the position of a 406 MHz beacon can be calculated on the first pass.

Doppler Shift Measured

The satellites measure the variation (actually a Doppler shift) in the radio signal as the satellites track toward and then away from the signal source. When the distress signal is detected, the aircraft or vessel can be located to within five or ten miles of its actual position. The newer 406 MHz equipped transmitters provide location accuracy to within one to three miles.

The 406 MHz beacons also transmit a digital signal containing information unique to each beacon including identification, type of vehicle, and country code.

Registering the beacon is an important part of the rescue effort. By registering, this digital information

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can be received and used to help locate the stranded or downed craft. Mike Plant, the captain of the *Coyote* and one of America's most experienced yachtsmen, did not register his EPIRB, and was feared lost at sea somewhere in the Atlantic. Plant left New York on October 16, headed for France. One unregistered EPIRB signal was picked up on October 27, but the duration of the signal was not long enough to calculate Plant's location. At press time, Plant's yacht had been located capsized north of the Azores, but the Coast Guard had called off the search.

The satellite system relays the distress signal to a ground receiving station called a Local User Terminal, or

LUT, where the emergency signal is processed, and the location of the aircraft or vessel is determined. This information is relayed to NOAA's Mission Control Center in Suitland, Md., which passes it on to the appropriate land or sea Rescue Coordination Center (RCC).

Distress signal locations on land are sent to the U.S. Air Force, while those at sea are sent to the Coast Guard. Airplanes, helicopters, ships, boats, ground search parties, and even commercial airlines may be called into the search.

Recent Gulf Rescue

A recent SARSAT rescue involved two Florida men in the Gulf of Mexico. Their fishing boat, the 37-foot fishing vessel *Wait Joan*, had capsized and their EPIRB signaling when they hit the water. The men, were aboard when the vessel began taking on water and capsized.

The EPIRB's information was

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Gotta Be the Shoes

Sailing Sneaks Support Seattle Study

A 1990 freighter spill of 80,000 Nike sneakers in the northeast Pacific has given NMFS researchers a unique look into how objects drift in the ocean.

W. James Ingraham, who studies surface ocean currents to see their effect on migrating salmon for NMFS in Seattle, collected about 1,300 of the shoes after they washed

ashore in Washington state. He then ran a computer retracing of the path of the shoes from the location of the spill to the coast. A scientific paper on the study was recently published in the journal *Nature*.

Although they've been in the ocean for two years, the sneakers are still drifting, with some of them reaching Hawaii recently. □

Mega Borg Spill Did Little Damage to Gulf

Oil spilled by the *Mega Borg*, a Norwegian oil tanker which exploded and caught fire June 8, 1990, about 70 miles southeast of Galveston, Texas, did virtually no environmental damage to the coast, despite the loss of more than five million gallons of its 41 million-gallon cargo, according to a NOAA study.

The 159-page report summarizes an environmental assessment con-

ducted by NOAA and the Texas Water Commission. Paid for by more than \$250,000 from the tanker's owners, K/S Mega Borg II, the study concluded that prompt salvage and clean-up, the type of oil, location of the spill and favorable weather all combined to minimize the accident's effects.

Most Burned or Evaporated

According to the report, more than half the estimated 5.1 million

gallons of Angolan crude oil burned, nearly 30 percent evaporated, approximately 15 percent dispersed into the water, and about five percent was recovered by skimmers. Favorable ocean currents kept the small amount that remained away from sensitive coastal areas.

NOAA officials said fewer than 125 gallons of oil are estimated to have washed ashore along 18 miles of southwestern Louisiana shoreline.

No Evidence of Marine Injury

Joint NOAA/Texas Water Commission studies and surveys show no evidence of injury to marine mammals or sea turtles. Other examinations of fish and shrimp indicate the oil's effect on them, if any, was minor.

NOAA General Counsel Thomas Campbell said that in many cases a state or federal agency would have to seek reimbursement for tax dollars paid out to conduct a damage assessment.

'Responsible Citizen'

"Owners of the *Mega Borg* acted like a responsible corporate citizen," Campbell said. "Prompt cooperation in funding these studies, just days after the accident, was critical to their success."

"Not every oil spill leads to a natural resource damage claim," he added. "In this case, our scientists could detect no harm to the resources; any harm that may have occurred will be restored by natural processes." □

NMFS Will Enforce New Law to Prevent Dolphin Kills in Yellowfin Tuna Fishery

The enactment of the International Dolphin Conservation Act of 1992, to be enforced by NMFS, will help prevent inadvertent killing of dolphins in the yellowfin tuna fishery.

"Passage of this bill addresses the overwhelming public opinion and international consensus that the practice of encircling dolphins with nets to catch tuna should be discontinued as soon as possible," said NOAA Administrator John A. Knauss.

5-Year Global Ban on Nets

Key elements of the act are:

- ❖ A five-year global moratorium on the practice of catching tuna by encircling dolphins or other marine mammals with nets beginning March 1, 1994.
- ❖ A completely dolphin-safe U.S. tuna market after June 1, 1994.
- ❖ U.S.-funded research for developing methods of fishing that do not involve setting nets around dolphins.
- ❖ Enforcement of the moratorium with an embargo of yellowfin tuna and its products from countries that renege on commitments to a moratorium on the encirclement of dolphins.

"This act signifies great strides in

protecting dolphins from harmful fishing practices, while benefiting the American workers, consumers and the tuna industry," said Knauss.

Schools of yellowfin tuna frequently swim with schools of dolphin in the eastern tropical Pacific. Since dolphins must surface to breathe, tuna fishermen can easily locate and capture the tuna by setting nets around the dolphins. Hundreds of thousands of dolphins have died because of this practice since the 1960s.

The Marine Mammal Protection Act of 1972 was enacted in response to widespread concern for the well-being of marine mammals. The act directed NOAA, through NMFS, to reduce fishing-related dolphin mortalities through research and regulation. A successful program has been developed that reduced the number of dolphins killed by the U.S. fleet.

However, tuna vessels from other nations continued to operate under less restrictive regulations. This led to the 1988 amendments to the act allowing the United States to restrict imports of yellowfin tuna from nations whose tuna fleets had not reduced dolphin mortality rates comparable to those of the U.S. fleet. □

SARSAT Turns 10

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picked up by a SARSAT satellite, and eventually reached NOAA's Mission Control Center in Suitland. The Coast Guard dispatched a Pelican helicopter crew from the Coast Guard Air Station in Clearwater, Fl., to the site. The two men, David Oldani of St. Petersburg, and Terry Long of Largo, Fl., were rescued within two hours unharmed. □

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during their four-week migrations home—two to Kaneohe Bay on Oahu, and the third to Johnston Atoll. They averaged about one mile per hour, and travelled over 600 miles in between 23 and 26 days.

NOS Scientist Honored: Dr. Michael Crosby, chief scientist for Sanctuaries and Reserves, was elected a Fellow of the Royal Linnean Society of London, one of the oldest and most prestigious scientific societies in the world.

NWS Area Manager Named to Task Force: NWS Illinois area manager Paul Dailey has been appointed to the Illinois Task Force on Global Climate Change by Ill. Gov. Jim Edgar. Sponsored by the Illinois State Water Survey and the Illinois Power Company, the group will meet

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monthly to find ways to address climate changes in the state.

Shrimp Net Project Wins Award: A two-part demonstration project conducted by the NOAA-funded Texas Sea Grant Marine Advisory Service has won an Innovative Program Award from the U.S. Department of Energy for constructing a more efficient and fuel-saving shrimp net. The nets, made of a more durable but smaller twine than traditionally used, increased shrimp catches in demonstrations by 15 percent and reduced boat fuel consumption by 10 to 20 percent. An average shrimping boat in the Gulf of Mexico could cut annual fuel consumption by 6,000 gallons, dramatically lowering operating costs.

Thai Princess Tours NOAA Centers: The Crown Princess of Thailand, Her Royal Highness Maha Chakri Sirindhorn, visited the NESDIS Operations Center in Suitland and the NOAA Science Center in Camp Springs, Md., last month, as part of an American visit. □



The NOAA Corps ship Surveyor in Seattle harbor. The research vessel will depart shortly for a voyage to Antarctica.

NOAA Ship Surveyor to Begin 6-Month Cruise to Nicaragua and Antarctica

The NOAA research vessel *Surveyor* will depart Seattle on December 4 for a six month research cruise to the Antarctic.

The voyage will take the ship down the Pacific coast of North, Central and South America to various locations along the Antarctic continent, then north to Tahiti and back to Seattle in May 1993. The ship will travel over 25,000 miles, a distance greater than a trip around the world.

Highlights of the cruise will include a detailed bottom survey off the coast of Nicaragua to determine the cause of the tsunami that occurred on September 2, killing over one hundred people.

Support Ecology Program

Upon arrival in the Antarctic next January, the ship will support the Antarctic Marine Living Resources program, one of the few systematic surveys of Antarctic ecology. The program plays a key role in developing U.S. policy regarding the exploitation of marine resources in the Antarctic.

In late March, the ship will depart Punta Arenas, Chile in support of a project to investigate biogenic gases emitted from the ocean that affect the earth's climate. The ship

will sail nearly one quarter of the way around the Antarctic continent before turning north to refuel in Tahiti and then return to Seattle.

Fifth Year of Research

The 292-foot research vessel is commanded by NOAA Captain Frederick J. Jones, and is staffed by NOAA Commissioned officers and civilian wage marine crew. Scientists will come from a variety of NOAA laboratories, academic institutions and foreign governments. This will be the fifth year of Antarctic research for the *Surveyor*. □

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Court Upholds Fines Against California Divers

A federal court in California has upheld fines totaling \$132,000 imposed on six divers by NOAA for removing artifacts from two historic shipwrecks in a national marine sanctuary off Santa Barbara.

The fines were levied in 1990 as part of a sting operation involving enforcement officers from NOAA and the National Park Service. They were part of the successful prosecution of 20 people for removing artifacts from shipwrecks at NOAA's Channel Islands National Marine Sanctuary.

The defendants, including Jack Ferguson, a dive club master fined \$100,000, argued that the penalties were too harsh, NOAA's regulations vague, and that NOAA could not prohibit removing artifacts protected by the rights of "salvage and finds" under admiralty law. Judge Stephen V. Wilson of the U.S. District Court for the Central District of California rejected all three arguments.

Salvaging Can Be Prohibited

The court's most important finding was its determination that the agency can prevent salvaging historic resources and can regulate salvors whose rights under admiralty law existed before the designation of a sanctuary.

"This is a very significant case for protecting sanctuary resources," said Francesca

Cava, head of NOAA's Marine Sanctuary Division.

"It is now a matter of law that historic sanctuary resources are safe from challenges under the admiralty law of salvage," she added. □



Sharing Info at the NMFS Open House

Mark Holliday (left), chief of the NMFS Fisheries Statistics division, discusses program developments with Dr. Bill Fox, NOAA assistant administrator for fisheries, at the division's Open House last month. The Open House let the division share with other agency staffers the technologies and processes involved in the collection, analysis and dissemination of fisheries data.

Fox was also awarded the Commerce Department's Gold Medal last month, for his "leadership and exceptional contributions" to the agency. He was commended for his outstanding leadership of an agency now recognized internationally for responding to the complex challenges of managing the nation's living marine resources. □

Sustained Interest in Recreational Fishing Shown

NMFS has released two statistical reports on fishing surveys that show continued interest in marine recreational fishing on the Pacific, Atlantic and Gulf Coasts in spite of the sluggish economy.

"The data collected and analyzed by this program continues to provide us a broader understanding of the impact of the recreational fishing sector so the fisheries service can better manage the nation's fishery resources," said NOAA's Assistant Administrator for Fisheries Bill Fox.

The reports show that on the U.S. coasts of the Atlantic Ocean and the Gulf of Mexico, more than seven million recreational anglers made 48 million saltwater fishing trips in 1990, and 55 million trips in 1991. The total U.S. Atlantic and Gulf catch was estimated at 263 million finfish in 1990, and 359 million finfish in 1991; about half of the catch was released alive in both years.

Three Million on Pacific Coast

On the Pacific coast, about three million marine recreational anglers made 10 million fishing trips in 1987, 12.4 million trips in 1988, and 9.4 million trips in 1989. The total Pacific catch ranged from 41 to 51 million finfish, and the percent of catch released alive ranged from 41 to 47 percent.

"Before the Marine Recreational Fishery Statistics Program there was limited data compiled on the recreational fishing sector," said Fox.

The reports, titled *Marine Recreational Fishery Statistics Survey, Pacific Coast, 1987-1989*, and *Marine Recreational Fishery Statistics Survey*,

Atlantic and Gulf Coasts, 1990-1991, summarize fishing trip and catch data collected through telephone surveys and on-site surveys of anglers. Survey questions were asked to collect data on demographics, the number of fishing trips made, and the type, number

Habitat for Snake River Salmon Planned

NMFS has announced a proposal to designate a critical habitat for the endangered Snake River sockeye salmon, threatened Snake River spring/summer chinook salmon and threatened Snake River fall chinook salmon under provisions of the Endangered Species Act.

The proposed habitat, which encompasses all spawning, rearing, and juvenile migration areas for endangered or threatened salmon, covers parts of Washington, Oregon and Idaho, including portions of the Snake, Salmon, and Columbia Rivers. Specific tributaries and lakes associated with these rivers are also included.

Economic Impact Considered

"Fisheries officials carefully considered the economic impact of designating this habitat while preparing the proposal," said Rolland A. Schmitt, northwest regional director. "They concluded that the only costs directly attributable to designation are for areas outside the listed Snake River salmon's current range, which includes former nursery lakes in the Stanley Basin."

Costs may be attributable to activities such as treating

and size of fish caught. On-site interviews were conducted with both party/charter boats and private/rental boats, as well as with shoreside anglers.

The data are only a summary of those collected during the actual surveys. For a copy of the reports, contact the NMFS Fisheries Statistics Division, F/RE1, 1335 East West Highway, Silver Spring, MD 20910. □

and buffering former nursery lakes, providing safe passage of juvenile and adult sockeye salmon to and from the nursery lakes, and eliminating potential competition and predation due to planted rainbow trout, Schmitt added.

Designation will not directly restrict human activities in the area or mandate specific management or recovery action.

Alerting the Public

Designating a critical habitat contributes to species conservation by identifying important areas and by describing the biological and physical features within those areas that are essential to the species' conservation. It also alerts public and private entities to the areas' importance and particular contributions, and helps focus federal, state, and private conservation and management efforts on those areas. □

National Oceanic and Atmospheric Administration

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