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ENDANGERED SPECIES:

Extinction threat rises for leatherback turtles as nesting plummets -- study

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Leatherback turtle nests have seen a sharp decline at one of the turtle's most important Pacific nesting beaches, raising concerns the species could be extinct if the trend continues, according to a study released yesterday.

The study, published in the Ecological Society of America's online journal Ecosphere, documents a 78 percent decline in leatherback nests over the past 27 years at a critical nesting site in Indonesia. The beach accounts for 75 percent of total leatherback nesting in the western Pacific and is that ocean's last sizable nesting population, the study says.

"If the decline continues, within 20 years it will be difficult if not impossible for the leatherback to avoid extinction," said Thane Wibbels, a biologist at the University of Alabama, Birmingham, who worked on the study. "That means the number of turtles would be so low that the species could not make a comeback."

The largest of marine turtles, leatherbacks can grow as long as 6 feet and weigh as much as 2,000 pounds. They migrate thousands of miles across the Pacific Ocean, sometimes crossing from Indonesia to the U.S. West Coast and back again. It is listed as an endangered species in the United States and is considered "critically endangered" by the International Union for Conservation of Nature.

The research focused on two key Indonesian nesting areas: Jamursba Medi Beach, the primary nesting shoreline, and nearby Wermon Beach.

The beaches are remote. Three nearby villages have a total of fewer than 800 inhabitants, most of them hunter-gatherers. Conservation groups had sporadically conducted nest counts on the two beaches in the past, but researchers for the new study trained locals to conduct year-round, daily surveys from 2005 to 2011.

"This area is so important right now because this is the largest stronghold nesting area for the leatherback for the entire Pacific," said Ricardo Tapilatu, the lead author of the report, noting that other key nesting beaches in Costa Rica and Mexico have smaller populations. "This is the last hope for the Pacific leatherback."

Nests at Jamursba Medi declined from 14,522 in 1984 to 1,596 in 2011. At Wermon Beach, researchers discovered a 63 percent decline since counts were first conducted there in 2002.

Together, the two beaches are seeing a "continual and significant long term nesting decline" of 5.9 percent per year, the study says.

"We were optimistic for this population when year-round nesting was discovered in Wermon Beach, but we now have found out that nesting on that beach appears to be declining at a simi-

lar rate as Jamursba Medi," said Peter Dutton, a co-author of the paper and head of the National Oceanic and Atmospheric Administration's Southwest Fisheries Science Center's marine turtle genetics program.

Scientists from NOAA, the State University of Papua in Indonesia and World Wildlife Fund Indonesia also contributed to the report.

The researchers attributed the decline in part to the leatherback's trans-Pacific migration, which exposes them to fishing and other threatening activities. They also identified problems on the Indonesian beaches where eggs are collected for food by islanders or eaten by pigs and dogs. Rising sand temperatures can kill the eggs or lead to few male hatchlings; a turtle's gender is determined by temperatures on the nesting beach.

Tapilatu, the lead author of the report, is also a native of Papua, Indonesia. He plans to return to the area to work on conservation efforts. He hopes to create a beach management program and turtle hatcheries.

"We need funding, but if we can do those things, we can improve the situation on the beach," Tapilatu said. "If we took a serious effort, we could save this for the entire Pacific."

U.S. environmentalists say the report highlights a need for greater protection for turtles from fishing threats.

"This new study confirms that we should be doing everything possible to protect leatherback sea turtles both in our waters and abroad," said Ben Enticknap, a senior scientist with Oceana.

Oceana and other groups have threatened to sue the National Marine Fisheries Service over California's drift gillnet fishery, which they argue poses unacceptable threats to leatherbacks. The nets, which can span a mile and target swordfish and thresher sharks, drown large amounts of food vital to endangered leatherback sea turtles, according to the groups (Greenwire, Sept. 10, 2012).