

In South Asia, it's cattle vs vultures

Ishani Ganguli

Substitute for cattle drug that has nearly wiped out Asian vultures presents new options, new conflicts between conservationists, drug manufacturers, and government, conservationists, drug manufacturers, and South Asian governments have clashed over whether to ban a commonly-used cattle drug ever since research emerged showing that the drug kills vultures that feed on carcasses, bringing three species to the brink of extinction in South Asia. Now, a recent report suggests that a substitute for the drug appears to be safe for vultures, and the Indian National Wildlife Board, headed by Prime Minister Manmohan Singh, plans to meet this month to discuss a possible ban of the cattle medicine. "Because the vultures are declining so fast, you haven't got a very long time to make these decisions. Every year that goes by, the vulture population is declining by half," Rhys Green, biologist at the Royal Society for the Protection of Birds and a senior research fellow at the University of Cambridge, told *The Scientist*. The situation is dire, said Rick Watson, director of the Asian Vulture Crisis Conservation project at the Peregrine Fund, who headed the 2004 studies implicating the drug, diclofenac, in the vulture deaths. "Extinction is certain unless diclofenac is removed

completely from the veterinary market," he said. Three species of Gyps vulture – Oriental White-backed, Long-billed, and Slender-billed – have declined by more than 97% in South Asia since the early 1990s, and are now at the brink of extinction. Two years ago, Watson's group at The Peregrine Fund identified the nonsteroidal anti-inflammatory drug diclofenac as the culprit, confirming that vultures that feed on the carcasses of livestock treated with diclofenac develop kidney failure and die within days. (With India's predominantly Hindu population, cows are rarely eaten, their carcasses left instead to be consumed by vultures.) The drug, taken by humans for the past 30 years, has been widely used on Indian cattle to treat general pain and fever since it was introduced to the veterinary market in the early 1990s. "If you are an owner of a cow or bullock in India, you are probably using it either for milking or drawing a cart or plow. Any injuries the animal has to stop it from doing work can be alleviated using a drug like diclofenac or meloxicam, at least for recovery to the point that the animal is working again," said Green, who estimated that 12 million doses per year are used in India alone. In a March 2005 meeting, government officials pledged to phase out the drug within

six months, but while several states have banned the drug, diclofenac use is still widespread in rural areas. Indeed, Ministry of Agriculture officials have expressed concern over a ban's potential impact on rural farmers, and according to The Guardian, the government has clashed with some of the more than 50 Indian pharmaceutical companies that have produced the drug since its patent lapsed. "The main barrier is getting the Ministry of Agriculture to make the move to recommend a ban," Chris Bowden, Vulture Programme director at the Royal Society for the Protection of Birds, told The Scientist in an Email. Ministry officials could not be reached for comment. Government officials have attributed the delay in part to the lack of an alternative for cattle that is safe for vultures, according to Green. But in January, Green and a team of scientists from Africa, India, and the UK found such an NSAID: meloxicam, whose patent has also expired. Meloxicam is currently more expensive than the mass-produced diclofenac in India -- twice the price of the injectable form, according to Bowden. But "with legislation to back it up, a new market will quickly be filled,

[and] the price [of meloxicam] will be more or less the same as diclofenac," he said. But Novartis, the developer and largest manufacturer of diclofenac in India, will not begin manufacturing meloxicam in India, according to Philip Rush, head of global strategic marketing. Rush explained that there are patent issues that make it difficult to manufacture meloxicam, and the drug remains very effective in humans, 90% of its Indian market, he added. Diclofenac is "the most widely used painkiller in humans" in South Asia, with "a very good safety and efficacy profile," said Rush. Still, Green said he's confident the government will firmly ban the drug's veterinary use when the Indian National Wildlife Board convenes a meeting on the issue on April 28. "In the end, this kind of problem should be easily solved, [officials] just have to engage the vested interests and help them see it differently, help them overcome what kinds of hurdles they face, rather than duke it out," said Thomas Lovejoy, president of The H. John Heinz III Center for Science, Economics and the Environment.

Ishani Ganguli

iganguli@the-scientist.com

<http://www.the-scientist.com/news/display/23334/>

