

Africa bans lead in gasoline

Kathryn Senior

The Nairobi-based UN Environment Programme (UNEP) has brought about a ban on leaded gasoline in all 49 sub-Saharan countries, as of January 1, 2006, bringing them into line with most countries in Europe, and with North America. As little as 3 years ago, only Sudan was using unleaded fuel; leaded gasoline was phased out of refineries and pumps with surprising speed during the last months of 2005. "This is a real environmental and health achievement", says Klaus Toepfer, Executive Director of UNEP.

Bill Kovarik (Radford University, VA) welcomes the move. "The health benefits of eliminating leaded gasoline are well understood. Hundreds of public health studies point to better mental health in children, including improved IQ levels, and a

decreased risk of hypertension and heart problems in adults", he comments. The dangers of lead have been known for decades, so why has giving up leaded gasoline taken so long and why have some African nations been so reluctant to do so even when encouraged by international organizations? "This is partly commercial and partly because of misunderstandings – lead is promoted as the cheapest way to boost the octane value of gasoline. There are other routes that can be just as cheap, but it is part of the tradition of petroleum refining", explains Kovarik. He reports that US authorities in Iraq are still buying leaded gasoline, even though it is banned in the US. "My understanding is that companies that have historically manufactured the additive for leaded gasoline are having financial difficulties and the pressure to keep a few markets open is intense."

The impact of the ban on the

environment and on health in Africa may be lessened by the failure to also reduce the sulphur content of gasoline. UNEP reports that African states will still have to contend with the high sulphur content in diesel fuel. "In Europe, sulphur levels in diesel vehicle fuel are typically 10 to 50 parts per million. In most African countries, these are currently at 5000 parts per million, with some countries having even higher sulphur content", explains Toepfer.

Whatever the final effect, Kovarik stresses that the difficulties involved in reaching this point highlight a very serious issue. "If we are having so many problems making the most minor and obvious environmental reforms by simply eliminating unnecessary poisons from commercial systems, how can we expect to make the major reforms that will be necessary for human survival in the coming decades?" he asks. ■

FishBase to the rescue?

Leslie Bienen

Aquaculture is often viewed by politicians and the public as a solution to overfishing. "Untrue", says Rainer Froese (Liebniz Institute of Marine Sciences, Kiel, Germany), "because most cultured species are fed with pellets made from fish meal and oil. Production of one kg of cultured fish takes 3–20 kg of wild fish". Additionally, aquaculture as it is currently practiced has caused widespread introductions of exotics. Fifty percent of the 1207 documented aquaculture introductions are already wild-established; the status of another 15% remains unknown. Nevertheless, information on a species' life history, the potential effects of its escape on native species, and data on other locations where it has established itself as an exotic is often lacking or ignored when decisions are made to begin aquaculture of a fish.

Enter FishBase, a biological information system developed by the



Courtesy of R. Alamaño, FishBase

Oreochromis mossambicus, a freshwater fish native to southeastern Africa introduced worldwide for aquaculture, is now widely considered invasive.

WorldFish Center and seven other consortium members, including the Food and Agriculture Organization of the UN, and several universities and museums in Europe, Canada, and the US. "FishBase is an attempt to bring scattered information from a variety of sources into a single database, thus making information accessible to decision makers and decreasing the potential harm that introduced species cause", explains Christine Casal (WorldFish Center, Los Baños, Laguna, Philippines). FishBase, available on CD, DVD, and online at www.fishbase.org, has existed since

1988, but has expanded enormously in recent years. FishBase now contains information on 29 200 species, including common names in over 260 languages, visual images of about 41 000 fish, and links to 500 online journals. "This type of information will be of tremendous assistance to developing countries that may lack resources for accessing relevant publications to aid them in informed decision making", notes Casal.

Still, a huge amount remains to be done. "Most species known to humans are already in FishBase", says Casal, "but gaps in biological information for important species still need to be filled, data contributions and expert verification must continue, and linkages with other data sources need to be increased". Casal's wish list for expanding FishBase includes producing easily understood reports that are useful to decision makers and managers and adding simple tools to assess the probability of particular species establishing in the wild if introduced into an ecosystem. ■