

the federal limit. Thus, exposure has probably occurred for the last 16 months.

Edwin Johnson, EPA's director of pesticide programs, says that this finding has prompted EPA to seek a reduction in the acceptable level of contamination to half the current amount, or lower. The Food and Drug Administration is expected to concur, as are Hawaiian state officials.

—**R. Jeffrey Smith**

Age of Nuclear Terrorism

There are those who believe the dawning of the age of nuclear terrorism is at hand—a time when terrorists will steal radioactive material for blackmail purposes or threaten to set off a homemade nuclear device. The subject was recently discussed on Capitol Hill at a panel sponsored by Senator Edward Markey (D-Mass.), which featured the views of three experts on the topic.

The Administration spokesman, Robert M. Sayre, director of the State Department's Office for Combating Terrorism, was the most sanguine of the speakers. He observed that terrorists don't fancy widespread destruction and tend to rely on simple weapons. Nuclear materials, he thought, are too difficult to obtain and hazardous to handle and would create too many casualties to suit terrorist purposes. "Terrorists have not yet gone to the limit of existing nonnuclear capabilities," he observed, and therefore he felt a "quantum jump" to nuclear was unlikely.

The other two speakers, however, saw some cause for alarm. Terrorist expert Robert Kupperman, former chief scientist at the Arms Control and Disarmament Agency, saw a changing world situation in which the era of "bipolar zero sum games with the Soviets" would be overtaken by an era punctuated by "horrendous crises" precipitated by fractionated groups around the world. As he saw it, the world is becoming "increasingly blasé" about terrorism and terrorist groups will respond by "mutating" to new and more virulent forms, which he foresaw could involve the use of biological as well as radioactive agents to achieve their ends.

Weapons expert Theodore Taylor

was also pessimistic. He emphasized that it is very easy to make a crude nuclear device with information that is publicly available. He had hard words for the new Reagan nonproliferation policy which is designed to loosen restrictions on the export of nuclear technology and materials. Said Taylor: "If plutonium and enriched uranium are not made much more difficult to steal than anything else in the world" the world would soon be witnessing the phenomenon of a small group of people "holding up a superpower." Taylor denounced as "reckless" the Administration policy of making nuclear materials more easily available without first seeing to it that a much improved system of international security has been established.

Sayre, however, reflected confidence on the part of the Administration that safeguards are such that nuclear materials will not fall into irresponsible hands. The Department of Energy has sunk more than \$100 million since 1974 into a Nuclear Emergency Search Team, a cadre of experts who stand ready to be called upon in the event of a nuclear accident or threat. Yet, as Sayre acknowledged, there has been no attempt by the government to involve the terrorism office with any deliberations relating to nuclear nonproliferation.

—**Constance Holden**

Thumbs Down on Use of Defoliants in Amazon

Environmentalists recently scored a victory when the Brazilian government, in effect, vetoed the use of defoliants on an enormous tract of Amazon rainforest. Environmentalists feared approval of the herbicides' use would have set a precedent leading to wider destruction of the world's rainforests.

In August, Brazil's Minister of the Interior Mario Andreazza ordered a halt to a study that would have determined which defoliant should be sprayed on an 800-square-mile section of the Amazon so a huge hydroelectric project could be developed. The project, Tucuruí Dam, will supply energy to a nearby coal-mining operation. Andreazza's action was largely in response to protests from the public

led by the Secretary of the Environment Paulo Nogueira Neto.

Nogueira's opposition arose when it was revealed that government officials in charge of the dam's construction proposed spraying the area with herbicides rather than cutting the jungle. Authorities from the government-owned company, Electronorte, contended that use of the chemicals was the only way to complete the dam as scheduled by September 1983. Electronorte then asked another government body, the National Institute for Amazonian Research, to study which defoliants to use.

At that point, Nogueira voiced objections to the study, arguing that the chemicals would contaminate the water and eventually poison area wildlife. More importantly, the undertaking of the study in and of itself was a fait accompli that would have virtually guaranteed the future ruin of rainforests because herbicides facilitate their clearing, he said. "There are all kinds of research, but some go against ethics. This is an example," Nogueira commented in an interview from his office in Brasília. In fact, a representative of Dow Chemical Company, the manufacturer of one of the herbicides under consideration, recently met with Nogueira and assured him that the company would not involve itself with such a research project.

Nogueira stirred up tremendous support to oppose the defoliant study. "The force of public opinion was too great," he said, so the study was squashed. Nogueira's opinion gained wide recognition, no doubt, because he, along with another Brazilian official, Maria Tereza Jorge Padua, received this year the World Wildlife Fund's annual conservation prize, the \$50,000 J. Paul Getty Award.

Nogueira said that he would press the nation's National Environmental Council to establish water quality standards as double assurance that defoliants would not be used.

Brazil has increasingly taken actions to protect the environment and won praise from many groups. An editorial in the August issue of *Smithsonian* points out that 10 years ago Brazil was a "prime example" of a developing country that resisted conservation efforts. Now, it is one of many "well aware of the need for control and long-range restraint on simple exploitation."—**Marjorie Sun**