Conference Addresses Terrorism's Environmental Impact

Major Stephen Davis speaks about WMD Consequence Management during the Environmental Terrorism Session.

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Within weeks of September 11th 2001, the Congressional Subcommittee on Water Resources and Environment held hearings on the environmental effects of terrorism. The committee's agenda was to review ongoing efforts to prevent, prepare for, and respond to any future terrorist attacks. The environmental devastation of war zones has long been recognized. Today, it must also unfortunately be acknowledged that intentional environmental contamination is a potential terrorist weapon.

To address the pressing issues of terrorism's environmental consequences, the UMass Amherst Security, Emergency Preparedness and Response Institute (SEPRI) sponsored a Homeland Security Thread at this year's conference, which included a platform session on Environmental Terrorism and a workshop on Policy Issues in Inter-Agency Cooperation. SEPRI is a multi-disciplinary institute charged with fostering the development of new scientific and technological methods to strengthen the nation's Homeland Security stance.

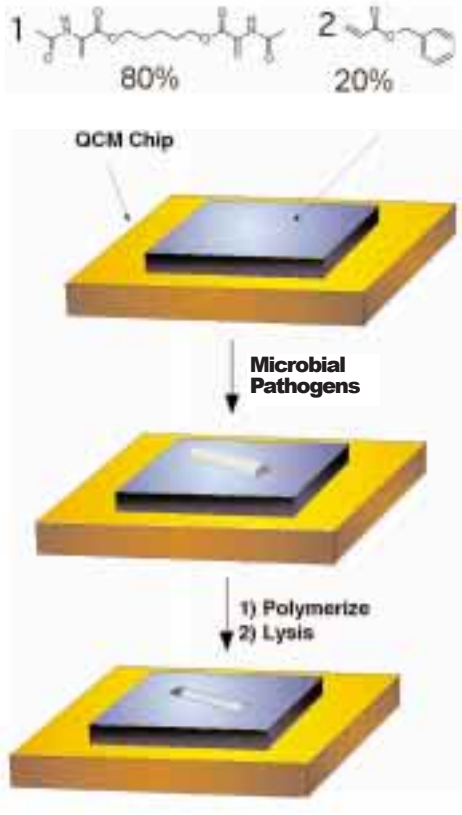
"Everybody has a piece of the puzzle," says SEPRI Managing Director Barbara Pearson. SEPRI's mission is enhanced through participation in this year's Soils, Sediments and Water Conference, Ms. Pearson explains, because "any act of terrorism will have an impact on the environment and these [conference attendees and speakers] are the environmental experts." In order to respond quickly to a terrorist attack, SEPRI encourages the experts to consider potential environmental vulnerabilities. "It's important for the environmental experts to be thinking ahead of time about how to mitigate the environmental degradation that might result from a man-made (terrorist) contamination event," she said.

Of course, a good defense is still the best offense. Klaus Nüsslein, of the Microbiology Department at UMass Amherst, opened the Environmental Terrorism session with a discussion of innovative biosensor technologies for the environmental detection of microbial weapons. Nüsslein reported on a biosensor system, which can detect the presence of specific microbial pathogens down to a concentration of 500 cells/ml. The biosensor was developed through an interdisciplinary collaboration between the microbiology and polymer science departments at UMass Amherst and is based on a NASA-developed quartz crystal microbalance.

Juan Reyes, Director of the U.S. Homeland Security Department's Office of Safety and Environment, participated in the evening workshop on Inter-Agency Cooperation. Mr. Reyes stressed that collaboration between academic researchers, industry and agencies is essential to homeland security. Connections need to be made and relationships forged in advance because when an event occurs there won't be any time to connect.

Homeland Security and terrorism's environmental impact will continue to be a thread in future conferences. There is much work to be done in order to develop the technologies and methods necessary to prevent or rapidly respond to an incident of environmental contamination caused by a terrorist attack. The conference is a forum where specialists can share ideas and engage in collaborative problem solving. "It's a way to bring the experts into the loop," says Pearson, "SEPRI is a work in progress and the conversation is just beginning."

Schematic of microbial biosensor developed by UMass Amherst microbiologist Klaus Nüsslein



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