

Estimating the Likelihood of Terrorist Attacks on the Ports of Los Angeles and Long Beach

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Since September 11, border security measures have proliferated. In particular, the Department of Homeland Security publicly has recognized the vulnerability of ports nationwide to terrorist attacks. Researchers from the Center for Risk and Economic Analysis of Terrorist Events (CREATE) conducted an analysis that focuses on the susceptibility of the Los Angeles and Long Beach ports. Together these ports are the third busiest in the world. Thirty-six percent of all United States imports travel through their entranceways and have a value of about \$212 billion per year. An attack upon the ports has the potential for serious economic and health - both physical and psychological - damages. This project provides an example of how risk analysis can be used to assess the susceptibility of these ports to a dirty bomb attack. Our analysis examines thirty-six scenarios of possible dirty bomb attacks in the Los Angeles and Long Beach harbors. Using project risk analysis tools, we estimate the success probability of such an attack. Plume models are used to estimate both short term health effects and long term cancer deaths. An input-output model provides estimates of the economic consequences of a short term and prolonged port shutdown. We suggest using this methodology to assist in setting counter terrorism policy measures against a dirty bomb attack, including the protection of the radiological sources and intercepting an ongoing dirty bomb attack. A paper entitled "A Risk and Economic Analysis of Dirty Bomb Attacks on the Ports of Los Angeles and Long Beach" has been accepted by *Risk Analysis*. A second, more technical paper is currently under development. Future plans involve expanding upon the model so that our analyses can extend to other areas of terrorist threat, such as biological attacks and bombings.