



Advanced Research Workshop



Risk Management Tools For Port Environmental Security, Critical Infrastructure, and Sustainability

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<http://www.risk-trace.com/ports/index.php>

Organizing Committee

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OVERVIEW SECURITY NEEDS

- Security at ports was not an issue before 9-11.
 - It has become very important since....
 - Because of terrorism!

- Ports are not sure what security is needed, how it should be developed, and where it is most effective (and why);
 - But...Ports know when they need security..... **NOW !**

- Security means different things to different organizations:
 - Terrorist attacks,
 - Bioterrorism,
 - Environmental (e.g., water & resource protection),
 - Natural catastrophes (e.g., earthquakes & hurricanes).



PORT SECURITY CHALLENGES

- **Supply chain protection**
- **Seismic protection**
- **Critical infrastructure**

- **Actions generate [intended and unintended] consequences**
 - **Pressures dictate challenges and responses**
 - **Pressures change with events**



CURRENT METHODS

- **Vulnerability analysis**
- **Consequence analysis**
- **MCDCA vs. Decision Analysis**
- **Risk Assessment vs. Common Sense**

- **Uncertainty**

- **Adaptive Management**



EXPERIENCE IN EUROPE, NORTH AMERICA & MIDDLE EAST

- Focus on different aspects of security
- Regulations are emerging
- Complex interactions are recognized

- Harmonization is needed

- More frequent communication is needed



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ENVIRONMENTAL SECURITY

WHERE DO WE GO FROM HERE?