



Machiavelli Center for Cold War Studies - CIMA

Centro interuniversitario "Machiavelli" per lo studio dei conflitti strutturali della guerra fredda



NATO Foundation  
Defense College

## Advanced Research Workshop

# CBRN Risks in Maritime and Land Containers Transport

Rome, 25-27 May 2016



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is supported by:*

The NATO Science for Peace  
and Security Programme

## Concept

Containers could be compared to barcode as a material tool of globalization's process. Answering to standardization's requirements that every industrial and commercial economy met, containers became the basic unity of delivering in any international goods markets. The movement of containers has revolutionized the world of logistics and has reduced the cost of transport for every kind of goods. Over 11 million containers arrive in USA alone, every year. But the movement of containers in the seaports entails the risks of illicit trafficking as well as CBRN threats and malicious acts. The sealed nature of the containers means that there is a growing appreciation for the risk of prohibited or dangerous material being shipped around the world as contraband items. To address this problem, the CSI (Container Security Initiative) was created in the USA under the guidance of the US Customs and Border Protection Agency in 2001. Their aim was to identify potential risks of shipping and where possible, mitigate the risks. Initially, teams were deployed to container 'hubs' around the world, to capture information and intelligence. This has developed into a system that ensures over 80% of all containers arriving in the USA to be pre-screened. On international level, as OECD report stated (<http://www.oecd.org/sti/transport/maritimetransport/31839546.pdf>), the mandatory framework of SOLAS and the ISPS code already govern security measures for international ocean-going vessels and ports involved in international trade. But we are still far from a full implementation of such measures. The CSI has developed a range of policies such as the "Containerized Cargo Sealing Policy" aimed at providing guidelines for global action for container handling. Whilst this policy is currently enforceable for US-bound containers only, there is a belief that the policies will be eventually adopted globally. To encourage greater national participation, the US has set up the Customs-Trade Partnership against Terrorism (C-TPAT) to act, through Mutual Recognition Arrangements (MRAs), as a cooperative around the world to police the movement of containers for contraband and terrorist activities.

The supply chain approach of Container Security Initiative promoted by US Government scored relevant results, but the CBRN threats need globally dedicated procedures of response, as well as the collection and filtering of shipping data to identify high risk sources and separate intelligence. For the future, the aim in this field must remain increasing volumes and variety of screening. If in the past the focus may have been on explosive materials, now there is growing interest in nuclear and bio-terrorist threats. Whilst there is recognition that the authorities have neither the technology nor the resources to screen every container for every kind of known threat, this still remains the final aim for a comprehensive container security.

Moreover, the screening methods with existing testing (chemical, biological, radiological) (i.e. large scale X-ray, gamma ray machines and radiation detection devices) still need for new screening methodologies (i.e. non-intrusive inspection). According to the pilot study of 2002 (Detecting Nuclear Material in International Container Shipping: Criteria for Secure Systems. Stanford Study Group Center for International Security And Cooperation Stanford University), the detection of special nuclear material was the main target for container screening. So, while the RN detection is still the advanced sector of CBRN detection's technologies, the pursuit of a reactive component that can track data for epidemic trails (Ebola, Anthrax, etc.) would be a good research in order to address bio risk in container exchange, in particular for aliments transportation.

With the aim of discussing these topics, an interdisciplinary approach is needed. For this reasons the co-directors will convey experts from the various fields involved in the technics and in the related international policies. Detection technologies, regulatory frameworks, emerging threats and many other topics shall be discussed to approach the movement of containers.

The workshop will be structured in six round-tables, with an introductory speech based on a pre-circulated article or paper. The Directors will require the introductory speakers for preparatory papers or already published articles, according to the theme of each round table:

- Comparing Experiences: Land, Maritime and Container Security
- CBRN Threat Vectors
- Lessons From Rn Security
- Bio And Chemical Threats Response
- Strategic Trade And International Security
- Nuclear Order And Global Security

The aim of the workshop is to gather experts, scholarship and companies in a provocative and high-quality discussion. This will promote future:

- Adoption of a standardized, harmonized security approach
- Increase engagement of the governmental, inter-governmental and international organizations whose are engaged in the screening programs (i.e. World Customs Organization, International Maritime Organization)
- Involve industry and trade communities
- Liability of supply chains

**CBRN Risks in Maritime and Land Containers Transport  
Global good transportation and future non-conventional challenges**

*Advanced Research Workshop*

*organised by the **CIMA – Machiavelli Center for Cold War Studies***

*and the **NATO Defense College Foundation***

*in co-operation with the **Sapienza Università di Roma - Dipartimento di Scienze Documentarie***

***Linguistico Filologiche e Geografiche***

*and the **Università degli Studi di Firenze - Dipartimento di Scienze Politiche e Sociali***

**Rome, the 25<sup>th</sup> – 27<sup>th</sup> of May 2016**

Venue: Casa dell'Aviatore, Viale dell'Università 20, Rome, Italy

**PROGRAMME**

**WEDNESDAY, 25<sup>TH</sup> OF MAY**

- 19,00-22,00 *Dinner Session*  
19.00-19.30 *Welcome remarks*  
**Alessandro Minuto-Rizzo** (NATO Defense College Foundation)  
**Leopoldo Nuti** (Machiavelli Center for Cold War Studies)  
**Andrea Manciuoli** (NATO Parliamentary Assembly – President of Italian Delegation)  
19.30-19.45 *Opening remarks*  
**Claudio Bisogniero** (Italian Ministry of Foreign Affairs and International Cooperation)\*  
\*Invited  
19.45-22.00 *Dinner*

**THURSDAY, 26<sup>TH</sup> OF MAY**

- 9.00-13.00 *Morning sessions*  
9.00-9.15 *Introduction to the workshop by co-directors*  
**Matteo Gerlini** (Machiavelli Center for Cold War Studies)  
**Abdelwahed Chetaine** (Université Mohamed V)

## 9.15-11.00 COMPARING EXPERIENCES: LAND, MARITIME AND CONTAINER SECURITY

*The increase in global threats had brought the EU customs to the fore front as a major player in the field of external border and supply chain security. The responsibility for supply chain security and trade facilitation requires a broad expertise and knowledge regarding customs risk management, customs detection technologies, mutual recognition of security programmes, cooperation with other trading nations and research in several areas.*

- Chair: **Sylwia Mrozowska** (University of Gdansk)
- **Paolo Salieri** (DG Home Affairs - European Commission): “EU approach to supply chain security and trade facilitation”

### *Discussion*

- **Marcello Irlando** (Italian Custom Agency)
- **Helmut Zika** (SSM - Swedish Radiation Safety Authority)
- **Enrico Checchi** (Joint Research Centre –European Commission)
- **Dennis L. McCrady** (US Department of Homeland Security)

11.00-11.15 *Coffee break*

## 11.15-13.00 CBRN THREAT VECTORS

*The threat of a Chemical, Biological, Radiological or Nuclear Weapon (CBRN) being delivered via various improvised or unconventional means, has risen significantly during last 15 years. With ever increasing technological innovations, the methods that are used to detect, mitigate or thwart such threats, may be (mis) used as means for CBRN delivery, under the term of dual-use technology.*

- Chair: **Emma Ferrero** (NDCF – NATO Defense College Foundation)
- **Ashok Vaseashta** (NUARI - Norwich University Applied Research Institutes):  
"Detection, Mitigation, and Consequence Management by Nexus of Technological Innovations”

### *Discussion*

- **Janet Benini** (US Government Department of Transport)
- **Renato Bonora** (University of Padua)
- **Antonietta Rizzo** (ENEA – Agenzia nazionale per le nuove tecnologie, l’energia e lo sviluppo economico sostenibile)
- **Nadira Berdimuratova** (Attaché Foreign Ministry of Uzbekistan)

13.00-14.00 *Lunch*

14.00-18.00 *Afternoon sessions*

14.00-15.45

## LESSONS FROM RADIO NUCLEAR SECURITY

*Nuclear and radiological security issues relating to the prevention and detection of, and response to, theft, sabotage, unauthorized access and illegal transfer or other malicious acts involving nuclear and radiological material and other radioactive substances and their associated facilities need to be addressed with a special focus on the maritime context.*

- Chair: **Claudio Tuniz** (International Centre for Theoretical Physics)
- **Christopher Hobbs** (King's College): "Challenges and opportunities for detecting nuclear and radiological materials in the maritime context"

*Discussion*

- **Guillaume Sannié** (CEA - Commissariat à l'énergie atomique et aux énergies alternatives)
- **Tareq Majeed** (PIEAS - Pakistan Institute of Engineering and Applied Sciences)
- **Sitara Noor** (VCDNP – Vienna Center for Disarmament and Non-Proliferation)
- **Willem Janssens** (Joint Research Centre –European Commission)

15.45-16.15

*Coffee break*

16.15-18.00

## BIO AND CHEMICAL THREATS RESPONSE

*Catastrophic chemical or radiological events can cause thousands of casualties. Such disasters require triage procedures to identify the development of health consequences requiring medical intervention. The final implementation of rapid and portable diagnostics tools suitable for emergency care providers to guide triage and medical countermeasures use will need public support.*

- Chair: **Hoda Abou Shady** (Cairo University)
- **Anna Giovanetti** (ENEA – Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile): "Addressing Bio and Chemical Risk"

*Discussion*

- **Johannes Rath** (University of Vienna)
- **Isabelle Daoust-Maleval** (French Ministry of Defence)
- **Amjad Fataftah** (Alfaisal University)
- **Stef Stienstra** (BBBeratung)

20.00-22.00

*Dinner*

## FRIDAY, 27<sup>TH</sup> OF MAY

9.00-13.00 *Morning sessions*

9.00-10.45

### STRATEGIC TRADE AND INTERNATIONAL SECURITY

*Number of Free Trade Zones (FTZ) has increased in the last ten years and appears to be essential for the economic development of certain States. If the term is very commonly used, there are no international definitions or common understanding of it. Do we need an international legally/politically binding act that defines it? How shall strategic trade control in FTZ be ruled and by whom?*

- Chair: **Morena Priori** (IAEA - International Atomic Energy Agency)
- **Quentin Michel** (Joint Research Centre –European Commission):  
“Trade control challenges in free trade zones”  
*Discussion*
- **Setsuko Aoki** (Keio University)
- **Sybille Bauer** (SIPRI - Stockholm International Peace Research Institute)
- **Andrea Viski** (Joint Research Centre –European Commission)
- **Alessandro Politi** (NDCF – NATO Defense College Foundation)

10.45-11.00 *Coffee break*

11.00-13.00

### NUCLEAR ORDER AND GLOBAL SECURITY

*In a dynamic, uncertain security environment, marked by rising regional instability and conflict and increased incidents of global terrorism, emerging nuclear and other weapons of mass destruction (WMD) threats—both proliferation and terrorism—are seen as growing dangers giving rise to increasing global insecurity.*

- Chair: **Park Jiyoung** (Asan Institute for Policy Studies)
- **Joseph Pilat** (Wilson Center): “Evolving models from NPT to NSS”  
*Discussion*
- **Matteo Gerlini** (Machiavelli Center for Cold War Studies)
- **Şebnem Udum** (Hacettepe University)
- **Polina Sinovets** (Odessa Nat. University)
- **Wolfgang Rudischhauser** (NATO – WMD Non-proliferation Centre)

13.00-13.30 *Conclusion: Franca Padoani* (ENEA – Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile)

13.30-14.30 *Lunch*

