

Industrial chemicals as a threat in unstable environments

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Introduction: The chemicals in the WW1 chemical weapons were weaponized as they were left overs of the chemical industry, which could not continue the production of their regular products due to the war. In modern threat scenarios this is still valid and as it is easier to transport chemicals nowadays, harmful chemicals are a realistic threat for safety and security

Methods: The OPCW (Organisation for the Prohibition of Chemical Weapons) organised an international meeting in Tarnow, Poland, discussing the chemical safety and security and both threat scenarios and consequent management schemes were put together and discussed. This gave an overview of threats and provided new ideas for the prevention of chemical incidences, which can be a ROTA (Release other than attack) or a chemical terror attack.

Results: With proper regulations, which do not interfere too much with the normal operations of chemical factories, laboratories and other chemical facilities, the public risk can be reduced enormously. Both a 'Code of Conduct' for those involved with chemicals as computer assisted administration and regulation help with improving the chemical safety and security.

Discussion/Conclusion: International organisations, like the UN (United Nations) organisation OPCW in The Hague can help to suggest and/or to make formats in which misuse of dangerous and/or toxic chemicals by terrorists and/or failed states can be limited. Self-regulation by the chemical industry organisations is preferred, but international guidelines should be initiated by politically well supported international organisations.

Biography

Stef Stienstra is a strategic and creative development manager in biomedical science, who works internationally for several medical and biotech companies as scientific advisory board member. He is also an active reserve-officer of the Royal Dutch Navy in his rank as Commander (OF4) and Lector at the Rhein-Waal University of Applied Sciences at the Faculty of Political Sciences, Peace & Security studies.

For the Dutch Armed Forces he is CBRNe specialist with focus on biological and chemical threats. He is also manager of the group of medical- and environmental functional specialist within the 1 CMI Command (Civil Military Interaction) of the Dutch Armed Forces.

In his civilian position he is at this moment developing with MT-Derm in Berlin (Germany) a novel intradermal vaccination technology as well as a new therapy for cutaneous leishmaniasis for which he has won a Canadian 'Grand Challenge' grant. With IQ Therapeutics in Groningen (The Netherlands) he develops therapeutic antibodies against anthrax and orthopox viruses and with Hemacon in Düsseldorf (Germany) he develops an innovative blood separation unit. For Infection Control in Eemnes (The Netherlands) he develops a bio-disinfection system for bioterrorism consequence management and works on freelance basis for several consulting companies.

He has finished both his studies in Medicine and in Biochemistry in The Netherlands with a doctorate and has extensive practical experience in cell biology, immuno-haematology, biodefense and transfusion medicine.

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