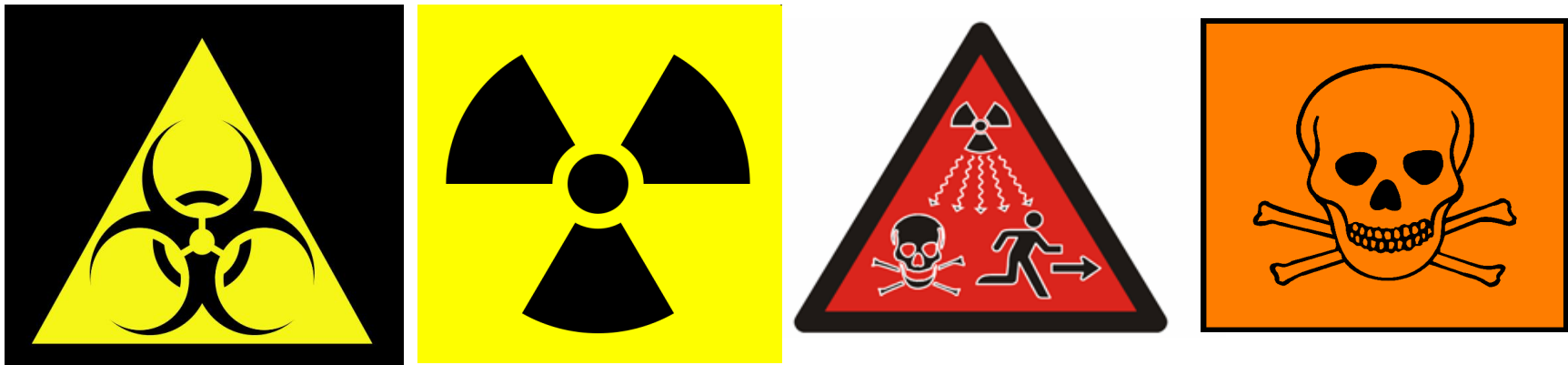


Call for a higher NBC awareness



Cross-border control of radiological, biological and chemical active and harmful terrorist devices

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Starting Point: End of Cold War

- Breakdown of the USSR - political landscapes changed dramatically
- Terrorists / Separatists are seeking dirty bombs
- Definition: dirty bomb normally means a Radiological Dispersal Device (RDD)
- Extended definition: dirty bomb should comprise all nuclear, biological and chemical substances that can be dispersed by explosives

Short History of Dirty Bombs I

- 1985 *Salmonella* was used by followers of Bhagwan Shree Rajneesh in The Dalles / USA
- 1987 Possible use of *X-Fever* against British post offices by Ōmu Shinrikyō (so called Aum-Sect)
- 1995 Tokyo, Subway-Attack with *Sarin* by Ōmu Shinrikyō (so called Aum-Sect)
- 1996 Russian separatists / terrorists in Chechenya planted a working RDD in a park in Moscow

Short History of Dirty Bombs II

- 1997 Since then more than 1.500 radioactive devices have been stolen, are lost or are abandoned in the US alone – the US federal government can only account for 660 of those
- 2001 Many anthrax attacks to official Departments and the White House by a worker of the biodefence lab, five casualties
- 2008 In Bangor, Maine / US a RDD was found in a dead mans home with four small containers of chemicals and uranium

Unsettling Facts

- NBC substances are normally colorless, odorless and very dangerous
- Some NBC substances are easily available within a country
- About 30,000 old radiological sources are stored in Europe alone out of which up to 70 sources per year are missing (IAEA)

Detection of NBC Devices I

- Some NBC substances can be detected easily (nuclear radiation) whereas most are not easily detectable (BC substances)
- Radiological sources can easily be detected by help of **Geiger Counters** (*actively* counting device)
- Border officers can be secured by help of **Dosimeters** (*passively* measuring device)

Detection of NBC Devices II

- Possible biological and chemical NBC substances are manifold
- What to look for? How detect NBC s.?
- Indicators of dangers may be:
 - Rapid change of pressure, temperature, acidity, etc.
- Detection dogs are not suitable

Cross-border Control I

- The cross-border traffic of NBC Substances is controlled by a variety of agencies:
 - (Border-) Police,
 - Atomic energy agencies,
 - Internat. Atomic Energy Agency IAEA,
 - Secret services and
 - Customs services

Cross-border Control II

- The cooperation between agencies is bad
- Normal customs controls are not regarded as important, yet
- Normal customs controls can contribute enormously
- US Department of Homeland Security and the federal government are requesting 100% scanning of all containers entering the US

Conclusions I

- National customs services should gear up their radiological detection equipment
- Customs officers should be equipped with passive measuring devices (Dosimeters)
- Customs officers should be trained sufficiently
- WCO should issue a recommendation for NBC smuggling awareness

Conclusions II

- Many authorities are chasing smugglers of nuclear substances; BC substances should also be taken into account
- Economic operators should contribute also
- Security managers are thinking that secure container seals can help to make world trade more secure; **I postulate** that smart containers and bulk carriers are necessary

Smart Containers / Bulk carriers

- Black boxes are widely used by airplanes and ships (but also in trucks) to record all readings during a journey in order to make accidents understandable.
- For safety and security reasons there should be introduced a **smart black box** for containers that is able to continuously measure certain values (Temperature, pressure, acidity, radiation).
- When a reading is changing rapidly / dramatically an alarm could be raised, because this is an indication of an immediate safety / security danger (such as chemicals leaking, gas evaporating or preparing to explode).

Final Remarks

- More details are available in the paper, printed in the *World Customs Journal*
- Thank you for your attention!

