

Weapons of Mass Destruction Proliferation Threat

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Bureau of Nonproliferation
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Central Asia and Caucasus Regional Forum
Almaty, Kazakhstan
2-4 June 2003

The Weapons of Mass Destruction Proliferation Threat Is Global

- The weapons of mass destruction (WMD) proliferation threat is global, with proliferators moving WMD materials across borders worldwide.
- Many WMD materials are dual use, with legitimate commercial applications as well as weapons use, complicating efforts by border control officials to counter proliferation.
- Weapons of mass destruction include chemical, biological, and nuclear weapons, and delivery systems.

WMD Proliferators Include State and Non-State Actors

State Actors:

China, Iran, Libya, North Korea, Sudan, and Syria

Non-State Actors:

Parties such as international terrorist or organized criminal groups often cross international boundaries and are difficult to counter because of their dispersed membership.

Potential Chemical Weapons Materials*

- Precursor chemicals
- Reactors
- Distillation columns
- Heat exchangers
- Storage tanks
- Evaporators/dryers
- Pumps, valves, and piping
- Process control equipment

*Note that these commodities have commercial applications

Some Dual Use Precursor Chemicals

Chemical	Commercial Uses	Weapons
Triethanolamine	Detergents, cosmetics	Mustard gas
Dimethyl methylphosphonate	Flame retardant	Sarin
Sodium fluoride	Insecticides, toothpaste	Sarin
Phosphorus pentasulfide	Insecticides	VX
Thionyl chloride	Insecticides, chlorinating agent	Mustard gas, sarin, VX
Dimethylamine	Insecticides, detergents, gasoline additive	Tabun
Thiodiglycol	Dye solvent, plastics, lubricants	Mustard gas

Potential Biological Weapons Materials*

- Fermentors
- Air handling systems
- Cultures of microorganisms
- Growth media
- Centrifuges
- Purification equipment
- Biocontainment facilities

*Note that these commodities have commercial applications

Potential Nuclear Weapons or Radiological Dispersal Devices (“Dirty Bombs”) Materials

- Highly enriched uranium
- Plutonium
- High-speed cameras
- Oscilloscopes
- Neutron generators
- Radioactive materials, such as strontium and cesium

Potential Ballistic Missiles Materials

- Accelerometers
- Carbon fiber
- Kevlar fiber
- Gyroscopes
- Turbopumps
- Chemicals used for fuels, such as aluminum powder, ammonium perchlorate, nitrogen, hydrogen, and hydrogen peroxide

Proliferators Use a Variety of Methods To Transport WMD Materials Across Borders

- Smuggling
- The use of front companies to purchase dual use materials
- The use of financial intermediaries
- The use of shippers and freight forwarders
- Deception techniques on import documentation, such as vague or false descriptions of goods or false end users

Proliferators Operate Outside of Internationally Accepted Norms

- Proliferators bypass legal responsibilities or treaty obligations
- Proliferators can use false identities
- Proliferators can pose as or use legitimate-sounding entities—such as chemical companies, petrochemical companies, agrochemical companies, pharmaceutical companies, universities, and research institutes—to obtain WMD materials
- Proliferators cooperate across borders

Identifying Potential WMD Transfers

Border security officials should scrutinize documentation attached to dual use commodities for:

- Ambiguous address documentation
- Unusual country of destination
- The recipient's known involvement in weapons programs

Identifying Potential WMD Transfers, Continued

- Unknown shipper, vendor, or manufacturer
- The description of the goods is vague
- The declared value of the goods is understated
- Elaborate packaging or security mechanism on shipments with low declared values
- The consignee and shipping agent are located in different countries

Case Study: Deceptive Documentation

- In 2002, an Iranian entity used deceptive methods in an effort to obtain dual use commodities—semiconductor modules that could be used as nuclear weapon fuses—from Germany.
- The Iranian entity, using a front company in Singapore and an intermediary in Hong Kong, and a German woman place an order for the modules as a domestic purchase.
- The apparent plan was for the German woman to send the modules to the intermediary in Hong Kong using false documentation, a misleading description of the goods, and understated value.

Case Study: Proliferation Attempt Thwarted by International Cooperation

- Recently North Korea apparently tried to obtain dual use commodities—special aluminum pipes, which could be used for uranium enrichment—from Germany.
- North Korea had a Chinese entity place the order and declare itself the end user.
- German authorities were suspicious, because a North Korean envoy acted as an intermediary for the deal and also because Iran apparently had used a similar method to obtain similar aluminum tubes from Germany, and denied the export license.

Case Study: Proliferation Attempt Thwarted by International Cooperation, Continued

- Despite the export license denial, the German firm shipped the aluminum pipes onboard a French merchant ship anyway.
- Although too late for the German authorities to prevent the shipment, they worked with their French counterparts to persuade the ship's captain to stop the shipment before it reached its destination.
- Local authorities in Egypt offloaded the pipes.