



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

15 Questions about WMD Terrorism

NISC June 2005



I. WMD Terrorism :

- A Hollywood Thriller or
- A Real Threat?

1.1. Video 5 min

- Video “Peacemaker”



1.2. Aum Shinri Kyo (CW use)

- When: 20 March, 1995
- Where: Tokyo subway
- Five Aum members carried packages onto Tokyo subway trains. They punctured the bags, releasing the deadly nerve gas, sarin, into the closed cabins
- 12 people killed, more than 5,400 injured

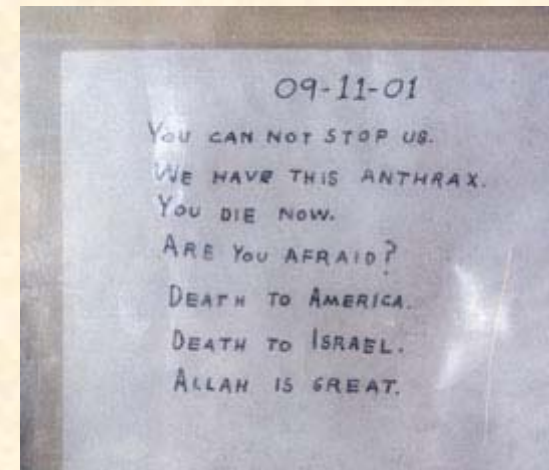
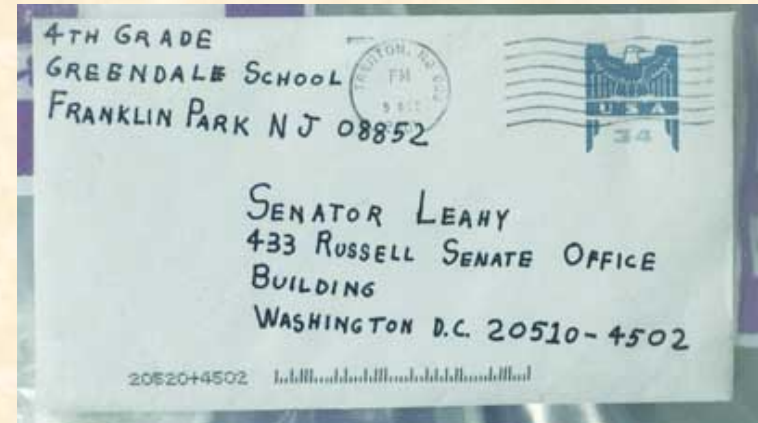


(Source: Bloomberg, Associated Press)

1.3. Anthrax letters (BW use)

- When: October, 2001
- Where: United States
- Letters containing anthrax bacteria were mailed to five news media offices and two US Senators
- 5 people killed, many injured

(Source: US General Accounting Office Report, 15/10/2003)



1.4. Chechens Izmailovsky Park (radiological)

- When: 1995
- Where: Izmailovsky Park in Moscow
- Chechen militants deployed a container with the radioactive isotope cesium-137
- Material not very dangerous, mainly meant for psychological effect



(Source: « Chechnya the threat of WMD terrorism ». *Yaderny Kontrol*, No.2, March-April 2001)

1.5. Senator Nunn on Nuclear Terrorism

- "The likeliest nuclear attack against the United States would come not from a nuclear missile launched by a rogue state, but from a warhead in the belly of a ship or the back of a truck delivered by a group with no return address."



(Source: www.carnegieendowment.org, speech of 15/06/2001)

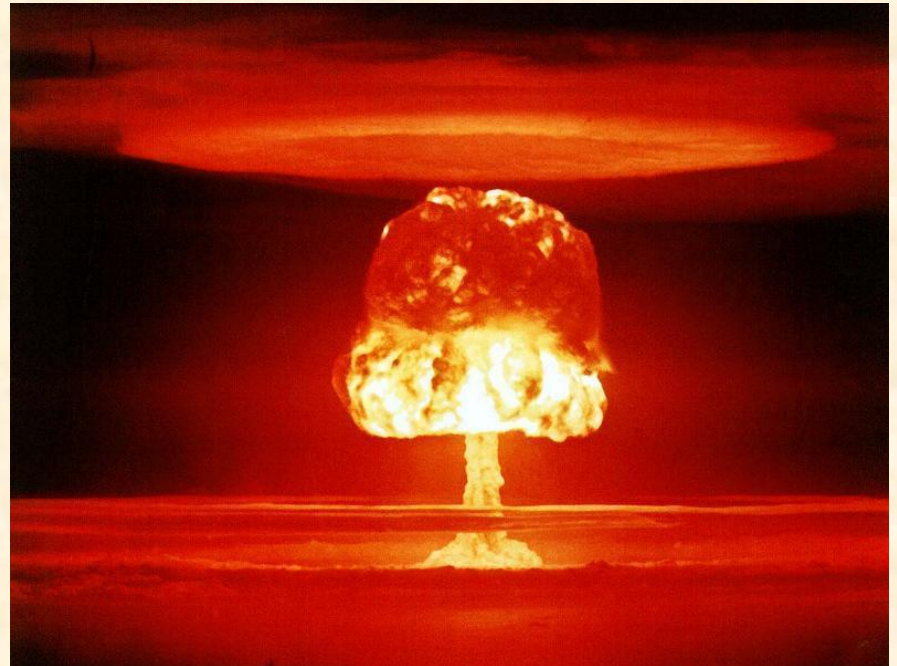


Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

II. What are the Types of WMD Terrorism?

2.1. Nuclear

- **Lowest probability**
- **Highest consequences**



2.2. Radiological

- **Highest probability**
- **Lowest consequences**



2.3. Biological

- the use or threatened use of micro-organisms or toxins to produce disease and/or death in humans, animals or plants



Anthrax Fermenter

2.4. Chemical

- the use of all toxic chemicals, and their precursors, munitions and/or devices specifically used to cause death, harm, temporary incapacitation or sensory irritation to man, animal or plants



2.5. Information Terrorism - not WMD Terrorism, but global effects

- “the premeditated, politically motivated attack against information, computer systems, computer programs, and data which result in violence against noncombatant targets by sub national groups or clandestine agents.”

(Source: FBI in www.crime-research.org)

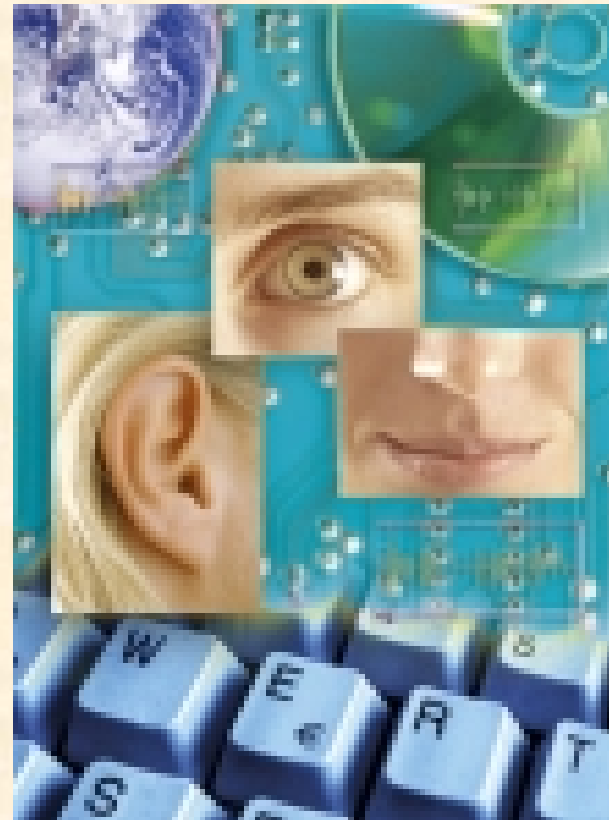




Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

III. What are the Root Causes of Terrorism?

- **The Acceleration of the scientific-technological development process**



- **End of the “Cold War” consequences and the collapse of a bipolar world structure**



- **National governments (for example, in the Arab World) became less radical**



- **Release of considerable amounts of weapon-grade nuclear materials as a result of the global nuclear-weapons reduction process**



- **For Non Nuclear Weapons States (NNWSs) which are developing their own nuclear military programs, access to materials necessary for such programs becomes more complicated because of the strengthening of the international export controls system**





- **Increase in number, power, financial abilities of non-state actors in international relations**



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

IV. Who are Non-State Actors?

Non-state actors

- **“Individual or entity, not acting under the lawful authority of any State in conducting activities which come within the scope of this resolution.”**

(Source: UN Security Council Resolution 1540, 28/04/2004)



- **International terrorist organizations**



- **Transnational organized criminal communities**



- **Separatist movements on an ethnic basis**



- **Extremist religious cults**



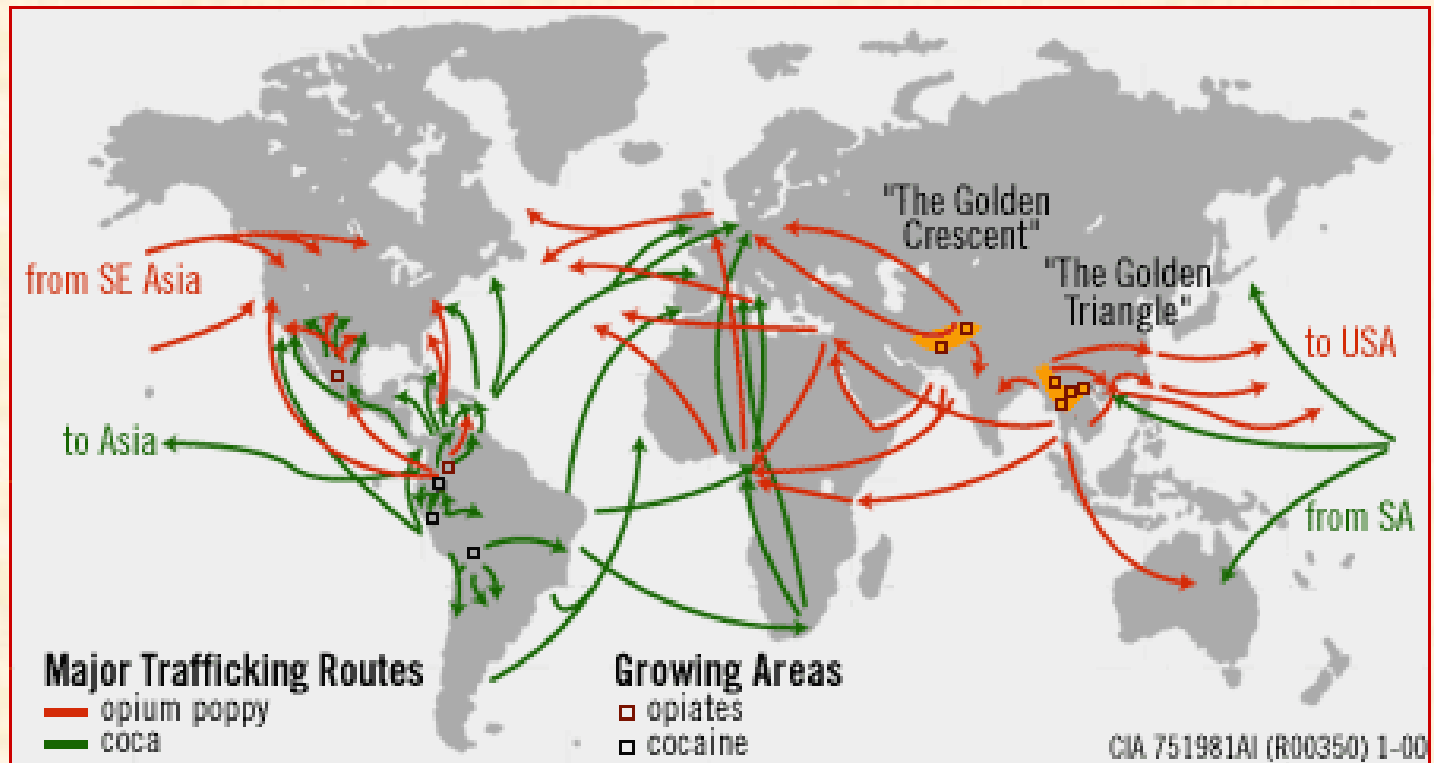


V. Are all violent non-state actors
willing to get access to WMD?
Are they merging?
Coordinating their efforts?

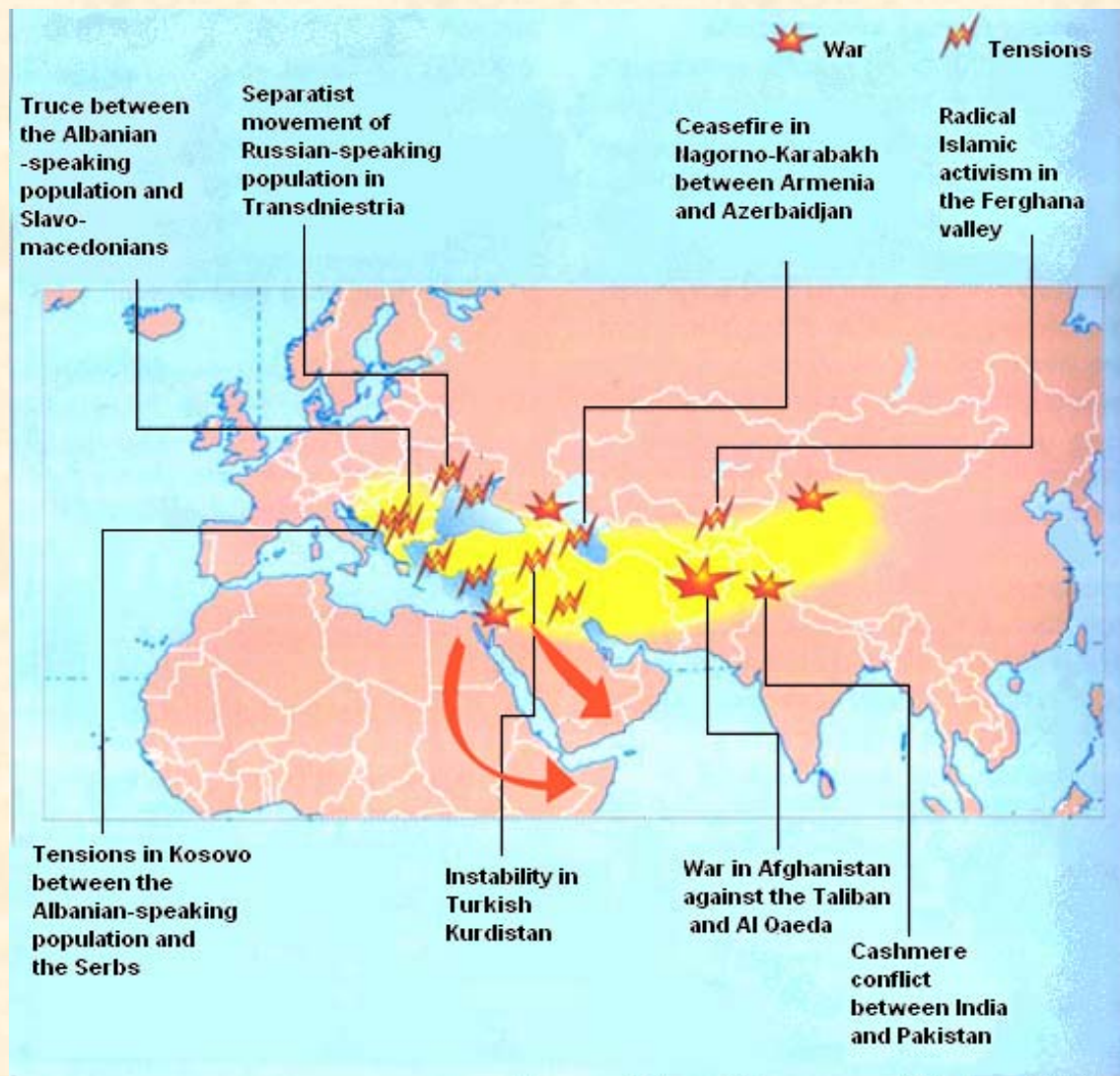
Yes

No

- **Are Organized Crime and Terrorism merging?**



- **“Grey Zones”**
or
“Black Holes”



(Source: IFAS)



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

VI. Let's talk now about nuclear terrorism. What does this definition include?

Terrorism

- **premeditated, politically motivated violence conducted in peacetime by an individual or a group of individuals, usually intended to influence a state, society or public opinion.**



The Four Faces of Nuclear Terrorism

- **“The theft and the detonation of an intact nuclear weapon”**

(Source: Ferguson, C.D. & Potter, W.C., “The Four Faces of Nuclear Terrorism”, 2004)

The Four Faces of Nuclear Terrorism (continued)

- **“The theft or purchase of fissile material leading to the fabrication and detonation of a crude nuclear weapon – an improvised nuclear device (IND)”**

(Source: Ferguson, C.D. & Potter, W.C., “The Four Faces of Nuclear Terrorism”, 2004)

The Four Faces of Nuclear Terrorism (continued)

- **“Attacks against and sabotage of nuclear facilities, in particular nuclear power plants, causing the release of large amounts of radioactivity”**

(Source: Ferguson, C.D. & Potter, W.C., “The Four Faces of Nuclear Terrorism”, 2004)

The Four Faces of Nuclear Terrorism (continued)

- **“The unauthorized acquisition of radioactive materials contributing to the fabrication and detonation of a radiological dispersion device (RDD) – a dirty bomb – or radiation emission device (RED)”**

(Source: Ferguson, C.D. & Potter, W.C., “The Four Faces of Nuclear Terrorism”, 2004)



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

VII. So, is it possible for non-state actors to get access to a nuclear weapon?

Yes

No



**Yevgeny P. Maslin,
Head of the 12th Main Directorate of the Russian
Ministry of Defense**

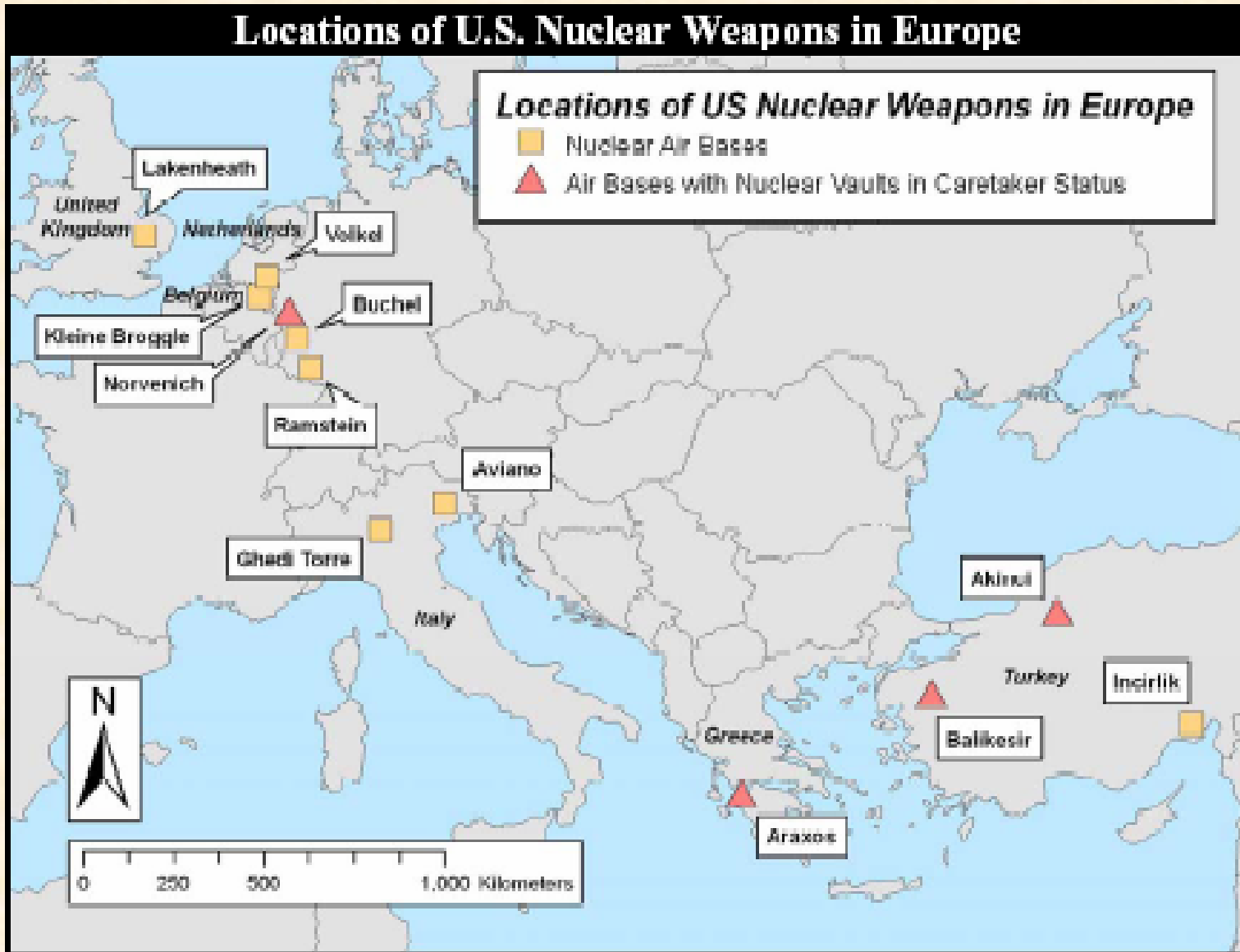
«... It's impossible to steal nuclear munitions from a Ministry of Defense's storage facility, I'm fully responsibly declaring this. What is hypothetically possible and we must be always prepared for is a robbery of railway trains, an attempt to get hold of transported nuclear munitions ... »

(Source: Yaderny Kontrol, No.5, May 1995)

Pakistan



Locations of U.S. Nuclear Weapons in Europe



(Source: Kristensen, Hans. *US Nuclear Weapons in Europe*)



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

VIII. How can non-state actors get access to nuclear material?

8.1. First line of defense: the nuclear facility

- **Safe and secure storage of nuclear materials (MPC&A):**
 - **Physical protection**
 - **Accounting**
 - **Control**



Theft of radioactive materials at the Russian North Fleet base *Sevmorput* in 1993

According to the military prosecutor investigating the case:

“Regarding the Kolsk Gulf – no fencing at all: just take a boat at night, come and do what you want. Regarding Murmansk industrial zone [...] holes in the fences here and there. There is no strip to control footprints around the warehouse. It is easy to reach the backdoor of the storage facility. The warehouse has anti-atomic protection [...] but no proper security alarm. There is a simple contact switch: if the door is open, the pin is not in place and the alarm turns on. The door closes, the pin returns to its normal position, no electric contact – no alarm. [...] Two old ladies guarded the control panel of the alarm. If they need to go to the warehouse they have to come across grounds full of various rubbish [...] No lights at all. The warehouse had a simple rusty padlock, which was sawed by the criminals in ten minutes.”

«[...] Even potatoes must be better guarded than radioactive material [...]»

(Source: Yaderny Kontrol, No. 2, February 1995)

8.2. Spent nuclear fuel

“Used fuel periodically removed from nuclear power reactors. One of the most hazardous materials made by man. Nuclear power companies currently store 50,000 tons of spent fuel at 72 sites in 33 states.”

(Source: Report to the Chairman, Subcommittee on Energy and Air Quality, U.S. House of Representatives, JULY 2003)



Securing transportation: the “back end” cycle

“All operations related to spent nuclear fuel leaving the reactors,

i.e. shipment of spent fuel elements from nuclear power plants to reprocessing facilities for recycling, the subsequent transport of the products of reprocessing [...] the transport to interim storage facilities pending final disposal.”

(Source: www.wnti.co.uk, World Nuclear Transport Institute, 2005)



Rail-road transfer at Valognes Terminal, France

8.3. Second line of defense: customs cooperation

Key to combat:

- attempts of unlicensed and undeclared export (smuggling)
- attempts of unlicensed exports, when nuclear material is declared as not subject to trigger lists and licensing
- attempts of export under forfeited license
- discrepancies between what was authorized on the license and the actual exported goods



(Source: "Nuclear Nonproliferation in US-Russian relations", 2002)

- Video “Customs Cooperation”





Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

IX. What about the human factor?

9.1. Insider support

- Key to seizing a nuclear facility

“It should be noted that the **weakest link in the nuclear security system is the **human factor**.”**

(Source: Megaterrorism: A New Challenge for a New Century. Edited by A. Fedorov. PIR Center for Policy Studies, 2003)



9.2. Brain drain

- Intangible technologies leakage





Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

X. Is the problem of illicit trafficking in nuclear material still serious?

Yes

No

10.1. Illicit Trafficking in Nuclear Materials

The transfer within or across state borders of nuclear materials is critical from the nonproliferation viewpoint, namely:

- Uranium with 20% or more enrichment,
- Plutonium,
- facilities for spent fuel reprocessing,
- Uranium isotopes division,
- heavy water production,
- enriched Uranium and Plutonium conversion, and their main parts

received as a result of unauthorized access to them.



U-235 Disc

10.2. Situation in the 1990's

“Illicit trafficking of nuclear material is a public safety and nonproliferation concern. As risks continue to exist, we have agreed on, and released, a programme on preventing and combatting illicit trafficking in nuclear material to ensure increased cooperation among our governments in all aspects of prevention, detection, exchange of information, investigation and prosecution in cases of illicit nuclear trafficking.”

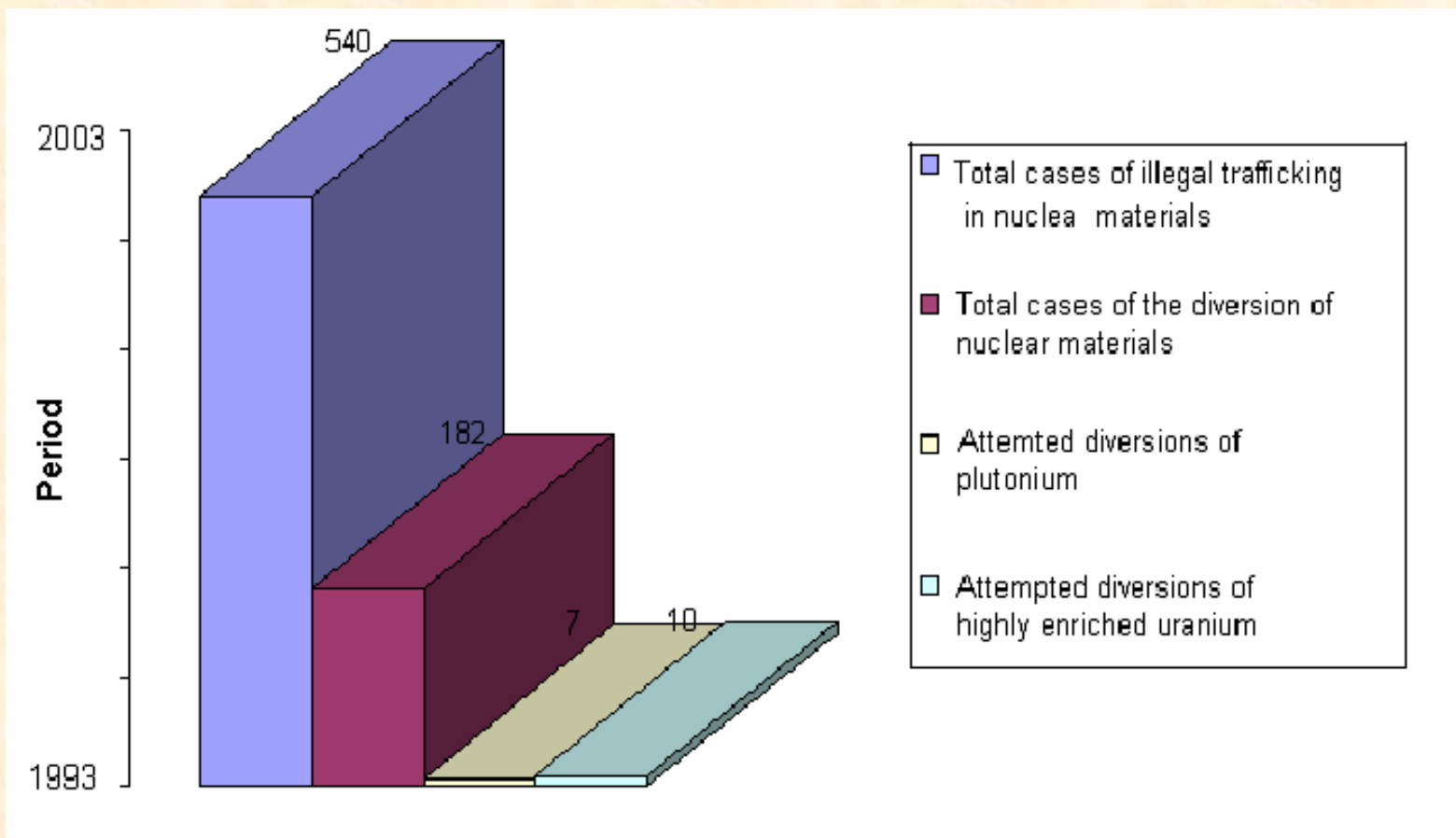


Declaration of the Moscow Nuclear
Safety and Security Summit,
20th April 1996

- Video

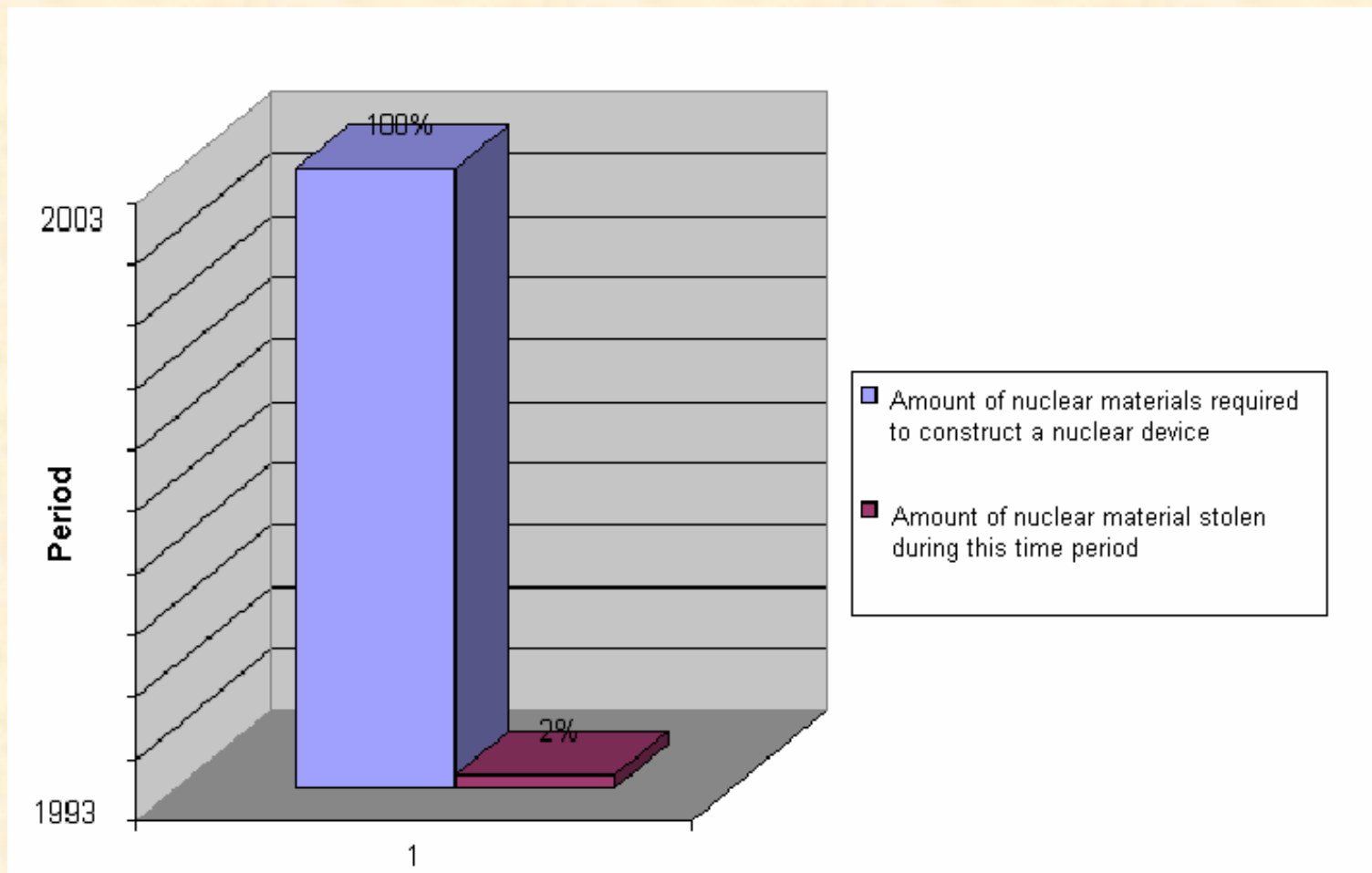


10.3. Statistics on illegal trafficking in nuclear materials (1993-2003)



(Source: IAEA)

Statistics on illegal trafficking in nuclear materials (1993-2003)



(Source: IAEA)



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

XI. Potential WMD terrorists – who are they?

11.1. Al Qaeda



11.2. Terrorist Exclusion List Designees

(Office of Counterterrorism, US Department of State)

- Afghan Support Committee (a.k.a. Ahya ul Turas; a.k.a. Jamiat Ayat-ur-Rhas al Islamia; a.k.a. Jamiat Ihya ul Turath al Islamia; a.k.a. Lajnat el Masa Eidatul Afghanistania)
- Al Taqwa Trade, Property and Industry Company Ltd. (f.k.a. Al Taqwa Trade, Property and Industry; f.k.a. Al Taqwa Trade, Property and Industry Establishment; f.k.a. Himmat Establishment; a.k.a. Waldenberg, AG)
- Al-Hamati Sweets Bakeries
- Al-Ittihad al-Islami (AIAI)
- Al-Manar
- Al-Ma'unah
- Al-Nur Honey Center
- Al-Rashid Trust
- Al-Shifa Honey Press for Industry and Commerce

11.2. Terrorist Exclusion List Designees (continued)

- Al-Wafa al-Igatha al-Islamia (a.k.a. Wafa Humanitarian Organization; a.k.a. Al Wafa; a.k.a. Al Wafa Organization)
- Alex Boncayao Brigade (ABB)
- Anarchist Faction for Overthrow
- Army for the Liberation of Rwanda (ALIR) (a.k.a. Interahamwe, Former Armed Forces (EX-FAR))
- Asbat al-Ansar
- Babbar Khalsa International
- Bank Al Taqwa Ltd. (a.k.a. Al Taqwa Bank; a.k.a. Bank Al Taqwa)
- Black Star
- Communist Party of Nepal (Maoist) (a.k.a. CPN(M); a.k.a. the United Revolutionary People's Council, a.k.a. the People's Liberation Army of Nepal)
- Continuity Irish Republican Army (CIRA) (a.k.a. Continuity Army Council)
- Darkazanli Company

11.2. Terrorist Exclusion List Designees (continued)

- Dhamat Houmet Daawa Salafia (a.k.a. Group Protectors of Salafist Preaching; a.k.a. Houmat Ed Daawa Es Salifiya; a.k.a. Katibat El Ahoual; a.k.a. Protectors of the Salafist Predication; a.k.a. El-Ahoual Battalion; a.k.a. Katibat El Ahouel; a.k.a. Houmate Ed-Daawa Es-Salafia; a.k.a. the Horror Squadron; a.k.a. Djamaat Houmat Eddawa Essalafia; a.k.a. Djamaatt Houmat Ed Daawa Es Salafiya; a.k.a. Salafist Call Protectors; a.k.a. Djamaat Houmat Ed Daawa Es Salafiya; a.k.a. Houmate el Da'awaa es-Salafiyya; a.k.a. Protectors of the Salafist Call; a.k.a. Houmat ed-Daaoua es-Salafia; a.k.a. Group of Supporters of the Salafiste Trend; a.k.a. Group of Supporters of the Salafist Trend)
- Eastern Turkistan Islamic Movement (a.k.a. Eastern Turkistan Islamic Party; a.k.a. ETIM; a.k.a. ETIP)
- First of October Antifascist Resistance Group (GRAPO) (a.k.a. Grupo de Resistencia Anti-Fascista Premero De Octubre)
- Harakat ul Jihad i Islami (HUJI)
- International Sikh Youth Federation
- Islamic Army of Aden

11.2. Terrorist Exclusion List Designees (continued)

- Islamic Renewal and Reform Organization
- Jamiat al-Ta'awun al-Islamiyya
- Jamiat ul-Mujahideen (JUM)
- Japanese Red Army (JRA)
- Jaysh-e-Mohammed
- Jayshullah
- Jerusalem Warriors
- Lashkar-e-Tayyiba (LET) (a.k.a. Army of the Righteous)
- Libyan Islamic Fighting Group
- Loyalist Volunteer Force (LVF)
- Makhtab al-Khidmat
- Moroccan Islamic Combatant Group (a.k.a. GICM; a.k.a. Groupe Islamique Combattant Marocain)
- Nada Management Organization (f.k.a. Al Taqwa Management Organization SA)
- New People's Army (NPA)
- Orange Volunteers (OV)

11.2. Terrorist Exclusion List Designees (continued)

- People Against Gangsterism and Drugs (PAGAD)
- Red Brigades-Combatant Communist Party (BR-PCC)
- Red Hand Defenders (RHD)
- Revival of Islamic Heritage Society (Pakistan and Afghanistan offices -
- Kuwait office not designated) (a.k.a. Jamia Ihya ul Turath; a.k.a. Jamiat Ihia Al- Turath Al-Islamiya; a.k.a. Revival of Islamic Society Heritage on the African Continent)
- Revolutionary Proletarian Nucleus
- Revolutionary United Front (RUF)
- Salafist Group for Call and Combat (GSPC)
- The Allied Democratic Forces (ADF)
- The Islamic International Brigade (a.k.a. International Battalion, a.k.a. Islamic Peacekeeping International Brigade, a.k.a. Peacekeeping Battalion, a.k.a. The International Brigade, a.k.a. The Islamic Peacekeeping Army, a.k.a. The Islamic Peacekeeping Brigade)
- The Lord's Resistance Army (LRA)
- The Pentagon Gang

11.2. Terrorist Exclusion List Designees (continued)

- The Riyadus-Salikhin Reconnaissance and Sabotage Battalion of Chechen Martyrs (a.k.a. Riyadus-Salikhin Reconnaissance and Sabotage Battalion, a.k.a. Riyadh-as-Saliheen, a.k.a. the Sabotage and Military Surveillance Group of the Riyadh al-Salihin Martyrs, a.k.a. Riyadus-Salikhin Reconnaissance and Sabotage Battalion of Shahids (Martyrs))
- The Special Purpose Islamic Regiment (a.k.a. the Islamic Special Purpose Regiment, a.k.a. the al-Jihad-Fisi-Sabililah Special Islamic Regiment, a.k.a. Islamic Regiment of Special Meaning)
- Tunisian Combat Group (a.k.a. GCT, a.k.a. Groupe Combattant Tunisien, a.k.a. Jama'a Combattante Tunisien, a.k.a. JCT; a.k.a. Tunisian Combatant Group)
- Turkish Hizballah
- Ulster Defense Association (a.k.a. Ulster Freedom Fighters)
- Ummah Tameer E-Nau (UTN) (a.k.a. Foundation for Construction; a.k.a. Nation Building; a.k.a. Reconstruction Foundation; a.k.a. Reconstruction of the Islamic Community; a.k.a. Reconstruction of the Muslim Ummah; a.k.a. Ummah Tameer I-Nau; a.k.a. Ummah Tameer E-Nau; a.k.a. Ummah Tameer-I-Pau)
- Youssef M. Nada & Co. Gesellschaft M.B.H.



Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

XII. What about the Chechen separatists?

12.1. Radioactive waste facilities in Chechnya



- At the moment of declaration of independence of Chechnya in 1991 there were a number of facilities on the territory of the republic that contained radiological materials. The primary source for acquiring those materials would have been a radiological waste repository located 30 km north of the Chechen capital Grozny, named Grozny Special Combine Radon (“the Grozny Radon”).
- This facility includes underground storage facilities for solid wastes with capacity of 1200 cubic metres each, a surface storage facility with a 900 cubic metre capacity, two facilities for liquid waste with a 400 cubic metre capacity each.

- Besides Grozny Radon, there were 26 facilities on the territory of Chechnya which had radioactive waste, including hospitals, industrial enterprises, labs, high schools, universities, and others, accounting for some 120 radioactive sources overall.
- The Radon may have been used for radioactive waste disposal during 1993-1994 and 1997-1999 by the Chechens.



12.2. Theft and diversion of radioactive containers

- There were several cases of documented theft or diversion of radioactive containers. In 1998 Chechen law enforcement filed several cases on theft of radioactive sources, and the director of Grozny Radon said that several containers had been stolen from the territory of the repository.



12.3. Threatening in the open

In a 21 October 1995 interview Basayev said he possessed radioactive materials and that he could cause several “mini Chernobyl” and “turn Moscow into a desert”.



In 1995



On 23 November 1995 a Russian television crew from the NTV network found a container with cesium-137 in a park in Moscow. The TV crew was tipped off about the location of the container by Basayev two weeks prior to the accident. The container, weighing approximately 15 kilograms, contained a radioactive source used in the oil industry. The container emitted radiation, the exact level of which varies in different press reports from 30 to 700 times the normal level. The radioactive source was removed by the Russian Federal Security Service (FSB) and taken to a research institute for analysis.

In 1999

- According to the press service of the Russian Defence Ministry, Chechen leader Salman Raduyev was preparing groups of saboteurs to be sent to attack Russian nuclear installations, including nuclear power plants. According to the press service, the groups consist of up to 15 persons and ‘will be made up mainly of Slavs’.
- On 13 October a spokesman for the Federal Security Service said that his agency had “the same information as the Defense Ministry”. The FSB refused to speculate on exactly which nuclear facilities the Chechen groups could attack, but Segodnya Newspaper suggested that the Ural region, in particular Chelyabinsk Oblast, with its several nuclear facilities, was a likely target.



ГЕНЕРАЛЬНЫЙ ШТАБ
ВООРУЖЕННЫХ СИЛ
РОССИЙСКОЙ ФЕДЕРАЦИИ

№ [redacted] июля 2002 г.

№ [redacted]

Дополнения к оперативной информации
по Чечне
(по состоянию на третью декаду июля)

Обстановка в приграничных с Чечней районах Ингушетии, Дагестана и Ставрополя продолжает оставаться достаточно напряженной. Агентурные данные с мест подтверждают информацию

От источника из чеченской диаспоры в Москве установлено, что в середине июля в Чечню из Казахстана, транзитом через Москву прибыли продавцы партии радиоактивных материалов, стоимость которых около 50 – 60 тыс. долларов за 1 грамм. Основная задача эмигрантов из Казахстана выйти с предложениями о продаже своего товара на наиболее влиятельных моджахедов из так называемой группы Хаттаба, которые регулируют основные денежные потоки НБФ. Продажу радиоактивных материалов планируется осуществить в Казахстане через местную чеченскую общину. Основным вариантом места покупки предлагается г. Дзезказган, как резервный вариант – г. Кызылжар. Подтверждением прибытия продавцов из Казахстана стал радиоперехват в ночь с 21 на 22 июля при радиообмене между проводниками, обеспечивающими проход гостей в горную часть Чечни.

Армейские части и подразделения внутренних войск

По обстановке на Чечено-Грузинской границе будет подготовлена отдельная справка.

In 2001

- Military counterspies have already prevented 4 attempts by terrorists to enter nuclear storehouses. The incidents happened in different parts of the country. In July and May 2001 security services of the nuclear storehouses captured several suspects. During questioning the “spies” said they didn’t follow orders by foreign special services, but by Chechens.
- Two more Chechen subversive groups were interested in the transportation of nuclear ammunitions. These groups were seen at several big railway stations in the Moscow region. It seems, they were extremely interested in special trains for nuclear warheads transportation.

In 2002

- Basayev's people were looking for ways to the Kurchatov Institute. They also sought to capture several theatre-concert halls in Moscow. Chechen insurgents were planning to seize a nuclear reactor (there are several of them in the Institute) to blackmail the Russian authorities.
- The insurgents understood that any attempt of a capture of a nuclear reactor in Moscow would fail. However they did not leave their plans of nuclear blackmailing. According to the operative information of special services, the terrorist underground in Russia is looking for a way to warehouses with nuclear munitions.

In 2002

- Three armed Chechens were captured in Sverdlovsk region. The arms arsenal they had was impressive: Kalashnikov machine guns with silencer, two Makarov pistols, 8 grenades, plastic explosives (400 grammes), detonators, remote control explosive devices.
- The main “bomb” of the Chechens was a pass which gave access to the secret town of Lesnoy, where nuclear warheads were produced. The permit was issued on Roman Tasuhanov’s name. His father served in Lesnoy and his family lived there. When the family returned to Chechnya they didn’t give back the permit. To put it more precisely, the permit was not taken from the officer. It turned out that the permit would still be valid today.

In 2002



“Terrorist acts are possible. We cannot exclude that the next such group takes over some nuclear facility. The results may be catastrophic, not only for Russian society and for Chechen society, but for the whole of Europe.”

Akhmed Zakayev, 30 October 2002

December 2002

- The information presented by Tver special service officers confirmed Zakaev's words. Shortly after the tragedy on Dubrovka, FSB officers detained a captain of security regiment of the Kalininskaya nuclear power plant, which could have become a terrorist target. Having searched the suspect, the officers found a plan of the station indicating secret objects and ciphered telephone numbers.
- The FSB officers found out the telephone numbers subscribers were citizens of the Chechen Republic.



In 2003

- During the operation in the Gudermes region of Chechnya conducted by Russian special forces, a group of terrorists was destroyed. One of the killed terrorists was carrying a manual on the hand-making of poison-gas, including ricin. Ricin is considered to be the most powerful toxin: its fatal dose is 80 times less than the fatal dose of cyanide.

12.4. French Interior Minister Dominique de Villepin on Biological Weapons in Georgia



“Several al-Qaeda cells have been trained in Afghanistan where they have learned to use biological agents including anthrax, ricin and botulism toxins. Later, after the fall of the Taliban regime, those groups continued their experiments in the Pankisi Gorge, on the territory of Georgia, bordering Chechnya.”

World Conference on Bio-terrorism
in Lyon, 1st March 2005



XIII. But why should the terrorists use WMD while it is much easier and cheaper, and still efficient, to use conventional methods?

The 10 largest terrorist attacks in the world

	Date	Place	Killed	Type of terrorist act	Organizer
1.	September 11, 2001	New York, Washington, PA. (USA)	3030	Four passenger planes captured by terrorists crashed into the World Trade Center, the Pentagon and in Pennsylvania.	«Al-Qaeda»
2.	June 23, 1985	Irish sea (North Atlantic)	329	Explosion on board of a Boeing-747 from Air India, going from Montreal to London	Sikh extremists – «the 10th Regiment of the Sikh Student Federation»
3.	October 23, 1983	Beirut (Lebanon)	299	Two suicide bombers blew up trucks with explosives near the barracks of US marines and French paratroopers	«Hezbollah»
4.	December 21, 1988	Lockerbie (Scotland)	270	Explosion on board of a Boeing-747 from Pan American, going from London to New York	An officer from the Libyan special services Abdelbaset –Al-Mohammed-Al Megrahi
5.	August 7, 1998	Nairobi (Kenya)	213	Truck explosion near the US Embassy	«Islamic Army for the Liberation of Holy Places» of «Al-Qaeda»- according to the American special services
6.	October 12, 2002	Kuta (Bali, Indonesia)	202	Explosions in Sari night club and Paddy's Pub beerhouse	«Jemaah Islamiyah» group
7.	March 11, 2004	Madrid (Spain)	191	10 explosions in 4 packed early-morning commuter trains	Islamic militants
8.	September 19, 1989	Tenere Desert (Niger)	171	Explosion on board of a DC -10 airplane from UTA airlines, going from Congo to Paris	Libyan special services (Islamic extremists, according to other information)
9.	April 19, 1995	Oklahoma (USA)	168	An explosion in Alfred P. Murrah Federal Building	Far-right terrorist Timothy McVeigh
10.	June 14-19, 1995	Budenovsk (Stavropol territory, Russia)	143	Chechen terrorists captured hostages in Budenovsk hospital and held them for six days.	Shamil Basaev, Chechen commander

13.2. The costs of 9/11

Costs to plan and conduct the operation:

- \$400,000 to \$500,000 - rough estimate
(does not include the cost of running training camps in Afghanistan)

Direct damage inflicted upon the United States:

- \$27.2 billion - destruction of physical assets

Total number of deaths: 3,030

Total number of injured: 2,337

(Source: 9/11 Commission Report, Center for Contemporary Conflict)



Spencer Platt / Getty Images

13.3. Future strikes

- **Terrorists want something:**
 - **new** and
 - **spectacular**



13.4. Public opinion as the main target

Combined effect of:

- “Chernobyl syndrome”
(radiological-phobia)
- “9/11 syndrome”
(catastrophic
terrorism-phobia)





Geneva Centre for Security Policy
Centre de Politique de Sécurité, Genève
Genfer Zentrum für Sicherheitspolitik

XIV. What is the most probable scenario of a WMD terrorist act?

14.1. Sabotage of a Nuclear Power Plant



14.2. Sabotage of another nuclear facility



Russian Fissile Material Storage Facility (FMSF)

14.3. Ground, air or sea attack



14.4. If combined terrorist attacks could be launched

A Case study:

Singapore

- Biological attack (efficient in densely populated areas)
- Cyber-attack on its stock exchange and other critical infrastructure



- Video: “Dirty bomb”





XV. What should be the responses?

15.1. National legislation



15.2. National law enforcement

Both lines of defense:

- **Securing nuclear facilities**
- **Customs cooperation**



15.3. International Cooperation

The States should:

- ***exchange information to prevent WMD Terrorism.***
In conditions of emerging and growing opportunities including financial support for “megaterrorism”, the traditional political anti-terrorist methods lose their efficiency, and the preventive exchange of intelligence information acquires the utmost significance;
- ***inform other States involved on investigation results regarding WMD Terrorism acts committed and on detention of criminals suspected in preparing such acts;***

15.3. International Cooperation (continued)

The States should:

- **adopt legislative measures *to prevent preparatory measures for WMD Terrorism acts in their territories*, including adoption of measures to prohibit in their territory the illegal activities of individuals, groups and organizations, which encourage, instigate, organize or participate in WMD Terrorism acts.**

15.4. International legislation

- **UN Security Council resolution 1540**
- **International export controls**
- **Convention on nuclear terrorism**



UN Security Council resolution 1540

“The Security Council”,

3. *Decides* that all states shall take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery.



UN Security Council resolution 1540 (continued)

All states shall:

- a) Develop and maintain appropriate and effective measures to account for and secure such items in production, use, storage and transport;
- b) Develop and maintain appropriate and effective physical protection measures;



AP

UN Security Council resolution 1540 (continued)

- c) Develop and maintain appropriate and effective border controls and law enforcement efforts [...];
- d) Establish, develop, review and maintain appropriate and effective national export and trans-shipment controls on providing funds and services related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation [...].

(adopted unanimously on 28 April 2004)



Nuclear Export Controls

- **Zangger Committee**
- **Nuclear Supplies Group**



The former head of Pakistan's nuclear weapons programme, AQ Khan, gave centrifuges for enriching uranium to Iran.

International Convention for the Suppression of Acts of Nuclear Terrorism



- Adopted by the UN General Assembly on 13 April 2005
- Opens for signature in September 2005.
- Provides for a definition of acts of nuclear terrorism and covers a broad range of possible targets, including those against nuclear power plants and nuclear reactors
- Encourages States to cooperate in preventing terrorist attacks by sharing information and assisting each other in connection with criminal investigations and extradition proceedings.