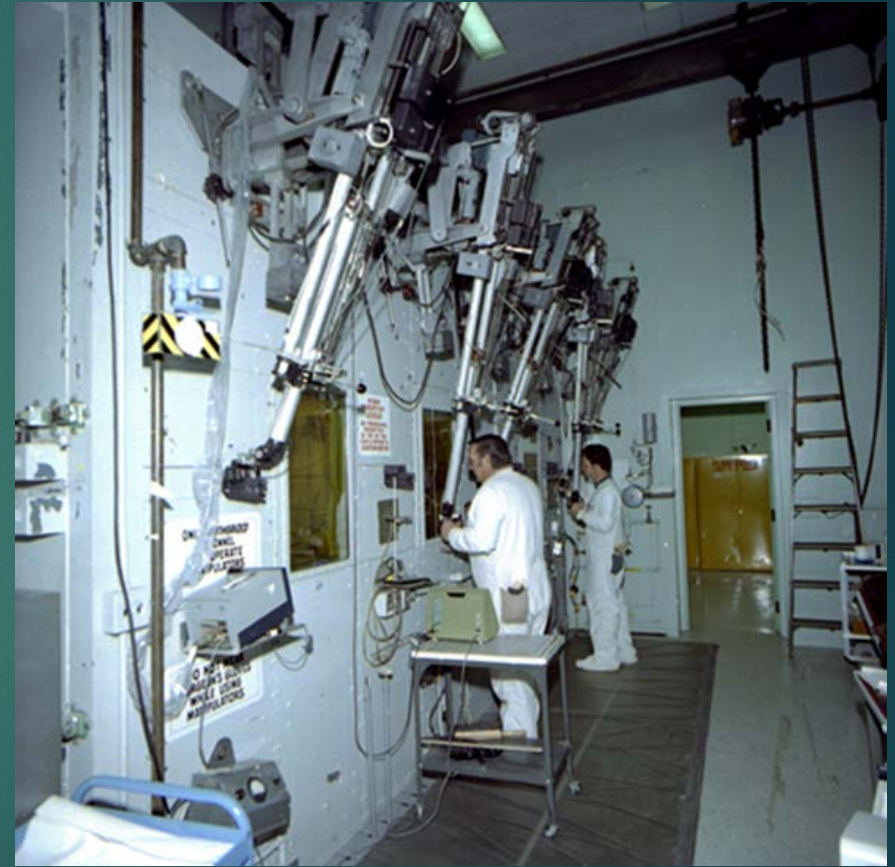


Countering Nuclear Smuggling: The Case of Georgia

Mason H Soule
CSCM CONGRESS
3 September 2018



*Hot cells at decommissioned IRT-M RR,
Mtskheta, Georgia*

Outline

- ▶ Relevant site and situational characteristics of Georgia
- ▶ Response framework – CBRN National Action Plan
- ▶ Indigenous resources
- ▶ Donor support
- ▶ Interdiction successes
- ▶ Issues
- ▶ Conclusions



*1kg yellow cake seized in 2012
in Samtredia, Georgia*

Relevant site & situational characteristics of Georgia

- ▶ Site:
 - ▶ Critical assembly; Soviet era research reactor; LEU storage site, Orphan sources (RTGs); Unknown waste at Saakadze site
- ▶ Situational:
 - ▶ Important transit position in Caucasus
 - ▶ Uncontrolled areas (Abkhazia, South Ossetia)
 - ▶ Unfriendly northern neighbor and its North Caucasus ethnic regions
 - ▶ Regional demand(?)
 - ▶ EU aspirations



Now-decommissioned IRT-2000 RR



"Temporary" nuclear waste storage site

Georgia – Strategic location





NUCLEAR AND RADIATION SECURITY AND SAFETY



*Dali Chichinadze
Department of Nuclear and
Radiation Safety, Georgia
Zagreb, CSCM 2015*

Georgia, as a transit country, is located at the strategically attractive place for nuclear smugglers.

Detection and protection of illicit trafficking of nuclear materials and radioactive sources are the greatest challenge we are facing today. The existence

of all appropriate measures for prevention of proliferation of nuclear materials and associated Dual-Use items is becoming an urgent necessity. Thus, the development of effective national system of nuclear export control is very important for our

country

Other CBRN threats in Georgia

- ▶ Nuclear/radiological
 - ▶ Transit of radioactive sources is of greatest concern
 - ▶ Orphan sources, nuclear waste sites?
- ▶ Biological
 - ▶ Lugar Center repository of EDPs
 - ▶ Anthrax burial sites; endemic outbreaks
- ▶ Chemical
 - ▶ Rustavi Chemical Plant
 - ▶ Chemical waste sites

Rustavi Chemical Plant



8,000m² BSL3 Lugar Center



National CBRN Threat Reduction Strategy



Ministry of Internal Affairs of Georgia

Reasons for Elaboration

- ✓ Georgia and the South Caucasus – prone to CBRN threats
- ✓ Number of States in the region with developed nuclear industries
- ✓ Derelict places in the region as well as in Georgia, where objects containing chemical or radioactive threats might be found
- ✓ Georgia`s strategic transit location, increased influx of passengers and cargo turnover- linked to dangers of CBRN materials` trafficking
- ✓ The Caucasus region- an endemic area for certain types of especially dangerous pathogens
- ✓ Shortfalls in the national legislation
- ✓ Georgia`s Euro-Atlantic aspirations, deepening cooperation with the US and enhancing international cooperation in the field

Framework – Georgian CBRN National Action Plan

- ▶ National CBRN Threat Reduction Strategy (MIA / SSSG)
 - ▶ Challenges
 - ▶ Prevention
 - ▶ Detection
 - ▶ Preparedness
 - ▶ Response
 - ▶ International Cooperation
- ▶ National Action Plan
 - ▶ EU CBRN CoE & UNICRI supported



Action Plan of the Chemical, Biological, Radiological and Nuclear Threat Reduction National Strategy 2014-2016

			Prevention				
Goal/Priority	Field C-Chemical B-Biological R-Radiological N-Nuclear	Activity	Timeframe	Responsible Agency	Source of Funding & Budget	Indicator	Risks
1.							
2.							
			Detection				
3.							
4.							
			Preparedness				
5.							
6.							
			Response				
7.							

Indigenous actors

- ▶ State Security Service Georgia (SSSG)
- ▶ Ministry of Internal Affairs (MIA)
- ▶ Ministry of Agriculture and Environment (MOA/E)
- ▶ Institute of Physics
- ▶ CBRN Secretariat
- ▶ Ministry of Defense (MOD) (Dual Use)
- ▶ Civil Council on Defense and Security (CCDS) NGO



Andronikashvili Institute of Physics



SSSG Logo and Headquarters building

Oversight of CBRN Safety & Security

- ▶ Legal framework
- ▶ National Action Plan
- ▶ Organization and coordination of roles & responsibilities among ministries & international partners
- ▶ First responder training (Emergency Management Agency, MOIA)
- ▶ Counterterrorism units (SSSG)



**Eliava
Institute**



**Emergency
Management
Service**



**State Security
Service**



**Ministry of Internal
Affairs**



**Ministry of Labour,
Health and Social
Affairs**



**CSCM
CONGRESS**



**Ministry of
Defence**



**Ministry of
Environment**

CSCM – World Congress on CBRNe Science & Consequence Management

Organized by:
International Organizing Committee
and
Government of Georgia
Radisson Blu Iveria, Tbilisi, Georgia
30 May - 2 June 2016



**Ministry of
Agriculture**



**Organisation for the
Prohibition of
Chemical Weapons**



**National Center for
Disease Control
and Public Health**



**Emergent
Biosolutions**

Battelle

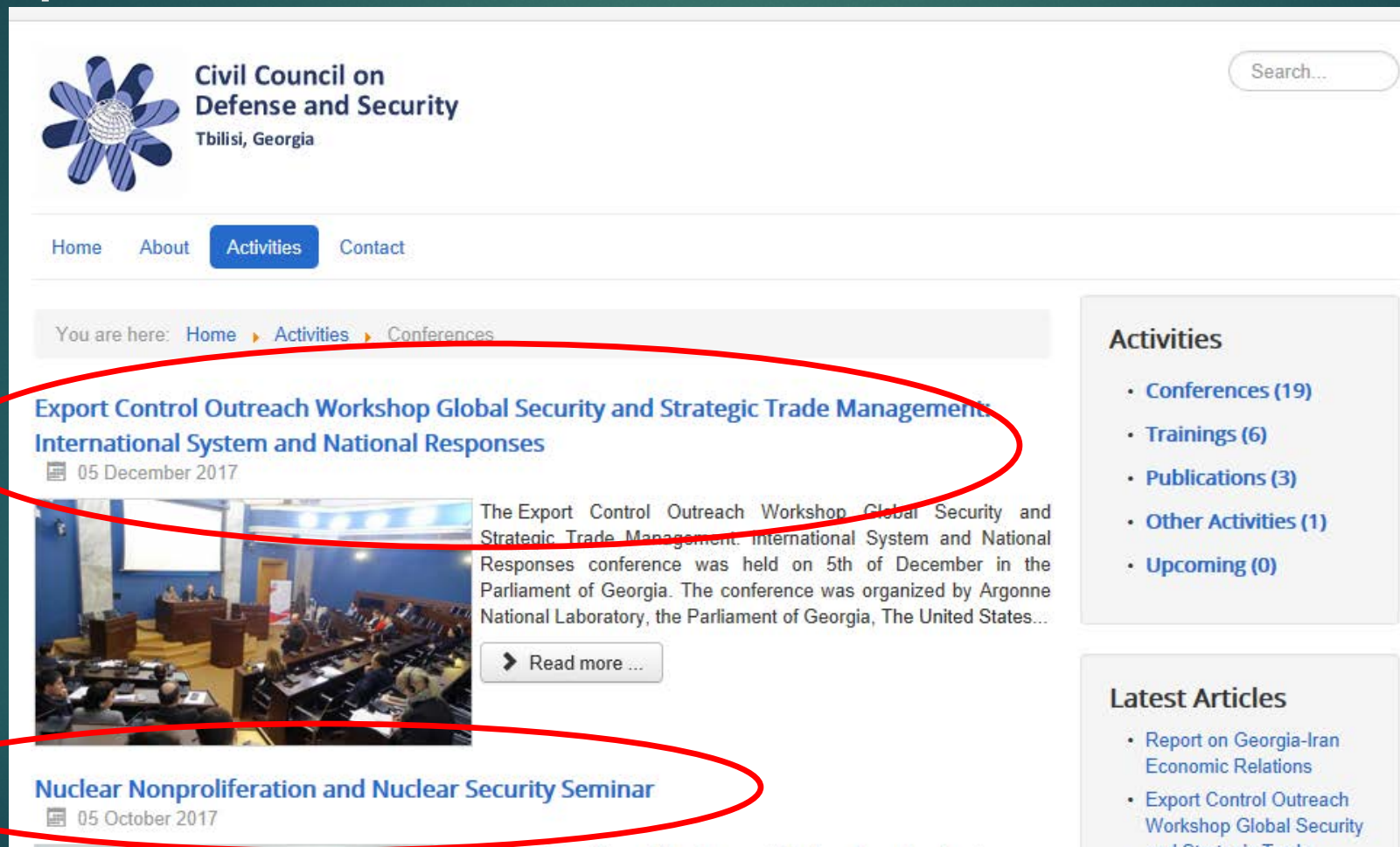
**Battelle
Memorial
Institute**



EPL CBRN

CSCM Tbilisi 2014, 2016

Black Sea Region Nuclear Nonproliferation Seminars



The screenshot shows the website of the Civil Council on Defense and Security in Tbilisi, Georgia. The main navigation menu includes Home, About, Activities, and Contact. A breadcrumb trail indicates the current page is under Home > Activities > Conferences. Two seminar announcements are highlighted with red circles:

- Export Control Outreach Workshop Global Security and Strategic Trade Management International System and National Responses**
05 December 2017
The Export Control Outreach Workshop Global Security and Strategic Trade Management International System and National Responses conference was held on 5th of December in the Parliament of Georgia. The conference was organized by Argonne National Laboratory, the Parliament of Georgia, The United States...
[Read more >](#)
- Nuclear Nonproliferation and Nuclear Security Seminar**
05 October 2017

On the right side, there are two sections: "Activities" with a list of categories (Conferences (19), Trainings (6), Publications (3), Other Activities (1), Upcoming (0)) and "Latest Articles" with a list of titles (Report on Georgia-Iran Economic Relations, Export Control Outreach Workshop Global Security and Strategic Trade...).

Next seminar:
Tbilisi, Georgia
4-5 Oct 2018

Donor Support

(Active International Partners)

- ▶ Sweden (Swedish Radiation Safety Authority)
- ▶ US DOE PNNL, Idaho & Argonne National Laboratories
- ▶ US Department of State (Embassy and Export Control and Related Border Security (EXBS) Program, Foreign Consequence Management (FCM))
- ▶ US DOD/Defense Threat Reduction Agency (DTRA)
- ▶ US FBI
- ▶ EU CBRN CoE, UNICRI; EC JRC; IAEA, NATO



unicri
United Nations
Interregional Crime and Justice
Research Institute

Nuclear and Radiation Safety and Security System in Georgia

Agency of Nuclear and Radiation Safety



LEPL Agency of Nuclear
and Radiation Safety

Upgrade of Physical Protection

- Upgrade of physical protection system for Saakadze Disposal (UK&IAEA support)
 - Establishment of new fence
 - Demolition of old (exhaust structures)
 - Establishment of new entrance check-point
 - Providing of electrical supply
- Upgrade of physical protection system for CSF (US & Sweden support)
 - Upgrade of the storage facility security system
 - Upgrade of entrance check-point





LEPL Agency of Nuclear
and Radiation Safety

International Collaboration



DoE of USA :

- Consolidation of high active radioactive sources into radioactive storage facility
- Strengthening of physical protection system for radioactive waste storage facility (Equipping by update detection system, video cameras and others)
- As a compensation for repatriated HEU Tbilisi State University will receive a new equipment for conducting of nuclear forensic investigations.



Swedish Radiation Authority:

- Update of main enter gate at Applied Research Center
- Starting elaboration of 15-year strategy for radioactive waste management



EU:

- Conducting of Safety Assessment for radioactive waste storage and disposal facilities and issuing the corresponded reports
- Equipping of radiological investigation unit of Ministry of Internal Affairs (conducted at 2013)

Mitigating Nuclear Smuggling Through Collaboration: The Counter Nuclear Smuggling Task Force



JASON RAY

**FBI SPECIAL AGENT AND WEAPONS OF MASS
DESTRUCTION ASSISTANT LEGAL ATTACHÉ**



Counter Nuclear Smuggling Mission



- ❑ **Secure** nuclear material within national borders
- ❑ **Collect and Manage** Information
- ❑ **Investigate** suspected smugglers and their networks
- ❑ **Share** information with local and international partners
- ❑ **Analyze** nuclear smuggling networks
- ❑ **Prosecute** suspected smugglers and their networks



EXBS Partners

Afghanistan	Cyprus	Kyrgyzstan	Morocco	South Africa
Albania	Czech Republic	Latvia	Nepal	Sri Lanka
Algeria	Egypt	Lebanon	Oman	Taiwan
Argentina	Estonia	Libya	Pakistan	Tajikistan
Armenia	Georgia	Lithuania	Panama	Tanzania
Azerbaijan	Hungary	Macedonia	Philippines	Thailand
Bangladesh	India	Malaysia	Poland	Tunisia
B-H	Indonesia	Maldives	Romania	Turkey
Brazil	Iraq	Malta	Saudi Arabia	Turkmenistan
Bulgaria	Jordan	Mexico	Serbia	UAE
Cambodia	Kazakhstan	Moldova	Singapore	Uganda
Chile	Kenya	Mongolia	Slovakia	Ukraine
Croatia	Kosovo	Montenegro	Slovenia	Uzbekistan
			Vietnam	Yemen

Equipment of the state border of Georgia with radiation control systems



Stationary Radiation Portal Monitors (RPM)

- Vehicle monitors
- Pedestrian monitors
- Rail monitors
- Conveyer (luggage) monitors



Rail Monitors at Batumi Seaport



Vehicle Monitors at Vakhtangisi Border Crossing with Azerbaijan



Conveyer Monitors at Batumi Airport



Pedestrian Monitors at Tbilisi Airport

Mobile Platforms

- Mobile detection systems (van-configured RPM); gamma and neutron detection.
- Radiation detection backpack



Traffic control and MDS134 system (blue van in background)



ThermoScientific model FHT 1377 PackEye

Handheld Equipment

- Personal Radiation Pagers (PRDs)
- Radiation Survey meters
- Radioactive Isotope Identification Devices (RIIDs)
- High-resolution Germanium RIIDs



Personal Radiation Detectors (PRDs)



TSA Survey Meter



ThermoScientific IdentiFINDER (RIID)



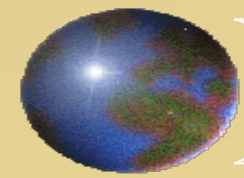
ORTEC Detective

Interdiction Successes

- ▶ Mission Space: State Security Service of Georgia (SSSG)
- ▶ Border Police – Ministry of Internal Affairs (MIA)

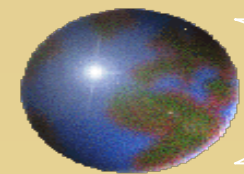


*2006 Seized 110 grams of
Highly Enriched Uranium (89,5%)
Russian & Georgian perpetrators*



Operations against illicit trafficking of radioactive materials in Georgia (2006-2016)

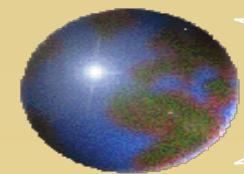
Statistics:
25 operations
76 arrested smugglers



2 November 2007

**In Zugdidi captured
citizen of Georgia Ruben
Gabisonia,
representative of
Abkhazian organized
criminal group. Seized
container with Cs-137**



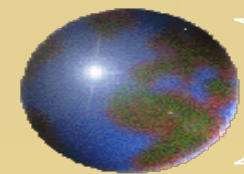


4 April 2011

**In Mtskheta captured
organized criminal
group.**

**Citizens of Georgia
Emzar Aliev and Jemal
Nagiev
Seized Cs-137, firearms
and explosives.**





14 April 2016

**In Tbilisi captured
organized criminal
group.**

**3 Citizens of Georgia
and 3 of Armenia.**

**Seized container made
from depleted Uranium.**



Issues with nuclear smuggling in Georgia

- ▶ **Organizational level:** Legal framework, cooperation & integration - good
- ▶ **Tactical level:** Descriptive policing good
 - ▶ Cs135/7, Sr90, Am241, yellow cake, DU
 - ▶ How many/much are they missing?
- ▶ **Strategic level:** strategic view unclear?
 - ▶ Patterns? Processes?
 - ▶ Where are items headed?
- ▶ Sustainability without donors?



2013 Americium-241 packets captured

Conclusions

- ▶ Secure partnerships and collaborations as planning is proceeding
- ▶ Recommend GOV-to-GOV contact between Croatia and Georgia
- ▶ Recommend attending Black Sea nuclear nonproliferation seminar (4-5 Oct 2018 in Tbilisi)
- ▶ Assume donor draw down and begin addressing issue of sustainability early

Hvala!!

