

*Global Initiative to Combat Nuclear Terrorism
(GICNT)*

**Assessment of Strategic and Political Challenges
to the
Development of a Regional Partnership Capacity
in the Black Sea Region**

Prepared by the Pontus Group

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Preface

The Pontus Group

The Pontus Group (PG) is an association of scientists and academics who are working together to explore and analyse the various existing, perceived or potential security issues in the Black Sea region. The membership of the PG includes scientists and academics from Georgia, Greece, Russia, Ukraine, the U.S.

At the moment, the PG is focussing on the implementation of the Global Initiative to Combat Nuclear Terrorism (Global Initiative) announced by Presidents Bush and Putin in July 2006. Since then, the Global Initiative has grown to be a multi-lateral initiative in support of United Nations Security Council Resolution 1540 and other important international agreements. However, while there has been much improvement worldwide in securing nuclear weapons and radioactive materials, there is still much to be done in various geographic regions.

The PG, therefore, is studying how much progress in reducing the threat of nuclear terrorism has been made in the Black Sea region and is assessing the efforts of states surrounding the Black Sea to apply control measures and implement the eight principles of the Global Initiative. The PG is also exploring the area of potential cooperation by countries of the Black Sea region because the only path to certain safety is for nations, working together, to secure the sources of nuclear material that might be used to build a nuclear weapon.

The scope of the above task encompasses two important assignments:

- 1) to assess progress achieved in the Black Sea region in creating "partnership capacity" in each of the eight areas listed in the Statement of Principles of the Global Initiative;
- 2) to identify measures that will enable the countries surrounding the Black Sea to improve "partnership capacity" throughout the region in each of the eight areas listed in the Statement of Principles, taking into account the current regional political and strategic considerations.

In short, the PG is implementing a study that assesses what is going right, what needs more attention, and what should be the way ahead to build better "partnership capacity" in each of the Global Initiative's eight areas of concern.

Abstract

The world is increasingly confronted with the threat of nuclear terrorism. Incidents around the world make clear that urgent action is needed to improve security for nuclear stockpiles around the world and to keep nuclear weapons and the materials needed to make them out of terrorist hands. As President Obama said in his speech on 5 April 2010 in Prague, “finally, we must ensure that terrorists never acquire a nuclear weapon. This is the most immediate and extreme threat to global security”.¹

International concern about terrorist acquisition of nuclear and other radioactive materials and substances particularly grew in the wake of the attacks of 11 September 2001.

An important development on the way toward nuclear security was the *Global Initiative to Combat Nuclear Terrorism (GICNT)*, announced by Presidents George W. Bush and Vladimir Putin on 15 July 2006.²

The impact of *GICNT* on the *Black Sea region* and its implementation, as well as conclusions and recommendations on how to strengthen nuclear security throughout the region is the main subject of this Report.

The Global Threats Studies Network (GTSN), an alliance of international scholars that conducts research on issues affecting global security, is currently focusing on the fostering of an international partnership capacity by countries surrounding the Black Sea³ and seeks to strengthen nuclear security throughout the region. The GTSN’s goal is to offer recommendations “*to improve security and to prevent nuclear materials from falling into the hands of terrorists*”.⁴

¹ http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/

² http://www.nti.org/e_research/e3_global_initiatives.html

³ In this Report, the terms “Black Sea”, “Black Sea region” and “Black Sea area” are used interchangeably. The Pontus Group considers the following countries as part of its definition of the area: Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Turkey and Ukraine. Although Armenia, Azerbaijan, Greece, Moldova are not the Black Sea littoral states, manifold factors and parameters, such as history, proximity, interests and various kinds of ties, make them natural regional actors, being considered as such by the Pontus Group. Consequently, the approach adopted in this Report is more political rather than geographic or institutional as it is, for instance, the case with the Black Sea Economic Cooperation Organization (BSEC) composed of all above states, plus Albania and Serbia. Special emphasis is also made in the Report on the geopolitics of the so called “gray zones”/security vacuum countries that are neither within the EU/NATO structures and will not be there in the immediate future, nor are parts of other regional security formats and initiatives.

⁴ Bruce M. Lawlor, et al, “Nuclear Security: A Framework for Developing National Programs”, Global Threats Studies Network, CTSP, Virginia Tech, U.S.A., March 2010, p. 44.

This Report focuses on the degree of nuclear security in the Black Sea region and provides an initial assessment of the implementation by the Black Sea countries of the Global Initiative to Combat Nuclear Terrorism (GICNT). Based on the GICNT's *Statement of Principles*,⁵ the Report concentrates not only on the scientific and technical aspects of the Global Initiative's implementation and level of cooperation by countries, but also on the political and strategic factors in the region which may be promoting or inhibiting international cooperation in developing a regional partnership capacity against the threat of nuclear terrorism.

The Black Sea region is located at the crossroads from north to south and from east to west, strategically linking together Asia and Europe. All Black Sea countries possess licit stocks of nuclear materials, but about half of these countries are also affected, one way or another, by the presence on their territory of radioactive waste and instruments that became "orphaned" after the dissolution of the Soviet Union and the subsequent hasty withdrawal to Russia of previously stationed there troops and nuclear arsenals. In some cases, such arsenals and radioactive instruments had also been based on the territory of other former Warsaw Pact member states.

Following the dissolution of the Soviet Union, the newly independent states of the Black Sea region were going through a period of painful transition from one system of governance to another and adaptation of that newly born system to the new geopolitical landscape. Moreover, since the early 1990s, some parts of the Black Sea region witnessed armed conflicts and increases in political tension, border disputes and geo-strategic rivalry against a background of aspirations by some of the stronger Black Sea states for regional hegemony.

The Report's main conclusion is that the Black Sea region is becoming increasingly insecure and unstable with the continuing existence of unrecognized political entities, areas of backwardness or of stagnant economic development. The situation is complicated by unresolved regional conflicts, the emergence of several secessionist or separatist movements, or ruling administrations, inter-state disputes and long-standing conflicts, such as in Nagorno-Karabakh, Transnistria, Abkhazia and South Ossetia, as well as political and ethnic grievances propounded by sections of certain populations, particularly in the North Caucasus where they often extend beyond existing political borders.

The Black Sea arena today is one of the world's most multi-polar regions. The lack of requisite synergy among Black Sea states, their differing political agendas and the increased geopolitical volatility in the region were dramatically manifested in

⁵ "Partner Nations Endorse Global Initiative to Combat Nuclear Terrorism Statement of Principles," Department of State , November 7, 2006, 2001-2009.state.gov/t/isn/rls/fs/75845.htm

the latest outbreak of a war between Russia and Georgia in August of 2008 which resulted in a change of the geopolitical balance in the region and an impact on it of new actors such as Abkhazia and South Ossetia. It is believed that the current high-level of geopolitical volatility of the Black Sea region can again ignite at any given moment into open warfare.

Insufficient political will and the absence of closer political cooperation in the region negatively affect prospects for establishing an adequate nuclear security regime involving the development of a regional “partnership capacity” to prevent, detect, and respond to the threat of nuclear or radiological terrorism. For instance, the two most powerful Black Sea countries – Russia and Turkey seem not to fully recognize the dimension of the threat of nuclear terrorism in the region and, unlike the experts sought out from the eight other Black Sea countries, Russian and Turkish experts have yet not submitted their answers to the questionnaire prepared by the Pontus Group along the lines of the *Statement of Principles of the Global Initiative to Combat Nuclear Terrorism*.

Another main conclusion of the Report is that the Black Sea region is at a high risk of illicit access to, or theft of, nuclear and other radioactive materials and substances.

The Black Sea region today is a “smuggling corridor” for all kinds of scourge, including illicit trafficking in drugs, firearms, human beings from the Middle East, Central Asia & West Asia towards Europe, and vice versa, and there is a high risk of trafficking throughout the region in materials required for nuclear terrorism (WMD) and the uncontrolled proliferation of radioactive materials for the construction of “dirty bombs” (RDDs).

Close connections have developed between groups involved in international terrorism and transnational organized crime groups, particularly in the conflict-ridden parts of the Black Sea region. Criminal networks of different origin, including terrorist organizations, have already a well-established presence and safe haven in the region while the Black Sea countries are being increasingly affected by spill-over from their subversive activities.

The Report concludes that Black Sea countries require consolidation of their national capacity into a new regional format, establishment of closer partnership and cooperation in the Black Sea region and external support in the development of a regional “partnership capacity” to prevent, detect, and respond to the threat of nuclear terrorism.

Findings, Assessment of the Status Quo, Conclusions and Recommendations

Introduction: Nuclear Terrorism and its Definition

Terrorist attacks of all types, including nuclear and radiological threats posed by some terrorist groups, have increasingly become a concern worldwide.

Nuclear terrorism involves the explosion of plutonium or highly enriched uranium (HEU) in a chain reaction splitting atoms. Radiological terrorism involves only the dispersion of radioactive materials.

A formal definition of nuclear and radiological terrorism (N & R terrorism) has been offered by Alex Schmid and Robert Wesley:

“The use, or credible threat of use, of destructive force against non-combatant/civilian targets for purposes of propaganda, blackmail/extortion or intimidation of a target audience, whereby the perpetrator:

- (a) has managed to trigger a fission (or fission/fusion) of nuclear material, or*
- (b) is credibly held to be in possession of weapons-grade (U-235, Pu-239) nuclear material, or*
- (c) is attacking or sabotaging nuclear reactors or vital support systems (e.g. cooling system) at power stations or nuclear materials (e.g. reactor rods or high radiation-level waste) in transport or at storage sites in order to produce, then or later, an accident or a controlled release/explosion of radioactive substances, or*
- (d) disperses in water, soil or air radioactive waste or isotopes, etc., by conventional explosion or dispersion/diffusion”⁶*

Consequently, also covered by N & R terrorism are attacks on nuclear facilities by non-state actors aiming at creating extreme fear (“terror”) with a credible threat of releasing highly toxic materials.

The various potential nuclear and radiological threats that terrorists could pose fall into three basic groups:

⁶ Alex Schmid and Robert Wesley, “Possible Causes and Motives of Nuclear and Radiological Terrorism in the Light of Empirical Data on Smuggling Incidents of Nuclear Materials”, in: J. Victoroff (Ed.), “Tangled Roots: Social and Psychological Factors in the Genesis of Terrorism”, Amsterdam, IOS Press, 2006, p. 359.

- radiological dispersal devices (RDDs, or “dirty bombs”);
- attacks on civilian nuclear power stations and similar facilities; and
- the construction of a crude nuclear device or the theft of a real nuclear bomb from the arsenal of military establishments.

While much of the public and some of the media do not make a difference between a “dirty bomb” and a real “atomic bomb” since both produce radiation, the following needs to be kept in mind.

The difference between a real nuclear bomb and a “dirty bomb” lies in the fact that the first is capable of a chain reaction splitting atoms (fission) that release high levels of energy in terms of heat, blast and radioactivity, while a RDD is only capable of releasing radioactivity.

In other words, a nuclear fission explosion by a nuclear bomb is of a different magnitude – both qualitatively and quantitatively – than a release of radiating substances by a so-called “dirty bomb”.

The most accessible radioactive device for any terrorist group would be a radiological dispersal device (“dirty bomb”). This would most likely consist of radio isotopes used in medicine, geological investigations and agriculture. The basic material could also be derived from waste that is a by-product of military and civilian nuclear research and development or experimentation, such as nuclear reactor by-products. In themselves, such substances are rarely explosive; they would have to be dispersed with the help of conventional explosives. Upon detonation, this combination would release radioactive substances, contaminating air, water and land, rendering a particular area or facility unusable, potentially for prolonged periods of time.

The ease of construction of a “dirty bomb” makes it an attractive tool for terrorist use. Radioactive materials that could be used for such a weapon are available from a wide range of relatively non-secure facilities, including hospitals, medical and research laboratories, agriculture, universities, and radioactive waste dumps.

However, the threat from radiological dispersion appears to be less terrifying when compared to the possibility that terrorists could construct or obtain an actual atomic bomb.

Findings

1. International Legal and Political Framework to Counter Nuclear Terrorism

The threat of nuclear terrorism by non-state actors is not altogether new. In 1977, the U.S. Congressional Office of Technology Assessment published a nuclear risk assessment that warned: "...a small group of people, none of whom have ever had access to the classified literature, could possibly design and build a crude nuclear explosive device. They would not necessarily require a great deal of technological equipment or have to undertake any experiments. Only modest machine-shop facilities that could be contracted for without arousing suspicion would be required. The financial resources for acquisition of necessary equipment on open markets need not exceed a fraction of a million dollars. ...Again, it is assumed that sufficient quantities of fissile material have been provided".⁷

Despite prolonged international efforts to secure Pu and U, "there have been over 18 documented cases of theft or loss of plutonium or highly enriched uranium (HEU), the essential ingredients of nuclear weapons".⁸

Unfortunately, it is believed that some governments abstained from confirming to the International Atomic Energy Agency (IAEA) a number of cases of theft and loss having been reported by mass media and, therefore, subsequently questioned by the IAEA. Especially worrying is that most of the intercepted nuclear materials had not been reported to the IAEA as missing prior to their recovery, if at all. This indicates that the lack of constant monitoring and control of nuclear inventories is a problem in itself, and the security of nuclear and other radioactive materials and substances should be a matter of serious international concern.

International concern about terrorist acquisition of fissile materials, primarily highly enriched uranium and plutonium, particularly grew in the wake of the attacks of 11 September 2001.

Top Al-Qaeda members have made no secret of their interest in acquiring nuclear weapons. Al-Qaeda's attempts to obtain nuclear and radioactive materials date back to the mid- and late 1990s.⁹ Most significant was Osama bin Laden's

⁷ Bruce M. Lawlor, et al, "Nuclear Security: A Framework for Developing National Programs", Global Threats Studies Network, CTSP, Virginia Tech, U.S.A., March 2010, p. 1.

⁸ Matthew Bunn, "Securing the Bomb 2010. Securing All Nuclear Materials in Four Years", Washington, D.C., Nuclear Threat Initiative, April 2010, p. v.

⁹ Cf. Appendix II "Al-Qaeda's Interest in Nuclear and Radiological Materials" in: Alex Schmid and Robert Wesley, op. cit. pp. 392-394.

declaration that the acquisition of weapons of mass destruction (WMD) represented a “religious duty”.¹⁰

In 2009, Al-Qaeda’s leader in Afghanistan directly referred to the use of nuclear weapons when he stated, “By God’s will, the Americans will not seize the Muslim’s nuclear weapons and we pray that the Muslims will have these weapons and they will be used against the Americans”.¹¹

Of a high security risk were also such incidents when “two teams of armed men attacked a site in South Africa where hundreds of kilograms of HEU are stored”¹², or the cases reportedly confirmed by the Russian officials “that terrorist teams have carried out reconnaissance at Russian nuclear weapon storage facilities”.¹³

There has been a great deal of effort during the last decades to establish an international political framework for strengthening the non-proliferation regime for nuclear materials, starting from the Nuclear Non-Proliferation Treaty (NPT), which entered into force in 1970, and including UN Security Council Resolution 1373 (UNSCR 1373), adopted on 28 September 2001, which noted the close connection between international terrorism and the illegal movement of nuclear materials and, most significantly in recent years, UN Security Council Resolution 1540 (UNSCR 1540), adopted on 28 April 2004, which requires all States to “refrain from providing any of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery” and to “adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes”.¹⁴

However, while the UNSCR 1540 imposes strict reporting requirements on states, only “few have fully met them” as the International Commission on Nonproliferation and Nuclear Disarmament found in a December 2009 report.¹⁵ Whereas more than 160 nations have formally filed WMD security reports in response to this Security Council resolution, many of these documents offer scant details on actions taken.

¹⁰ Cit. Michael Evans, “Obama Warning on Terrorist Getting Nuclear Weapons”, *Times Online*, 12 April 2010, www.timesonline.co.uk

¹¹ “Al-Qaeda Commander Threatens U.S.,” Al Jazeera English, 22 June 2009, english.aljazeera.net.

¹² Matthew Bunn, “Securing the Bomb 2010. Securing All Nuclear Materials in Four Years”, Washington, D.C., Nuclear Threat Initiative, April 2010, p. v.

¹³ Ibid.

¹⁴ U.S. Department of State, UN Security Council Resolution 1540, <http://www.state.gov/t/isn/c18943.htm>

¹⁵ NTI: Global Security Newswire, 5 April 2010, http://gsn.nti.org/gsn/nw_20100405_3244.php

Implementation of UNSCR 1540 received special attention at the first Nuclear Security Summit hosted by the United States on 12 - 13 April 2010 in Washington, D.C., which brought together 49 world leaders with the aim to foster cooperation in preventing nuclear terrorism. The Summit participants adopted the four-year timeline proposed by President Obama and agreed on a voluntary Work Plan.¹⁶

The Nuclear Security Summit was preceded by the New START Treaty – a bilateral nuclear arms reduction treaty between the United States and the Russian Federation signed by Presidents Obama and Medvedev in Prague on 8 April 2010.¹⁷

From 3 to 28 May 2010, the Review Conference for the Nuclear Non-Proliferation Treaty was held at the headquarters of the United Nations in New York and achieved consensus in approving the proposed Final Document.¹⁸

A number of international conventions are addressing the nuclear security problem, such as the Convention on Nuclear Safety, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management, as well as the 1979 Convention on the Physical Protection of Nuclear Material which was amended in July 2005 to enhance the protection regime not only against the theft of nuclear material in international transport, but also against the sabotage of nuclear facilities.

Furthermore, the UN in 2005 adopted the *International Convention for the Suppression of Acts of Nuclear Terrorism*¹⁹ which calls on states to develop appropriate legal frameworks for the criminalization of any acts related to nuclear terrorism and promotes international cooperation. Unfortunately, this important Convention has not yet been ratified by more than half of the signatory states (as of May 2010).

A key contributor to international nuclear security is the International Atomic Energy Agency (IAEA) which is providing the international community with standards for nuclear safety and security programs, expertise, guidance and recommendations for non-military nuclear facilities. The IAEA is implementing a Nuclear Security Program that aims to prevent, as well as detect and respond to,

¹⁶ NTI: Research Library, 20 April 2010,
http://www.nti.org/e_research/e3_nuclear_security_summit.html

¹⁷ The White House Blog,
<http://www.whitehouse.gov/blog/2010/03/26/president-obama-announces-new-start-treaty>

¹⁸ Non-proliferation for Global Security Foundation, 28 May 2010,
<http://npsglobal.org/eng/news/25-international-security/907-satisfaction-with-the-npt-revcons-outcome.html>

¹⁹ UN Documents, <http://www.un-documents.net/icsant.htm>

malicious acts in utilizing nuclear or radioactive materials, and has also prepared a Nuclear Security Plan for the period 2010-2013.

An important development on the way toward nuclear security was the *Global Initiative to Combat Nuclear Terrorism (GICNT)*,²⁰ announced by Presidents George W. Bush and Vladimir Putin on 15 July 2006. The impact of *GICNT* on the *Black Sea region* and its implementation, as well as conclusions and recommendations on how to strengthen nuclear security throughout the region is the main subject of this Report.

2. Political and Strategic Factors in the Black Sea, and the Development of a Partnership Capacity to Respond to the Threat of Nuclear Terrorism

The Black Sea region is located at the crossroads from north to south and from east to west, strategically linking together Asia and Europe. It is a geopolitically significant region, being a nexus of various influences, conflicting agendas, different nationalities, ethnic groups, languages, customs, traditions, cultures, religions, lifestyles, and legacies of a diversity of traumas from both the historical and the not so distant past.

The following countries are part of the Black Sea region: Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Turkey and Ukraine.²¹

After the Second World War, the Black Sea region was for almost half a century one of the frontlines of the Cold War, rigidly divided between the two hostile political and military alliances. It was only in the early 1990s that the region began to realize its new geopolitical identity.

However, located right at the edge of European, Eurasian and the Middle Eastern security spaces, the Black Sea region, as a “newly-emerged geopolitical entity”, has yet been largely ignored or even dismissed by experts on Europe, Eurasia and the Middle East and has not been a centre of attention for most of them.²²

An important role in addressing this gap is being performed by the International Centre for Black Sea Studies (ICBSS)²³ which was founded in 1998 as a non-profit organization. ICBSS fulfils a dual function as, on the one hand, it is (1) an

²⁰ <http://www.state.gov/t/isn/c18406.htm>

²¹ Report by the Commission on the Black Sea, “A 2020 Vision for the Black Sea Region”, May 2010, p. 36, http://www.blackseacom.eu/fileadmin/user_upload/Paper/A_2020_Vision_for_the_Black_Sea.pdf

²² Yannis Tsantoulis, “Subregionalism in the Black Sea and the EU’s Role”, Center for European Integration Studies, Bonn, 2008, p. 4.

²³ <http://www.icbss.org/>

independent research and training institution, focusing on the wider Black Sea region thus also dealing with security issues, and on the other hand, it is (2) a related body of BSEC and serves as its acknowledged think-tank.

There is also the Harvard Black Sea Security Program which began in 2001 with the goal of encouraging a regional security system based on cooperation and integration.²⁴

Security and stability in the Black Sea countries are being addressed by the Organization for Security and Co-operation in Europe (OSCE)²⁵ which maintains an important presence in the region and promotes, *inter alia*, the rule of law, counter-trafficking and resolution of regional conflicts, particularly between Armenia and Azerbaijan under the “OSCE Minsk process” or between Moldova and the breakaway Transnistria.

The Black Sea region has recently become an area of interest of the Global Threats Studies Network (GTSN), an alliance of international scholars that conducts research on issues affecting global security through Academic Assessments, Technical and Political Expertise, Independent Benchmarking and focuses on the implementation of the *Global Initiative to Combat Nuclear Terrorism (GICNT)*.

The subjects addressed by the GTSN include the elaboration of cooperative non-proliferation programs, the provision of expertise in nuclear detection and forensics, consequence management, biological defense, counter-smuggling, e.g. of nuclear materials, drugs, human beings, and weapons in a geographic area “from Almaty to Eastern Europe” which includes the Black Sea region.²⁶

Based on the GICNT’s *Statement of Principles*,²⁷ GTSN is currently focusing on the fostering of an international partnership capacity in the Black Sea region and seeks to strengthen nuclear security throughout the region. The GTSN’s goal is to offer recommendations “*to improve security and to prevent nuclear materials from falling into the hands of terrorists*”.²⁸

In view of the specific expertise in the Black Sea region, the Pontus Group, particularly Ambassador Tedo Japaridze, Member of the Commission on the Black

²⁴ <http://www.harvard-bssp.org/bssp/about>

²⁵ <http://www.osce.org/>

²⁶ Coordination and overall guidance of the GTSN activities are provided by the Center for Technology, Security and Policy (CTSP) at Virginia Polytechnic Institute and State University, U.S.A., CTSP, https://www.vbi.vt.edu/archive/pdf/public_relations/posters/barrett-group/2010-dtra/ndssl-dtra-19-ctsp.pdf

²⁷ <http://www.state.gov/t/isn/141785.htm>

²⁸ Bruce M. Lawlor, et al, “Nuclear Security: A Framework for Developing National Programs”, Global Threats Studies Network, CTSP, Virginia Tech, U.S.A., March 2010, p. 44.

Sea²⁹, is facilitating the current assessment by the GTSN of efforts of states surrounding the Black Sea to apply control measures and implement the eight principles of the *Global Initiative to Combat Nuclear Terrorism (GICNT)*. The Harvard Black Sea Security Program is also assisting GTSN in this important endeavor.

An initial assessment and comparative analysis of efforts by states surrounding the Black Sea to implement the eight principles of the GICNT is presented in detail in the Section on the “Assessment of the Status Quo in Responding to Threat of Nuclear Terrorism by the Black Sea Countries” of this Report.

All Black Sea countries possess licit stocks of nuclear materials. At the same time, there are considerable differences between these countries. The composition of the Black Sea region is highly diversified in terms of the size and power of countries of the region, their systems of governance, the sophistication of their economic and financial structures, their ranking on the UNDP human development index, as well as the volume of licit nuclear-related operations.

For instance, Bulgaria, Greece and Romania are members of both the NATO and EU, hence, formally bound to comply with EU institutional norms and requirements while Turkey, also a NATO member, currently negotiating its accession to the EU, is urged to demonstrate measures in compliance with the EU pre-accession requirements.

Other Black Sea countries are ex-USSR independent states. All of them, except Russia, or probably with Russia but to a lesser degree, are still going through a process of socio-economic transition/transformation and the building of national institutions. Many of them are facing considerable economic, social and governance problems and have inefficient or unstable economies with high unemployment rates. There is social and political instability, at least in some parts of the Black Sea region, and last but not least, the overarching corruption that appears to be endemic for most of the ex-USSR countries.³⁰

Since the early 1990s, some parts of the Black Sea region witnessed armed conflicts and increases in political tension, border disputes, geo-strategic rivalry against a background of aspirations by some of the stronger Black Sea states for regional hegemony.

²⁹ <http://www.blackseacom.eu/members/archive/tedo-japaridze/>

³⁰ See, for example, Panayotis Gavras, “The Current State of Economic Development in the Black Sea Region”, Policy Report I, presented by the Commission on the Black Sea, 2010, and Franz-Lothar Altmann, Johanna Deimel, Armando García Schmidt, “Democracy and Good Governance in the Black Sea Region”, Policy Report IV, presented by the Commission on the Black Sea, 2010. Available for download at: <http://www.blackseacom.eu>

The situation in the region is complicated by unresolved regional conflicts, the emergence of several secessionist or separatist movements, inter-state disputes and long-standing conflicts, such as in Nagorno-Karabakh, Transnistria, Abkhazia and South Ossetia, as well as political and ethnic grievances articulated by sections of certain populations, particularly in the North Caucasus where they often extend beyond existing political borders.

The Black Sea arena today is one of the world's most multi-polar regions, caught also in a conflict between globalization and entrenched nationalism.

The combination of economic, technological, social, cultural and political forces that account for the reduction and removal of barriers between national borders in order to facilitate the flow of goods, capital, services and labour – the process known as globalization – has to share its space with resurgent nationalism.³¹

There is also a process of polarization between the conflict-ridden states (Armenia, Azerbaijan, Georgia, Moldova) - on the one hand, and the consolidated “western & southern” countries of the Black Sea region (Bulgaria, Romania, Turkey, Greece) - on the other.

Finally, there is also a certain polarization within the ex-USSR countries of the Black Sea region when it comes to the level and scale of their possession of, and/or access to, licit nuclear and other radioactive materials and substances. For instance, Russia and Ukraine have advanced and highly-developed nuclear-related industries, while Armenia, Azerbaijan, Georgia and Moldova do not.

Soon after the end of the Cold War, a number of regional political and economic organizations, programs and schemes came into existence in the Black Sea region. Their goal was, *inter alia*, to overcome the legacies of the past with some inherent negative features and to create common synergies with a view to achieve a solid and real regionalism conducive to effective regional cooperation in addressing major common challenges.

Of primary importance, was the Black Sea Economic Cooperation Organization (BSEC).³² It was established in 1992 and included, in addition to the ten Black Sea countries, also Albania and Serbia as its members. Austria, France, Germany, Italy, the United Kingdom, the United States and other countries with strong capacities to assist in preventing nuclear terrorism in the region, as well as the Commission

³¹ Dimitrios Triantaphyllou, “The ‘security paradoxes’ of the Black Sea region”, *Southeast European and Black Sea Studies*, Vol. 9, No. 3, September 2009, p. 234.

³² <http://www.bsec-organization.org/Pages/homepage.aspx>

of the European Union are linked to the BSEC either as observers or sectoral dialogue partners.³³

Originally, the BSEC could have offered a multi-faceted model of cooperation, including in some policy and security areas. Since the time of its creation, the BSEC has assisted in launching cooperation and dialogue in such areas as telecommunications, transport, tourism, statistics, data collection, project feasibility studies, banking, harmonization of commercial and customs procedures, cooperation in dealing with natural disasters and in environmental issues.³⁴ However, the BSEC has not yet become the main initiator and promoter of regional cooperation capable of creating a regional ‘security community’.

Nevertheless, the BSEC remains the most institutionally coherent regional body with a number of related bodies that complement its work. These include a parliamentary assembly – the PABSEC (the Parliamentary Assembly of the BSEC)³⁵, a development bank – the BSTDB (the Black Sea Trade and Development Bank)³⁶, a business council, and a think-tank – the ICBSS (the International Centre for Black Sea Studies).

Other Black Sea regional structures are the Organization for Democracy and Economic Development (ODED-GUAM)³⁷ which was created in 2001 to strengthen regional security against international terrorism, organized crime and drug trafficking. Then there is the Community of Democratic Choice (CDC)³⁸, an intergovernmental organization established in 2005 to promote democracy and the rule of law. In addition, we find, *inter alia*, the Black Sea Forum³⁹, an international NGO comprised of over 100 national NGOs from the Black Sea region; the Black Sea Association of National News Agencies (BSANNA)⁴⁰; the Black Sea Littoral States Border/Coast Guard Cooperation Forum (BSCF)⁴¹; the Black Sea Naval Cooperation Task Group (BLACKSEAFOR)⁴², a regional on-call naval task force; the Naval Operation Black Sea Harmony⁴³; the Southeast European Cooperative

³³ <http://www.bsec-organization.org/partners/Pages/Observers.aspx>

³⁴ Bülent Karadeniz, Security and Stability Architecture in the Black Sea” in: “Perceptions”, Winter 2007, p. 101.

³⁵ <http://www.pabsec.org>

³⁶ <http://www.bstdb.org/>

³⁷ <http://guam-organization.org/en/node>

³⁸ <http://www.rferl.org/content/article/1063423.html>

³⁹ <http://www.blackseaforum.org/>

⁴⁰ <http://bsanna-news.ukrinform.ua/bsanna-about.php?lang=en>

⁴¹ <http://bscf-bcg.org/index.aspx>

⁴² <http://www.photius.com/blackseafor/>

⁴³ <http://www.tsk.tr/eng/uluslararasi/karadenizdenizisbirligorevgrubu.htm>;
<http://www.harvard-bssp.org/static/files/398/CEEOL.pdf>

Initiative (SECI)⁴⁴, as well as a number of other organizations, programs and structures.

Whereas the level of regional networking and interaction has to a certain degree increased as the result of activities of these organizations, programs, structures and schemes; nevertheless, it stands to reason that a new, overarching concept and policy of a common Black Sea Dimension has so far not been brought into existence.

The prolonged absence of adequate collective political structures in the region was, unfortunately, accompanied by the separate political agendas of the differing Black Sea countries and a lack of common political will for genuinely concerted action, which is necessary for the creation of a true regionalism and development of a functional political cooperation within the region. Furthermore, the newly independent states have often seen the new regional organizations as forums not just for cooperation with their neighbors, but also as yet another venue at which to raise their national flags and underscore their newfound state identities.⁴⁵

The lack of requisite synergy among the Black Sea states, their differing political agendas and the increased geopolitical volatility in the region were dramatically manifested in the latest outbreak of a war between Russia and Georgia in August 2008 which resulted in a change of the geopolitical balance in the region and an impact on it of new actors such as Abkhazia and South Ossetia. It is believed that the current high-level of geopolitical volatility of the Black Sea region can again ignite at any given moment into open warfare.⁴⁶

The absence of closer political cooperation in the region negatively affects prospects for establishing an adequate nuclear security regime in the region involving the development of a “partnership capacity” among the Black Sea nations to prevent, detect, and respond to the threat of nuclear or radiological terrorism. For instance, the two most powerful Black Sea countries – Russia and Turkey seem not to fully recognize the dimension of the threat of nuclear terrorism in the region and, unlike the experts sought out from the eight other Black Sea countries, Russian and Turkish experts have not submitted their answers to a questionnaire prepared along the lines of the *Statement of Principles of the Global Initiative to Combat Nuclear Terrorism*.

⁴⁴ <http://www.secicenter.org/>

⁴⁵ Report by the Commission on the Black Sea, “A 2020 Vision for the Black Sea Region”, May 2010, p. 22, http://www.blackseacom.eu/fileadmin/user_upload/Paper/A_2020_Vision_for_the_Black_Sea.pdf

⁴⁶ Report by the Commission on the Black Sea, “A 2020 Vision for the Black Sea Region”, May 2010, p. 12, http://www.blackseacom.eu/fileadmin/user_upload/Paper/A_2020_Vision_for_the_Black_Sea.pdf

However, two new and important initiatives were recently undertaken:

1. A significant milestone for addressing the “cooperation gap” in the region and meeting both existing and emerging challenges was the creation in January 2009 of the Commission on the Black Sea.⁴⁷ It was a civil society initiative, jointly developed by the German Bertelsmann Stiftung in Gütersloh, the Black Sea Trust for Regional Cooperation (BST-GMFUS) in Bucharest, the Economic Policy Research Foundation of Turkey (TEPAV) in Ankara, and the International Centre for Black Sea Studies (ICBSS) in Athens. Among members of the Commission on the Black Sea are a former vice prime minister, former ministers, current and former parliamentarians, public intellectuals and scholars from the whole Black Sea region, the European Union and the United States. The Commission currently focuses on peace and security, economic development and welfare, democratic institutions, good governance, and regional cooperation. Of particular relevance is the fact that the Commission on the Black Sea recommends, in its report, the start of a real structured security dialogue and the establishment of confidence-building measures in order to tackle the protracted conflicts and other outstanding issues in the region.⁴⁸

2. Based on the successful model of the Balkan Trust for Democracy, and with an eye on promoting regional integration and good governance in the Black Sea region, the German Marshall Fund of the United States (GMF) has created the Black Sea Trust (BST).⁴⁹ BST is a multi-million dollar, grant-making initiative, which in the next decade will fund programs that promote regional cooperation, strengthen cross-border ties, democratic governance, and the rule of law in the Black Sea region. The countries to be included in BST’s activities are Armenia, Azerbaijan, Bulgaria, Georgia, Moldova, Romania, Turkey, Ukraine, and the regions of Russia bordering on the Black Sea.

It should be noted that the plethora of new initiatives, such as the two mentioned above, has led to the creation of important synergies with other relevant initiatives, such as the Harvard Black Sea Security Program which has been addressing regional security issues since 2001.

In the meantime, the Black Sea region is becoming increasingly insecure and unstable with the continuing existence of unrecognized states, areas of backwardness or of stagnant economic development. The presence of internally displaced people, conflicting non-state actors and the threat of social unrest in

⁴⁷ <http://www.blackseacom.eu/>.

⁴⁸ Report by the Commission on the Black Sea, “A 2020 Vision for the Black Sea Region”, May 2010, p. 41, http://www.blackseacom.eu/fileadmin/user_upload/Paper/A_2020_Vision_for_the_Black_Sea.pdf

⁴⁹ <http://209.200.80.89/economics/about/office.cfm?city=bucharest>

some ex-USSR parts of the region are largely due to uneven economic and political growth.

As a result, all kinds of security issues ranging from energy security to environmental degradation, from terrorism to illicit trafficking in drugs, human beings, and the smuggling of weapons and materials of potential use for the construction of WMD or RDDs continue to be insufficiently addressed or remain unresolved.

Most worrying is that local administrations of the secessionist regions operate according to their own rules, not those of central governments. One of the results is, among other things, a lack of sufficient crime prevention. Some of these lawless enclaves have become breeding grounds for international smuggling.

For instance, the breakaway Transnistria region is known to be a black hole in the global economy, a hotspot of organized crime, trafficking and bootlegging. A similar situation is reported in other secessionist regions.

In Abkhazia, which was a hotbed of regional smuggling and other lawless activity, the I. N. Vekua Institute of Physics and Technology, located in Sukhumi, has become an object of considerable non-proliferation concern since up to 2 kg of highly enriched uranium had disappeared from that Institute sometime in the early 1990s during the civil war in that region.⁵⁰

The existence of unrecognized and weak administrative structures in combination with porous borders promotes the development of illegal cross-border activities that are often controlled by organized crime networks. A disturbing element in the Black Sea region has been the increasing involvement of political non-state violent actors – including terrorist, as well as separatist or ideologically motivated guerrilla movements – in organized crime.

For example, the Pankisi Gorge, located in mountainous north-eastern Georgia and bordered by Chechnya, became a focus of international attention in 2002-2003 after organized criminal groups, terrorist organizations, and Islamist militants reportedly found safe havens there and began to use it as a base of illegal operations, including the production and proliferation of chemical weapons aimed for terrorist acts in Russia.⁵¹

⁵⁰ Richard Weitz, “Georgian War Increases Nuclear Terrorism Risks”, Central Asia-Caucasus Institute Analyst, 29 October 2008, <http://caciaanalyst.org/?q=node/4970>

⁵¹ Jean-Christophe Peuch, “Russia: Moscow Levels Fresh Terrorism-Related Charges Against Georgia”, Radio Free Europe Liberty, 11 February 2003, <http://www.rferl.org/nca/features/2003/02/11022003161829.asp>

According to then acting U.S. Ambassador in Georgia, Al-Qaeda and Taliban fighters had scattered across the Caucasus, while some of them were hiding in the Pankisi Gorge and were in contact with Al-Khattab, an Arab terrorist with connections to Osama bin Laden.⁵²

In general, organized crime and terrorism tend to flourish where the administrative structures are weak. An administration that is unable to take decisive action to prevent or control organized criminal activities provides a highly congenial environment for extremist groups, including terrorist organizations. It allows them to operate with a high degree of impunity. Not surprisingly, therefore, they try to perpetuate this weakness, or at the very least to ensure, mainly by using bribery, that the administration remains acquiescent.

Close connections have developed between groups involved in international terrorism and transnational organized crime groups, particularly in the conflict-ridden parts of the Black Sea region. This also involves several illicit sub-trades, such as human trafficking, small arms trafficking, forgery, counterfeit, smuggling of nuclear and other radioactive materials and substances, and other criminal activities.

There is a mix of violent non-state actors, “frozen conflicts”, unrecognized states, with a large proportion of migrants, internally displaced persons and refugees (there are over a million of refugees, mainly ethnic Armenians, Azerbaijanis, Abkhazians, Chechens, Georgians, Kurds and Ossetians). These pose additional security risks the Black Sea region has to contend with.⁵³

Some of the Black Sea countries are still weak and not well-organised. About half of these countries have had little experience of sovereign statehood, while the process of national institution-building has not yet been completed. Their weakness makes the region one of the global hot spots for threats such as terrorism, the proliferation of materials useable for the construction of weapons of mass destruction (WMD), illegal trafficking in narcotic drugs, the smuggling of weapons of various levels of sophistication as well as the cross-border transport of human beings without, or with forged, travel documents. Due to these problems, the fragile states of the region have the potential to affect the security of other regional actors and of nearby EU states.

All ex-USSR states are affected, one way or another, by the presence on their territory or that of their neighbours of a Cold War legacy in the form of

⁵² Artyom Vernidoub, “Bin Laden and U.S. Troops Welcome in Georgia”, Gazeta.ru online edition, 19 February 2002, <http://www.gazeta.ru/2002/02/19/BinLadenandU.shtml>.

⁵³ Commission on the Black Sea, “Security in the Black Sea Region, Policy Report II”, p.13, [http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black Sea Policy Report II Security.pdf](http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black%20Sea%20Policy%20Report%20II%20Security.pdf).

radioactive waste and often ill-guarded medical, geological or agricultural radioactive instruments that became “orphaned” after the dissolution of the Soviet Union and the hasty withdrawal to Russia of troops and nuclear arsenals from the territory of the newly independent states.

The total nuclear waste (Pu and U) originally stored across the ex-USSR was estimated to involve 640 million cubic meters of contaminated materials,⁵⁴ and a certain part of it has remained just abandoned in the newly independent states.

An incident that occurred in Georgia, on the premises of the former USSR military base at Lilo, near Tbilisi, is illustrative and stands for dozens, perhaps even hundreds of similar cases.

Following the withdrawal in 1992 of the Russian troops from the Lilo base, it was taken over by the Georgian Army. However, in October 1997, a number of Georgian soldiers stationed at Lilo started exhibiting symptoms of radiation sickness, accompanied by third degree radiation burns. After examining the area, 15 radioactive capsules, containing cesium-137, which had remained abandoned from the times prior to 1992, were unearthed.

Some radioactive springs were discovered in 1997 also at other former Soviet military and paramilitary bases in Georgia, located in Vaziani, Godogani and Matkhodzhi.⁵⁵

In terms of nuclear security, of particular danger today are abandoned industrial facilities and orphaned installations, medical and scientific institutions, mothballed uranium ore deposits, and tailing dumps in ex-USSR countries.

Administrations in some of these countries partially lost control of radioactive materials. At the same time, their nuclear backyards began to attract criminal elements. Potential “dirty bomb” producers/buyers might, for instance, be closely watching nuclear submarine dismantling plants and other industrial (especially abandoned) enterprises that in some way or another used radioactive materials. Alternatively, they might focus on medical, scientific and research institutions or abandoned uranium mines and uranium tailing dumps.

For instance, Russia is believed to house thousands of orphaned nuclear sources, which were lost following the collapse of the Soviet Union.

⁵⁴ Nadine Curr and Benjamin Cole, “The New Face of Terrorism”, London, Tauris, 2000, p. 57; Gavin Cameron, “Nuclear Terrorism”, New York, St. Martin’s Press, 1999, p. 2.

⁵⁵ NTI Research Library, August 2005, http://www.nti.org/e_research/profiles/georgia/radioactive_waste.html.

A large, but unknown, number of these sources belong to the high security risk category. Noteworthy are the Russian very strong beta emitting strontium-90 sources used as Radioisotope Thermoelectric Generators (RTGs) for beacons in lighthouses in remote areas. Many of RTGs have exhausted their designed service periods; they are held in unsecured sites and are either waiting to be dismantled or are simply unaccounted for. If discovered by terrorists, such sources can be relatively easy used to create an improvised radiological “dirty bomb”.

According to the report *Inventorying and Disposal of Ionizing Radiation Sources in the CIS*⁵⁶, which was presented in Kiev in June 2005 at the Seventh Session of the CIS Commission on the Use of Atomic Energy for Peaceful Purposes, “sources of ionizing radiation cannot be reliably protected on the same level as nuclear power plants or nuclear waste storage facilities; in the past decade, after the reforms that caused closure of a number of institutions, there are increasing numbers of ‘orphaned’ ionizing radiation sources; the relatively small dimensions and weight of ionizing radiation sources make them convenient targets of theft or unauthorized transfer, which causes particular concern today in light of the growing threat of terrorism”.⁵⁷

In a contrast to this, the closure in 1998 of a Georgian research reactor in Mtskheta, on the outskirts of Tbilisi, took place in an orderly manner when the HEU- and LEU-based fresh and spent fuel was transferred to the Dounreay Nuclear Complex in Scotland under Operation Auburn Endeavor.⁵⁸

Without calling into question the competence and good faith of the governments of the states on whose territory hazardous installations are located, it is critical to take into account the possibility of theft and uncontrolled circulation of radioactive materials.

The radiological situation can also be affected by natural cataclysms, as well as man-made impacts, including acts of sabotage or subversion, whereas economic difficulties, political instability and armed conflicts still prevent certain countries from establishing water-tight nuclear control systems.

The above realities entail a higher risk of trafficking in materials required for nuclear terrorism (WMD) and the uncontrolled proliferation of radioactive materials for the construction of “dirty bombs” (RDDs) in the Black Sea region.

⁵⁶ CIS is the abbreviation for the Commonwealth of the Independent States which is a regional organization whose participating countries are 11 of 15 ex-USSR republics (Georgia, Estonia, Latvia, and Lithuania are not participating).

⁵⁷ http://sng.ainf.ru/po/images/stories/zasedaniya_komissii/7zasedanie/6.pdf

⁵⁸ NTI Research Library, 10 May 2001, <http://www.nti.org/db/nisprofs/georgia/auburn.htm>

3. The Wider Black Sea Region - an “Extended Two-Way Trafficking Corridor”

Located at the juncture of Europe and Asia, the Black Sea is an important conduit of international trade, both legal and, unfortunately, illegal, and in which the routes for licit trade often converge with the illicit smuggling routes.

Porous, transparent, or poorly-controlled borders in the Black Sea region provide plenty of opportunities for an intensive illicit traffic in various kinds of materials within, and/or through, the region.

In geographical terms it is difficult to specify the boundaries of the Black Sea region, since there are numerous regional and sub-regional structures. There is also a large measure of strategic openness to several neighbouring areas, such as the Balkans and the Mediterranean at one edge of the region, and the Caspian Sea and Central Asia – at its other edge.

The Black Sea region can not be seen, therefore, in isolation from the neighbouring regions. This is also illustrated by new nomenclature on the extended connection to the East and South: “Black-Caspian Seas Region”, and in the West: “Black-Mediterranean Seas Region”.⁵⁹

There are geo-strategic, economic, and socio-political reasons to link the Black Sea region with the wider geographic areas of the Caucasus, the Caspian, and the Balkans.⁶⁰ Consequently, a nomenclature of a Wider Black Sea region is being used to refer *de jure* to twelve BSEC member states (incl. Albania and Serbia), but rather often to embrace *de facto* also the Caspian and Central Asia.

The Wider Black Sea region is perhaps best characterized as a critical strategic corridor between East and West which features transit routes for a variety of commodities, both licit and illicit, and towards the West as well as towards the East and South.

While licit commodities, and most importantly, oil and gas from Asia move along Black Sea shipping lanes and pipelines to Europe, the same routes are increasingly used for all sorts of smuggling, from trafficking in cigarettes, counterfeit products, narcotic drugs and human beings, to terrorist activities, including illicit import or

⁵⁹ Commission on the Black Sea, “Security in the Black Sea Region, Policy Report II”, p.6, [http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black Sea Policy Report II Security.pdf](http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black_Sea_Policy_Report_II_Security.pdf)

⁶⁰ Yannis Tsantoulis, “Subregionalism in the Black Sea and the EU’s Role”, Center for European Integration Studies, Bonn, 2008, p. 7.

export of conventional weapons and, it would appear, components for weapons of mass destruction (WMD).

The security of the Wider Black Sea region, particularly from the nuclear or radiological terrorism, is of utmost importance in view of the numerous oil and gas pipelines connecting or planned to connect Ukraine, Russia and Azerbaijan; Georgia and Turkey; Bulgaria and Greece which may be sabotaged by rebel groups. Therefore, the Wider Black Sea region is seen as an important component of European security.⁶¹

According to Ian Lesser, the Black Sea region is strategically significant primarily for three reasons: The Black Sea “and its hinterlands are an important part of the European security environment”; the region’s strategic importance “derives from its role as a political and logistical hub for power protection to crisis-prone areas beyond the Black Sea basin”; and the region is “a place of strategic significance in its own right, with multiple crises on, or near, its shores, and numerous flashpoints for regional conflicts”.⁶²

Furthermore, Ian Lesser is expecting that “the security environment in and around the Black Sea will be strongly influenced by the propensity for new or revived strategic competitions” and “in a scenario of this kind, the Wider Black Sea region emerges as a likely centre of gravity for competition, over political futures, over energy, and in security terms”.⁶³

4. Transit Trafficking from the Middle East, Central & West Asia towards Europe

Whereas the traditional trafficking route through the Black Sea region was in the past the so-called “Balkan” route, commencing in Eastern Turkey, there also emerged, after the break-up of the USSR, the so-called “Silk Road” route, passing from Afghanistan/Pakistan/Iran into Central Asia, and from there – to the Caucasus and the Black Sea region.

The “Silk Road” route has quickly gained in importance since the early 1990s as the roads and other infrastructures in the ex-USSR countries were better while border controls became poorer. As a consequence, organized trafficking groups

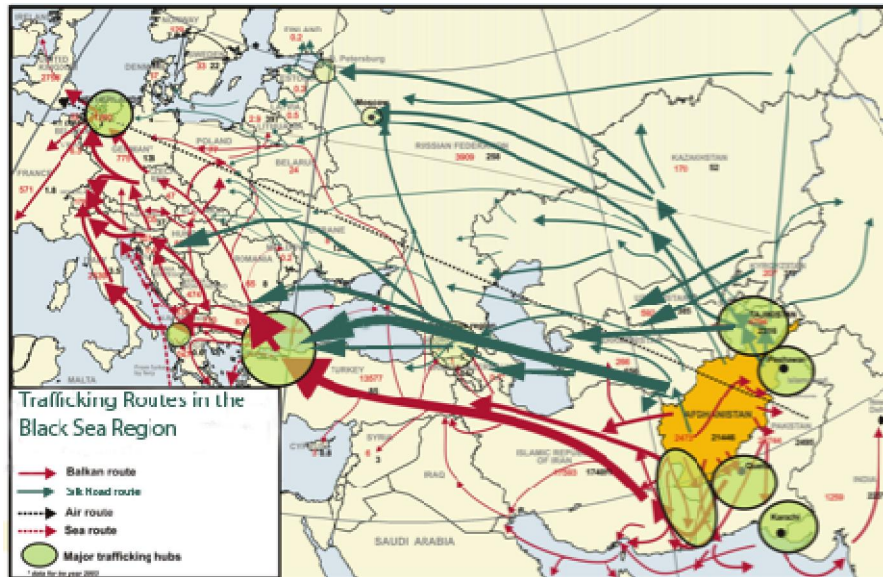
⁶¹ Svante Cornell et al, “The Wider Black Sea Region: An Emerging Hub in European Security”, Central Asia-Caucasus Institute & Silk Road Studies Program, 2006, p. 6.

⁶² Ian O. Lesser, *Global Trends, Regional Consequences: Wider Strategic Influences on the Black Sea*, Xenophon Paper, No. 4, ICBSS, Athens, November 2007, pp. 5-7.

⁶³ Ibid, pp. 12-13.

could easier provide smooth and fast deliveries to destinations located along the traditional “Balkan” route.

By the mid-1990s, the “Silk Road” route had become an important supplement to the “Balkan” route. “Sandwiched” between these two routes is the Caucasus and the Black Sea, and both routes do intersect precisely in the Black Sea region, continuing further towards the Balkans and Mediterranean as one, ‘merged’ together, “Silk Road – Balkan” trafficking route.



Source: Presentation made at the NATO Advanced Research Workshop: *International Approaches to Counter Illicit Trafficking in the Black Sea Region*, 13 June 2006, Oxford, U.K.

With regard to the Caucasus, given that the “Silk Road” trafficking route passes across its mountain divide, it is impossible to separate the South and North Caucasus from one another. Instability in both the North and South Caucasus facilitates the use of links between the two for smuggling and trafficking purposes.

In the North Caucasus, the question of Chechnya stands out. Since the beginning of a state of war there, organized crime has grown to huge proportions in Chechnya. To a varying extent, this is true in Dagestan as well as in the rest of the North Caucasus.

Due to the unruly nature of the North Caucasus, a complex mix of Islamist movements, local officials and organized crime figures is in existence, which is very difficult to disentangle. It is only clear that a large number of actors are involved in one or another way in the illicit business - if not actively then passively. This includes obvious groups, such as criminal groups and individual professionals of various degrees of sophistication. But this also includes less

obvious actors, such as warlords, rebels, former intelligence officers and, reportedly, even some current governmental figures.

Indeed, one of the main conclusions is that the illicit trade in the North Caucasus would be impossible without the systematic involvement of persons in state employment across the region. Moreover, a blurring of lines seems gradually to have developed among the different categories of actors. Hence especially in the weaker administrative structures, the line between politics and organized crime has become fuzzy. The same is true for the line between insurgency and crime, and - perhaps most worryingly - between insurgency and terrorism.

While there have so far been no incidents involving the attempted use of nuclear (fission) materials in the region, the same is not fully true for radioactive materials. In November 1995, a group of Chechen separatists buried a caesium-137 radio isotope “dirty bomb” at the Izmaylovsky Park in Moscow. A Chechen rebel leader alerted the media about the fact and the RDD material was never released – thus amounting to a mere publicity stunt. A similar incident occurred in 1998 when a container of radioactive materials attached to a mine was found next to a railway line near Argun in Chechnya.⁶⁴

In the South Caucasus, most of the illicitly trafficked radioactive and nuclear items that transit Georgia towards the Black Sea ports, or to Turkey, and a substantial part of those transiting Azerbaijan, come to the Caucasus either from Russia, or across the Caspian Sea, directly from Turkmenistan.

However, many items discovered on this route came from as far as Siberia, particularly from Novosibirsk (a Russian ‘mini-analogue’ of the Silicon Valley with several nuclear reactors used by local researchers), or from as far as Uzbekistan, Kyrgyzstan, Kazakhstan and Tajikistan in Central Asia.

Apparently, a black market of unknown size has emerged in Central Asia, focusing on the sale of nuclear and radioactive materials and substances, including the local uranium. There have also been links between Central Asia and Pakistan, the country with a nuclear program, but known for its poor control of nuclear stocks.

Licit and illicit shipments from Central Asia usually cross the Caspian Sea to reach the port of Sumgait, north of Baku, in Azerbaijan, or the ports of Derbent, Kaspiysk and Makhachkala in Dagestan. From there a portion of the traffic veers north towards parts of the Russian Federation and Eastern Europe, while the larger part transits Dagestan, Chechnya or South Ossetia to Telavi in the Kakheti

⁶⁴ New Scientist, 2 June 2004, <http://www.newscientist.com/article/dn5061-risk-of-radioactive-dirty-bomb-growing.html>

district of Georgia and then towards the Georgian border with Turkey or towards the Black Sea coast.

Consequently, the “Silk Road” route remains a convenient conduit for illicit deliveries of radioactive materials from the “double-locked” Central Asia and distant Siberia to the Black Sea region, particularly to the Georgian-Turkish border and the seaports of Georgia.

On 13 April 2010, the President of Georgia disclosed at the Nuclear Security Summit in Washington, D.C., that his country’s security forces led a sting operation resulting in the confiscation of uranium enriched to weapon-grade level. He also recalled that another eight confiscations of enriched uranium took place in the last 10 years.⁶⁵

The traffickers target Georgia as a convenient transit point for further deliveries across the border to Turkey and for proceeding along the “Silk Road – Balkan” trafficking route to Europe. Georgia is at the forefront in countering such traffic, including the traffic in WMD materials. For instance, on 19 April 2000, four persons were arrested in the Georgian Black Sea port of Batumi for unauthorized possession of 920 grams of highly-enriched uranium fuel pellets en route from Russia to Turkey.⁶⁶ On 31 May 2003, the Georgian police detained in downtown Tbilisi a taxi driver who was transporting in the trunk of his car two metal boxes with cesium-137 and strontium-90. The investigation revealed that the boxes, in fact, belonged to a resident of Kobuleti, a town located in the Autonomous Republic of Adzharia, on the border with Turkey.⁶⁷ On 26 June 2003, the Georgian border guards detained an Armenian national who was trying to smuggle to Georgia from Russia containers of radioactive material in the trunk of his car.⁶⁸ On 13 March 2004, Georgian border guards detained an Armenian national who was trying to smuggle to Georgia radioactive material through the Sadakhlo crossing point at the Armenian-Georgian border.⁶⁹ On 8 November 2004, the Georgian Security Service discovered near Tbilisi two containers with the radioactive isotope cobalt-60 which was slightly covered by earth.⁷⁰ On 7 July 2005, the Georgian authorities announced the pre-emption of four attempts to smuggle highly-enriched uranium through Georgia.⁷¹

⁶⁵ NTI: Research Library, 20 April 2010,

http://www.nti.org/e_research/e3_nuclear_security_summit.html

⁶⁶ Alex Schmid and Robert Wesley, *op cit*, p. 382 (Table 19: Major Incidents of Nuclear Theft, Smuggling and Trafficking).

⁶⁷ NTI Research Library, August 2005,

http://www.nti.org/e_research/profiles/georgia/radioactive_waste.html

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

Having crossed the Georgian-Turkish border, the trafficked items are often taken over by an outlawed militant Kurdish nationalist organization, commonly known as the PKK, which from 1984 staged an insurgency and runs armed operations both in the south-eastern parts of Turkey and Northern Iraq. An access by PKK to radioactive materials may bring about very serious consequences, if used in attacks on civilian objects or military and naval bases in the Black Sea region.

Illicit shipments which reach the Caucasus across the Caspian Sea, and further delivered to other Black Sea countries, include not only Afghan heroin, or cannabis from the Chu Valley (which straddles Kazakhstan and Kyrgyzstan). Such shipments, most probably, may also include radioactive materials from numerous 'orphan' tailing dumps left over in Central Asia which between the 1950s and the 1980s was the largest single source of uranium for the Soviet military industry.

Today, the former uranium mines, uranium tailing dumps, waste byproducts of uranium mining, and other radioactive waste (RW) sources stay abandoned, largely unprotected and unguarded throughout Central Asia. There are strong reasons to believe that some of the above 'orphan' tailings may contain either cesium-137, or strontium-90, or even plutonium-238, suitable for the manufacture by terrorists of radiological dispersal devices (RDDs), or so-called "dirty bombs".

Various highly radioactive materials, which could be used to produce radiological dispersal devices, might also be present inside the tailing dumps in Central Asia, as well as in abandoned equipment at these sites. Both the tailing impoundment sites and so-called 'orphan' sources could contain reactor-produced radio isotopes and present clear security risks if left unmonitored. For instance, four such isotopes have enough cumulative radioactivity to raise the potential for a heightened security concern. These isotopes are americium (Am)-241, cesium (Cs)-137, iridium (Ir)-192, and strontium (Sr)-90.⁷²

Other radio isotopes of concern are cobalt-60, californium-252, radium-226 and lead-103. While plutonium-239 and plutonium-238 are also of concern as sources for radiological devices, uranium has a much lower radiation signature and is – like plutonium – more appropriate for nuclear fission bombs.⁷³

The Kyrgyz Republic alone has 70 radioactive waste (RW) sites, including 36 uranium tailings⁷⁴ with 475 million tons of waste.⁷⁵ Of particular concern are 23

⁷² For more information, see Charles D. Ferguson, et al., "Occasional Paper No. 11: Commercial Radioactive Sources: Surveying the Security Risks," James Martin Center for Nonproliferation Studies, January 2003, cns.miis.edu/opapers/op11/op11.pdf

⁷³ For details, see Alex Schmid and Robert Wesley, op cit., pp. 380-381.

⁷⁴ Saltanat Berdikееva, "Enduring Radioactive Dangers in Central Asia," International Relations and Security Network", 2009, www.isn.ethz.ch/isn/Current-Affairs/Special-Reports/Nuclear-Dangers/Analysis/

radioactive tailing dumps in the Mailuu-Suu River Valley, in the western Osh province of Kyrgyzstan, where a former uranium plant was built 50 years ago. The total volume of Mailuu-Suu tailings is close to 3 million cubic meters.⁷⁶ The Kyrgyz authorities have stated repeatedly that many of these tailing dumps are in need of modernization, but the country does not have enough financial resources for such a project.

In 2005, the Kyrgyz Republic reported that with assistance from the United States and in cooperation with the IAEA, it had secured or disposed of 1,000 items containing radioactive material believed to be vulnerable to theft. However, according to Kyrgyz authorities, there were still 500 more items to secure. It was also noted that an unidentified amount of radioactive material is still missing.⁷⁷

In September 2004, a Kyrgyz national was caught attempting to sell weapons-grade plutonium-239.⁷⁸ In December 2007, cesium-137 was found on a train carrying ferrous scrap metal from the Kyrgyz Republic. It was scheduled to be transported to Iran. The material, cesium-137, is one of the most desirable ingredients for an RDD, and as such, the incident came to the attention of the IAEA.⁷⁹

Another Central Asian country - Tajikistan - possesses 14% of the world's uranium reserves. Tajikistan's uranium mines were mainly located in Tyuyamyun, Taboshar, Adrasman, Mailisu.

In March 2002, the police of Tajikistan seized 2 kg of stolen low-enriched uranium from four Tajik nationals who appeared to be members of an organized crime ring that had been trading stolen radioactive materials since 1998.⁸⁰ The incident took place in the city of Chkalovsk, in northern Tajikistan, where the first large-scale facilities of the Soviet nuclear industry were established in late 1940s. Extensive tailing dumps and settles can remain there unprotected for decades more since Tajikistan does not have the necessary technology to handle such sites.

The inadequate security maintained at uranium tailing sites could pose a serious proliferation threat inviting acquisition by terrorist groups, depending upon the level of radioactivity in materials that have been abandoned.

⁷⁵ "Central Asia: Conference maps out way forward on radioactive waste," IRIN, 2 October 2009, [www.irinnews.org/ Report.aspx? ReportId= 84061](http://www.irinnews.org/Report.aspx?ReportId=84061)

⁷⁶ <http://www.asiawaterwire.net/node/74>

⁷⁷ Rob Broomy, "Kyrgyz Hunt for Radioactive Matter," BBC News, NTI Database, 7 October 2005.

⁷⁸ Carolynne Wheeler, "Smuggler Seized in Kyrgyzstan with Weapons-Grade Plutonium," The Guardian, 30 September 2004, [www.guardian.co.uk/ world/ 2004/ sep/ 30/ russia. international crime](http://www.guardian.co.uk/world/2004/sep/30/russia.international.crime)

⁷⁹ "Kyrgyzstan: IAEA Seeks Answers to Radioactive Seizure", Radio Free Europe, 18 January 2008, [www.rferl.org/ content/ article/ 1347721.html](http://www.rferl.org/content/article/1347721.html)

⁸⁰ <http://www.nti.org/db/nistraff/2002/20020230.htm>

On top of this, Uzbekistan – also a Central Asian country – possesses the world’s seventh largest uranium reserves (e.g. in Aktau, in Dzhanau in Central Kyzylkum, etc.), and, in the words of the head of the Institute of Nuclear Physics in Tashkent (Uzbekistan’s capital) is “a pivotal transit point”.⁸¹

Rich uranium ore was also discovered in the Khanneshin district of Afghanistan.⁸²

As the above enumeration indicates, a component that is less frequently discussed within the nuclear risks framework is the security threat that such abandoned tailing sites, as well as the active uranium mines could potentially pose in a politically volatile environment.

Now, turning to the other edge of the Black Sea region, its openness to the Balkans and the Mediterranean facilitates regular use by the traffickers of the transport infrastructure in such Black Sea littoral states as Georgia, Turkey, Russia, Ukraine, Romania and Bulgaria.

There are several major transit corridors for TIR trucks⁸³, private cars, buses, by air, by powerboats and ships from Turkey and from the Caucasus Black Sea ports, such as Poti, Batumi, Sukhumi, as well as the Russian port of Novorossiysk, and the Ukrainian port of Odessa/Ilyichevsk. From such places, illicit deliveries move westwards, e.g. via Romania, Bulgaria, to Greece, Albania, Bosnia & Herzegovina, Croatia, FYROM, Montenegro, Serbia, other Balkan countries, and subsequently – to Central and Western Europe.

The traffickers also make use of the licit trade for their illicit operations, concealing the illicit stuff in commercial cargo, particularly in containers. Today, approximately 90% of non-bulk cargo worldwide moves by containers stacked on transport ships.⁸⁴ Some 18 million total containers make over 200 million trips per year.⁸⁵

Improved profiling capacities need to be introduced in the Black Sea region to assist in the identification of high-risk shipments in the flow of sea containers carrying legal cargo for imports and exports to prevent the use of sea containers for illicit purposes such as the trafficking of drugs, weapons, explosives, human beings or terrorism, whilst avoiding a disruption of the legal trade.

⁸¹ Central Asia-Caucasus Institute Analyst, 4 May 2006, <http://cacianalyst.org/?q=node/3872>

⁸² <http://pubs.usgs.gov/of/2007/1214/PDF/3.0-carbonatite-FINAL.pdf>

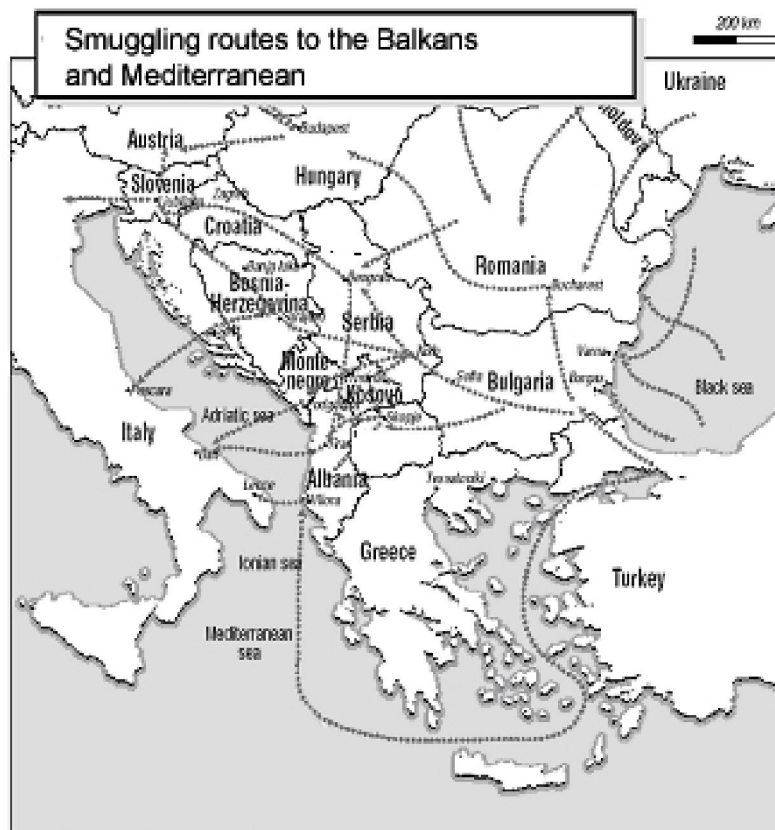
⁸³ TIR trucks are trucks with trailers or containers with customs bonded seals, allowing drivers to cross borders without re-inspection at each border.

⁸⁴ C. E. Ebeling, "Evolution of a Box", *American Heritage of Invention and Technology*, Vol. 23 (Winter 2009).

⁸⁵ Marc Levinson, "The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger", Princeton Univ. Press, 2006, p. 1.

The volume of land traffic along the “Balkan” route is constantly increasing. The checkpoint Kapikule-Kapitan Andreevo on the Turkish-Bulgarian land border is the second busiest crossing point in the world⁸⁶, being a major entry to the EU area for commercial cargos from Turkey, Iran, Afghanistan, Pakistan, Syria, etc.

Following the recent expansion of transit capacities at Kapikule-Kapitan Andreevo, close to 4,000 vehicles, including more than 1,000 TIR trucks, now pass through this checkpoint daily⁸⁷, raising concern regarding its readiness to meet the necessary security standards.

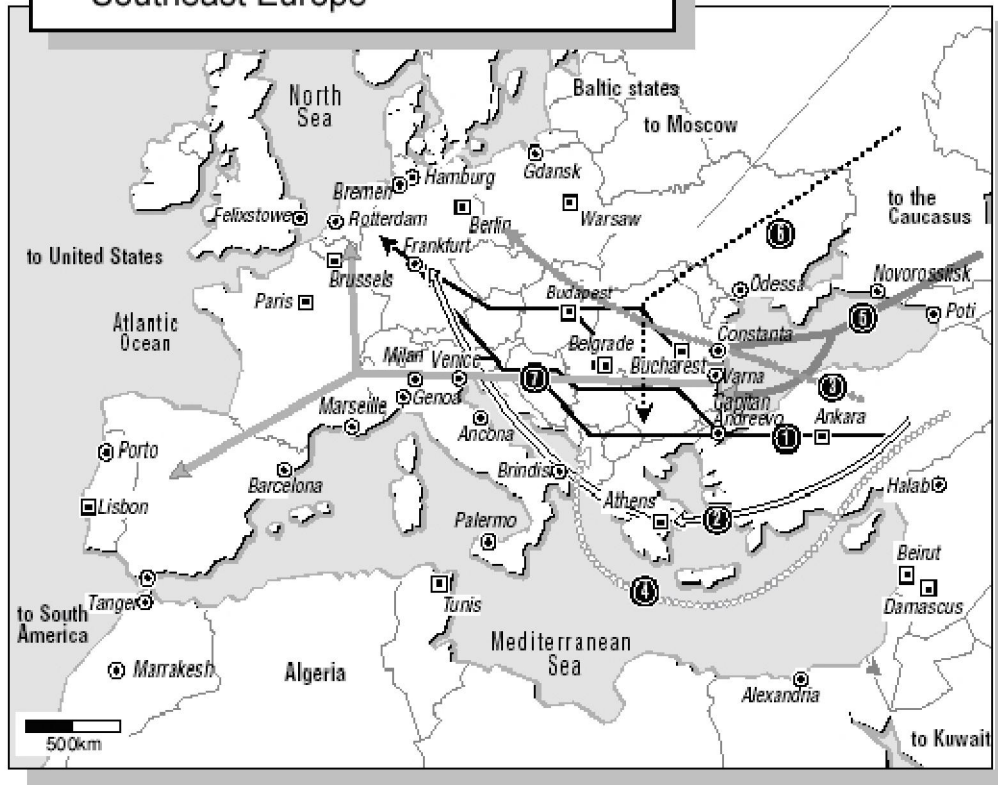


Source: Presentation made at the NATO Advanced Research Workshop: *International Approaches to Counter Illicit Trafficking in the Black Sea Region*, 13 June 2006, Oxford, U.K.

⁸⁶ Bruce M. Lawlor, et al, “Nuclear Security: A Framework for Developing National Programs”, Global Threats Studies Network, CTSP, Virginia Tech, U.S.A., p. 12.

⁸⁷ <http://www.verkehr.co.at/templates/index.cfm?id=26898> (in German)

Smuggling channels crossing Southeast Europe



- ← 1. From Turkey, through Bulgaria,
- ⇐ 2. From Turkey, through Greece,
- ←····· 3. From Turkey, by sea to Romania and then to Central and Eastern Europe;
- ←····· 4. From Turkey and Pakistan by sea to Albania;
- ← 5. From the Former Soviet Countries through Black sea and then to Bulgaria and Romania;
- ←····· 6. Through Russia, Ukraine, Moldova, Romania and Bulgaria to West Europe;

Source: Presentation made at the NATO Advanced Research Workshop:
International Approaches to Counter Illicit Trafficking in the Black Sea Region,
 13 June 2006, Oxford, U.K.

5. Transit Trafficking from Europe towards the Middle East, Central Asia & West Asia

The same “Silk Road – Balkan” major trafficking route is used for the smuggling operations in the opposite direction, i.e. from the Mediterranean and Balkans for destinations in the Caucasus, Central Asia, Afghanistan, Pakistan and Iran.

The trafficking along this route in the eastward direction was initially established for illicit deliveries to Afghanistan of chemical precursors required for the local production of heroin from opium and diverted from some countries with advanced chemical industries.⁸⁸

Today, the connections established decades ago by the illicit traffickers in chemical precursors can conveniently be used for trafficking in nuclear and radioactive materials across, or directly from, Central Asia to Afghanistan, Pakistan and Iran. For instance, in March 2000, a truck was intercepted on the Kazakh-Uzbek border, on its way to Pakistan, with uranium hidden in 10 lead containers concealed among scrap metal.⁸⁹

The trafficking in radioactive materials and substances in Central Asia is particularly worrying since Central Asia is witnessing political instability and the incursion of Islamist groups believed to have terrorist ties.

For instance, the Islamic Movement of Uzbekistan (IMU) has had extensive connections with Al-Qaeda and the Taliban since 1998 when the IMU was founded in Taliban-controlled Kabul.⁹⁰ Other terrorist and Islamic extremist groups active in Central Asia, but with strong connections to Afghanistan and Pakistan, are the Islamic Jihad Group of Uzbekistan, the Islamic Movement of Uzbekistan, the East Turkistan Islamic Movement, the Turkistan Liberation Movement, and the Afghan-based terror group Hizb-e Islami of Gulbuddin Hekmatyar.

According to Kyrgyz security officials, the public unrest, ethnic strife, violent clashes, and massacres in the Uzbek-populated southern regions of Kyrgyzstan in April and June 2010 were largely fomented by members of the Islamic Movement of Uzbekistan (IMU) and the Islamic Jihad Group of Uzbekistan, having been discussed in advance with the Taliban warlords.⁹¹

Of particular note is Hizb ut-Tahrir, the international pan-Islamic political party which has grown by 10,000 recruits worldwide. It has a significant presence in Central Asia and could provide the global radical Islamist movement with an "access to the expertise and technology to manufacture weapons of mass destruction".⁹² The U.S. Department of State cited Hizb ut-Tahrir as an emerging

⁸⁸ Vladimir Fenopetov, "The Drug Crime Threat to Countries Located on the Silk Road", The China and Eurasia Forum Quarterly. Central Asia - Caucasus Institute, Washington, D.C., Volume 4, No. 1, February 2006.

⁸⁹ Central Asia-Caucasus Institute Analyst, 4 May 2006, <http://caciaanalyst.org/?q=node/3872>

⁹⁰ Central Asia-Caucasus Institute Analyst, 5 May 2004, <http://caciaanalyst.org/?q=node/2078>

⁹¹ 24 June 2010, www.lenta.ru (in Russian)

⁹² Ariel Cohen, "Hizb ut-Tahrir: An Emerging Threat to U.S. Interests in Central Asia," 30 May 2003, The Heritage Foundation, www.heritage.org/Research/RussiaandEurasia/BG1656.cfm.

and threatening group in the region in its *Country Terrorism* report released in 2008.⁹³

Finally, according to the former head of a U.S. government group monitoring Al-Qaeda, Osama bin Laden viewed the Central Asian Republics as "a happy hunting ground in which to seek WMD components".⁹⁴

6. Implications of the “Two-way Traffic” for the Black Sea countries

The poor levels of economic and political governance in some states of the Black Sea region, as well as the slow pace of reforms in certain littoral countries, are both a cause and an effect of this predicament.

Furthermore, following the disintegration of the USSR, there emerged in the post-Soviet space, *inter alia*, in the Black Sea region a new, non-inclusive, security situation characterized by a ‘security vacuum’ and the appearance of the so-called “Gray Zones” which have brought about new, non-traditional, asymmetric security threats and new actors, including transnational criminal organizations and terrorist groups.

An important new, non-traditional, threat on the post-Soviet space is the drug trade, accompanied by the quick spread of addiction. Yet it is far from being the single or dominant one.

Extortion, kidnapping for ransom, contract murder, illicit trafficking in persons and firearms, and all sorts of smuggling of licit and illicit goods, including radioactive materials and substances, are heavily interwoven into the criminalized “complex economy” in the “Gray Zones”.

These new threats further increase the high geopolitical volatility in certain parts of the Black Sea region affected by the ‘security gap’, particularly in the Caucasus.

Criminal networks of different origin, including terrorist organizations, have already a well-established presence in the region. The Black Sea countries are being increasingly affected by spill-over from their subversive activities along the “Silk Road – Balkan” trafficking route.

⁹³ Joshua Kucera, "Central Asia and Caucasus: Terrorist Threat on Rise in Ferghana Valley," US State Department, 8 May 2009,

www.eurasianet.org/departments/insight/articles/eav050809a.shtml

⁹⁴ Michael Scheuer, "Central Asia in Al-Qaeda's Vision of the Anti-American Jihad, 1979-2006," Central Asia-Caucasus Institute Silk Road Studies Program, China and Eurasia Forum Quarterly, Volume 4, No. 2 (2006) p. 5-10, www.silkroadstudies.org/new/docs/CEF/Quarterly/May_2006/Scheuer.pdf

Since smuggling of any kind of illicit goods, including materials for “dirty bombs” and WMD is likely to provide organized crime and terrorist actors with a significant additional source of funds, they have made themselves well at home in the Black Sea region, enjoying *de facto* safe-havens along the “Silk Road – Balkan” trafficking route, cultivating and expanding the locally established criminal connections and using each other’s money laundering networks.

Such smuggling and illicit trafficking operations with anything which could bring profit, have serious implications for the legal, political, economic, and social stability in most of the Black Sea countries. Connections between traffickers and local organized crime promote corruption, reduce the effectiveness of law enforcement efforts, and de-stabilize or slow down the process of reforms.

The unholy nexus between profit-driven crime and politically- or religiously-motivated terrorism undermines the positive results of economic and political efforts, spawns extraordinary levels of violence and causes general public, political and economic insecurities. The criminal networks attempt to penetrate and influence vulnerable economies of the Black Sea countries, infiltrate national politics, and, in some cases, foment regional strife and ethnic tensions. Moreover, through their illicitly acquired profits, they are able to nourish separatist ambitions, finance armed conflicts in some of the Black Sea countries and bluster with their access to materials for WMD.

The countries affected by the ‘security gap’ of the “Gray Zones” require attention and support in their struggle for economic security, against crime, illegal migration, terrorism, proliferation of nuclear and radioactive materials and substances. This could possibly be done in the framework of an inclusive cooperative security structure or another collective arrangement acceptable to the countries of the region.

7. Role of the Extra-regional Actors

The Black Sea region is not seen anymore as the periphery of the European continent, but is becoming “a core component of the West’s strategic hinterland”.

In January 2007, with the accession of Romania and Bulgaria to the European Union, the Black Sea has turned into Europe’s new south-eastern frontier and has thereby become of immediate and direct policy-interest to the EU.

The Black Sea region is crucial to Europe principally because of its location at the juncture of Europe, Central Asia, and the Middle East and due to its role in the transit of oil and gas to Europe.

The EU's interests in the Black Sea region can broadly be defined along four categories. These are: promoting long-term stability and conflict management; promotion of democratic institutions and the rule of law; securing a stable energy supply for Europe; and combating organized crime and terrorism, including concerns over migration and border controls.⁹⁵ On top of this, there is a need to manage the common neighbourhood with both Russia and Turkey.

Among challenges facing the region, the EU notes serious environmental problems, illicit movements of people and goods, and insufficient border patrolling.

The EU is addressing most of the Black Sea countries within the framework of its Common Foreign and Security Policy (CFSP), launched under the Amsterdam Treaty of 1997, the European Security Strategy (ESS) of 2003, the European Security and Defence Policy (ESDP), the European Neighbourhood Policy (ENP) of 2004, the Black Sea Synergy, launched in 2007, and the Eastern Partnership (EaP), launched in 2008.

Of particular relevance is the Black Sea Synergy which aims at consolidating already existing EU strategies with individual countries in the region which would allow to approach the Black Sea as a single component within the wider Europe.

However, the use of the term “synergy” in the aforementioned EU policy indicated that the EU is pulling together different inputs, lessons and bilateral initiatives within this new regional framework rather than creating a whole new policy. In other words, the EU is so far addressing the Black Sea region on a country-by-country basis and has not yet developed for it collective security architecture.

Nevertheless, the interest of the EU, in particular, towards the Wider Black Sea region is bound to grow due to geographic and political proximity, strategic agendas and the potential for tangible synergies in specific thematic areas of mutual interest.⁹⁶

At this stage, the close political, economic, and geographic links between the EU and the Black Sea region raise the need to clarify its status with the Black Sea, i.e., as to whether the EU is a Black Sea actor, or not, and what its acknowledgement as

⁹⁵ Svante Cornell et al, “The Wider Black Sea Region: An Emerging Hub in European Security”, Central Asia-Caucasus Institute & Silk Road Studies Program, 2006, p. 6.

⁹⁶ Tedo Japaridze et al, “The EU’s Ambivalent Relationship with the BSEC: Reflecting on the Past, Mapping out the Future”, ICBSS Policy Brief No. 20, January 2010, p. 3.

a Black Sea entity could imply for the region. Such recommendations were presented in the recent Report of the Commission on the Black Sea.⁹⁷

The numerous oil and gas pipelines connecting or planned to connect Ukraine, Russia and Azerbaijan; Georgia and Turkey; Bulgaria and Greece, which may be sabotaged by terrorist groups are of increasing concern, and the EU would inevitably be bound to assist in promoting the regional partnership capacities, particularly, addressing together the security issues, including non-proliferation of nuclear and other radioactive materials and substances.

Furthermore, the sense of urgency about confronting the new security threats in the Wider Black Sea region is already gaining momentum, as have been the calls for tackling those issues in a trans-Atlantic format.⁹⁸

This implies the involvement of two other players – NATO which is present on the Black Sea, and the U.S.

The Black Sea region, once on the periphery of European consciousness, has become the next frontier in trans-Atlantic strategic thinking in terms of energy security, trade, migration, non-proliferation and other key policy areas.

Similarly to the EU, both NATO and the U.S. have strong interests in safeguarding peace and security in the Black Sea region through the enhanced cooperation in the war on terrorism and prevention of WMD proliferation.

As regards NATO enlargement, “one of the main conditions to meet Euro-Atlantic alliance standards is the stability of state institutions and the trust of the population in them”.⁹⁹ This is not yet the case in all Black Sea countries. Furthermore, any straightforward process in this direction will be strongly opposed by Russia – one of the key and most powerful regional actors, and Turkey, concerned with keeping intact the status of the Black Sea Straits established in 1936 by the Montreux Convention.

The U.S. regards the Black Sea as more of a gateway in the framework of its Eurasian and Greater Middle East policies, particularly towards West Asia (Iraq,

⁹⁷ Report by the Commission on the Black Sea, “A 2020 Vision for the Black Sea Region”, May 2010, p.p. 39-44, http://www.blackseacom.eu/fileadmin/user_upload/Paper/A_2020_Vision_for_the_Black_Sea.pdf

⁹⁸ Sergiu Celac and Marius Vahl, “Ready for a breakthrough: Elements for a European Union strategy Towards the Black Sea Region” in *Southeast European and Black Sea Studies*, Vol. 6, No. 2, June 2006, pp. 169-191.

⁹⁹ Tedo Japaridze, “Anticipation of turning point or the frenzy of reinventing the wheel? (European and Euro-Atlantic Future of Georgia)” in: “Georgia, 2009, Post-War Challenges & Perspectives”, Tbilisi, 2010, p. 19.

Iran, Afghanistan, Syria), and, therefore, aims to establish political and military presence in the Wider Black Sea region.

A large measure of openness of the Black Sea region to several neighbouring areas, particularly to the East and South, is important both for reconstruction and stabilization in Afghanistan and Iraq, as well as for the protection of energy shipping lanes between the Caspian region and Western markets against subversive and terrorist acts.

Security is one of the main pillars of the U.S. approach to the Black Sea region. The U.S. therefore provided support to the Black Sea Border Security Initiative and the Black Sea Civil Emergency Response Planning, aimed at improving trans-border coordination.¹⁰⁰

In this context, of great importance is the emphasis by the U.S. on fighting terrorism, organized crime and the smuggling of weapons of mass destruction (WMD) by means of an enhanced border security regime and a civil-military response.

Whereas the U.S. initiatives of 2002 for extending to the Black Sea the NATO-led *Operation Active Endeavour* received no follow-up due to the lack of consensus within NATO, there are a number of other NATO programs addressing the Black Sea countries, such as the *Partnership for Peace (PfP)*, *Membership Action Plans (MAPs)*, etc.

The U.S. is pursuing its Wider Black Sea strategy also through bilateral cooperation and defence agreements with the countries of the Wider Black Sea region. As of 2000, the U.S. has established its military presence in Iraq, Afghanistan, as well as its military bases in Romania, Bulgaria, in Central Asia, e.g. the Manas air base in Kyrgyzstan (the originally opened Khanabad air base in Uzbekistan was closed in 2005 after the deterioration of bilateral relations), performed joint military exercises in Kazakhstan, sent military personnel to train and equip Georgian military forces, and exercised regularly with the Ukrainian forces in the Crimea and Western Ukraine.

Consequently, the Black Sea region is uniquely positioned to benefit from coordinated and mutually reinforcing efforts by the EU and NATO.¹⁰¹

¹⁰⁰ Commission on the Black Sea, "Security in the Black Sea Region, Policy Report II", p.10, [http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black Sea Policy Report II Security.pdf](http://www.blackseacom.eu/fileadmin/user_upload/Paper/Black_Sea_Policy_Report_II_Security.pdf)

¹⁰¹ Eugene B. Rumer and Jeffrey Simon, "Toward a Euro-Atlantic Strategy for the Black Sea Region", Institute for National Strategic Studies, National Defense University, Washington, D.C., April 2006, p. 6.

8. Towards the Development of a Regional Partnership Capacity

In countering crime and aspiring for security and stability, the majority of the governments in the Black Sea region try to apply best practices for meeting European Union standards. This covers, *inter alia*, areas such as legislation, adoption and implementation of a framework for integrated financial and criminal investigation aimed at confiscation of proceeds from crime, improved legal framework in crime analysis and criminal intelligence systems, strengthened institutions, enhanced capacities to utilize special investigative means for the detection and exposure of serious criminal offences while making their use subject to principles of legality, proportionality, procedural safeguards and oversight mechanisms, protection of witnesses, vulnerable victims and collaborators of justice prior, during and after criminal proceedings.

The governments of the Black Sea countries are aware that the European integration process requires them to widen cooperation within the region in the fields of human dimension, democracy, justice, migration, asylum, refugees, combating illegal activities, drug trafficking, countering money-laundering and the financing of terrorism.

The integration process also requires good neighborly relations, development of regional “partnership capacity”; the need for finding mutually acceptable solutions on outstanding issues with neighboring countries; enhanced security and stability; the development of economic, social, cultural and humanitarian cooperation; the elimination of terrorism, corruption, cross-border organized crime, illicit trafficking in human beings, conventional weapons and components for weapons of mass destruction (WMD).

However, there is still a lack of requisite synergy among the Black Sea countries. This leads to a situation where many security issues in the Black Sea region, ranging from security of oil and gas pipelines to security from terrorist acts continue to be unresolved. According to an analyst, “establishing a structured security dialogue on relevant issues ranging from civil protection to coordination regarding man-made or natural disasters, migration and organized crime would be a viable addition to regional security”.¹⁰²

¹⁰² Dimitrios Triantaphyllou, Statement to the 22nd meeting of the Council of Ministers of Foreign Affairs of the BSEC, 28 May 2010, http://icbss.org/images/papers/statement_sofia_22_cmfa.pdf

Assessment of the Status Quo in Responding to the Threat of Nuclear Terrorism by Experts from the Black Sea Countries

1. Introduction

The Global Initiative to Combat Nuclear Terrorism (GICNT) is an international partnership of 81 nations and four official observers who are committed to work individually and collectively to implement a set of shared nuclear security principles. In this regard, GICNT's mission is to strengthen global capacity to prevent, detect, and respond to nuclear terrorism by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations.¹⁰³

The GICNT was launched on July 15, 2006 by the then US President George W. Bush and his Russian counterpart Vladimir Putin, while its first meeting took place in Rabat, Morocco in October 2006 and included 13 countries and the International Atomic Energy Agency (IAEA). The delegates developed a Statement of Principles that outlined nuclear security goals that partners would voluntarily work toward in order to effectively combat the shared threat of nuclear terrorism.¹⁰⁴

2. GICNT and the UN Security Council Resolution 1540

The GICNT's mission is not unrelated to that of the United Nations Security Council Resolution (UNSCR) 1540,¹⁰⁵ which outlines obligations for UN member

¹⁰³ <http://www.state.gov/t/isn/c18406.htm>

¹⁰⁴ <http://www.state.gov/t/isn/141785.htm>

¹⁰⁵ Security Council Resolution 1540 is a unanimously-passed, binding resolution of the UN Security Council expressing a desire for uniform international action to prevent the proliferation of weapons of mass destruction (WMD) to non-state actors. More precisely, the Resolution calls on UN member states to develop and maintain appropriate effective storage and accounting systems, physical protection measures, border controls, and legal export/transshipment controls. To assess implementation, the Resolution established a Committee which receives and reviews all reports filed by member states. In addition, the resolution invites those states that have the means and capabilities to do so to assist those countries who need and request assistance with complying with the Resolution. The resolution covers all WMD and their means of delivery, as well as related materials. It also calls for national action on law enforcement, border security, export controls and physical protection of materials. Furthermore, unlike prior arms control agreements, UNSCR 1540 does not operate on an opt-in basis; it is binding on all member states of the United Nations, including those who are

states with respect to a broad variety of non proliferation areas, to include nuclear terrorism. This includes prohibiting support to non-state actors seeking to acquire nuclear materials or weapons, adopting and enforcing effective laws prohibiting nuclear proliferation to non-state actors, and promoting dialogue and taking cooperative action to prevent illicit trafficking. Participating in the GICNT is one of many steps that UN member nations may take to fulfil their UNSCR 1540 obligations.¹⁰⁶

The GICNT could also help with the implementation of the International Convention of the Suppression of Acts of Nuclear Terrorism, which “calls for states to develop appropriate legal frameworks criminalizing nuclear terrorism-related offenses, investigate alleged offenses, and, as appropriate, arrest, prosecute, or extradite offenders. It also calls for international cooperation with nuclear terrorism investigations and prosecutions, through information-sharing, extradition and the transfer of detainees to assist with foreign investigations and prosecutions.”¹⁰⁷

3. The Statement of Principles

Moreover, many measures envisaged by the GICNT Statement of Principles (see below) draw on the spirit, and in some cases even the letter, of a number of international arrangements, such as the Nuclear Terrorism Convention, the Convention on the Physical Protection of Nuclear Materials (CPPNM) and its 2005 Amendment, and UNSCR 1373, which are all explicitly referred to as legal basis of the GICNT. The GICNT can therefore be characterised as a legally non-binding international arrangement resting on both national actions and cooperation among sovereign states.¹⁰⁸

The Statement of Principles also includes a reference to IAEA’s role as a key contributor to international nuclear security and an important source of technical

not participatory members of the other agreements. As of March 2007, 136 countries as well as the European Union have submitted their reports to the 1540 Committee. The Resolution itself is available at:

<http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N04/328/43/PDF/N0432843.pdf?OpenElement>

¹⁰⁶ Ibid.

¹⁰⁷ Steven C. Welsh, "Nuclear Terrorism Convention: International Convention for the Suppression of Acts of Nuclear Terrorism," Center for Defense Information (17 May 2005), accessed at: <http://www.cdi.org/news/law/ntc.cfm>

¹⁰⁸ Riccardo Alcaro, “The Global Initiative to Combat Nuclear Terrorism: Big Potential, Limited Impact?” *The International Spectator* 44:1 (2009): 100.

expertise supporting GICNT participants' efforts. The agency takes part in the initiative as an "observer."¹⁰⁹

4. The State of Play

However, the GICNT fails to address a major weakness of UNSCR 1540, which is the absence of an effective mechanism for encouraging nations that have the resources to provide financial and technical assistance to provide it, and for learning and seeking to meet the needs of nations that cannot fulfil their obligations under UNSCR 1540 without assistance.¹¹⁰

It is widely argued that the US and Russia should take the lead in establishing through the Global Initiative a standard that would require each country possessing weapons-usable nuclear material to establish and effectively implement nuclear security systems that could defeat the kinds of insider and outsider threats that terrorists and criminals are known to pose.¹¹¹

Since an effective response to a nuclear terrorism threat in the Black Sea region can be provided only through concerted action by all partners – i.e., establishing a partnership is the only path to a certain safety from nuclear terrorism. The concerted action by various states can be reached only by using one and the same basic document, commonly agreed by all partners.

The Statement of Principles (SOP) mentioned above is a set of broad nuclear security goals related to the full spectrum of nuclear terrorism deterrence, prevention, detection, and response objectives.

The eight principles within the SOP aim to develop partnership capacity to combat nuclear terrorism on a determined and systematic basis, consistent with national legal authorities and obligations as well as relevant international legal frameworks such as the Convention for the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Material, and UNSCR 1373 and 1540.¹¹²

¹⁰⁹ Ibid.

¹¹⁰ <http://www.stimson.org/MAB/?SN=CT200705181262>

¹¹¹ Ibid.

¹¹² <http://www.state.gov/t/isn/141785.htm>

These eight Principles are:

- i. to strengthen nuclear material accounting, control, and physical protection
- ii. to enhance the security of civilian nuclear facilities
- iii. to research and develop national detection capabilities that are interoperable
- iv. to enhance search, confiscation, and safe control capabilities
- v. to deny safe haven and financial resources to those facilitating nuclear terrorism
- vi. to ensure adequate civil and criminal legal frameworks to deter nuclear terrorism
- vii. to improve response, investigation, and mitigation capabilities
- viii. to promote information sharing among participants, while protecting confidentiality

Four years after Rabat, the time has come to take stock of how the above principles are being adhered to in the Black Sea region, what has already been accomplished and what needs more support, attention and further efforts. Thus, the Pontus Group took the initiative of approaching experts/practitioners from all the Black Sea countries with a view:

- i. to assess the Strategic and Political Status Quo in the Black Sea region, bearing in mind the potential threat of nuclear terrorist acts
- ii. to assess the current legal framework throughout the region and its effectiveness in securing nuclear materials and, consequently, in preventing possible acts of nuclear terrorism
- iii. to learn more about the scientific and technical aspects of the GICNT's implementation by each of the countries of the Black Sea region, and of the related difficulties that they may be facing, as well as of their possible needs for external assistance
- iv. to establish a more active dialogue with each of the countries of the Black Sea region on the subject of countering nuclear terrorism
- v. to assess progress already achieved in creating "partnership capacity" in each of the eight areas listed in the Statement of Principles
- vi. to identify measures that will enable the Black Sea countries to improve "partnership capacity" throughout the region in each of the eight areas outlined in the Statement of Principles, bearing in mind current regional strategic and political considerations.

Consequently, the Pontus Group has prepared a questionnaire along the lines of each of the above eight Principles and sent it out to experts from all countries of the Black Sea region.

5. The Answers of the Experts

The Pontus Group has received answers from experts/practitioners from the following Black Sea countries: Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, and Ukraine.

No answers have been sent, so far, by experts from Russia and Turkey. However, that does not mean that these countries are not willing to cooperate, and in this regard we are still expecting to receive their valuable inputs.

The answers received, particularly the Status Quo situation described by each expert, including the progress made in, and the opportunities existing for, the development and/or the strengthening of “regional partnership,” can be summarized as follows for each of the eight areas listed in the Statement of Principles:

- i. accounting, control and physical protection systems for nuclear and other radioactive materials and substances
- ii. enhanced security of civilian nuclear facilities
- iii. improved detection of nuclear and other radioactive materials and substances and cooperation in the research and development of national detection capabilities
- iv. improved capabilities to search for, confiscate, and establish safe control over unlawfully held nuclear or other radioactive materials and substances or devices
- v. denial of safe haven to terrorists and financial or economic resources to terrorists seeking to acquire or use nuclear and other radioactive materials and substances
- vi. adequate national legal and regulatory frameworks that provide for appropriate criminal and civil liability for terrorists and those who facilitate acts of nuclear terrorism
- vii. improved capabilities to respond, mitigate, and investigate terrorist attacks involving nuclear and other radioactive materials and substances, including development of technical means to identify nuclear and other radioactive materials and substances that are, or may be, involved in the incident
- viii. information sharing pertaining to the suppression of acts of nuclear terrorism consistent with national laws and international obligations to protect the confidentiality of information

ARMENIA

Accountability

Armenia requires persons to obtain government authorisation to possess, use, transport, and store radioactive sources. Such authorisation is issued either by the Ministry of Energy and Natural Resources or the Armenian Nuclear Regulatory Authority (ANRA). The aforementioned agencies do exchange information on those issues, however only upon request.

ANRA is also responsible for Armenia's national register of radioactive sources, and it exchanges the information contained in its registry with other countries in the region. The information is available upon request.

Documents describing Armenia's national register of radioactive sources, how it works, and how it exchanges information with other countries are available only upon request.

Civilian Nuclear Facilities

In Armenia, the owners of the civilian nuclear facilities are responsible for their facilities' security and safety, since the responsibility of government agencies or committees has not been determined.

Detection

In accordance with the Law on the Use of Nuclear Energy for Peaceful Purposes of 01.03.1999, ANRA is responsible for the detection and monitoring of radioactive sources on Armenia's territory.

Armenia possesses and uses radiation monitoring equipment to maintain a capability to detect the illicit movement of nuclear and other radioactive sources and substances across borders, ports, and airports. Responsible for this equipment is the Customs Service. Although the Customs Service does not liaise or exchange information with similar agencies in other countries within the region, its agents constantly participate in exercises, conferences, etc. Moreover, the Customs Service has established procedures to request other countries to monitor at their borders, ports, and airports to detect radioactive sources in the IAEA framework.

Armenia has an established system for ensuring that radioactive sources are identifiable and traceable. The agency responsible for managing it is ANRA.

Personal dosimeter equipment to government personnel is issued by IAEA upon request.

The international programs that provide radioactive source detection technology to Armenia are effective and useful.

Search, Confiscate, Establish Safe Control

In the event of a missing radioactive source, the Ministry of Emergency Situations, the National Security Service and ANRA open an investigation. Armenia does not have a government entity whose specific mission is to search for missing radioactive sources.

In the event of an accident or malicious act involving a radioactive source, the Ministry of Emergency Situations, which is responsible for responding in the event of an accident, localises, monitors and conducts breakdown elimination. Depending on the nature of the incident, the National Security Service is also involved.

Neither the Ministry of Emergency Situations, nor the National Security Service liaise, exchange information, or engage in exercises with similar government agencies in other countries. Such activities take place only in the framework of IAEA.

Prevent Terrorist Safe Haven

Q: Does your country conduct a formal national vulnerability assessment with respect to the threat of nuclear terrorism based on the potential for loss of control and/or malicious acts involving one or more radioactive sources?

A: A credible threat perception had been developed in conformity with the requirements of the Nuclear Regulatory Authority.

Armenia has a mechanism to notify the receiving country of its intent to export radioactive sources to that country. First, the country informs IAEA of its intention and only then the receiver, with whom it signs a contract to possess, use, transport and store radioactive sources.

Armenia requires that the import of nuclear materials is pre-approved by the national government. The Ministry of Energy and Natural Resources is responsible for issuing licenses for the import of nuclear sources, while ANRA for radioactive sources.

Armenia requires that the export of radioactive sources is pre-approved by the receiving country. However, there is no government entity responsible for obtaining such pre-approvals, and the approval is issued only if there is a license or a contract.

Armenia requires that the transport of radioactive sources through its territory is conducted in a manner consistent with IAEA standards for the transport of such material.

Legal and Regulatory Frameworks

Armenia has in place national legislation and regulations to control the management and protection of radioactive sources, such as the Convention on Nuclear Safety. A copy of this legislation is publicly available and can be accessed through ANRA's official website: www.anra.am.

ANRA is also Armenia's regulatory body responsible for the safety and security of radioactive sources.

Armenia has laws and regulations that require the prompt reporting to a national agency of a loss of control over radioactive sources or an incident involving radioactive sources. In accordance with a Governmental Regulation, the owner of a radioactive material must report its loss.

There is no unified framework of complementary laws and regulations within the region that enables countries to monitor, account for, and protect nuclear materials as they move from originator countries to destination countries, as the current situation in the South Caucasus makes cooperation on issues difficult.

Response and Mitigation

ANRA is Armenia's agency responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials.

The Ministry of Emergency Situations is responsible for responding in the event of an incident involving nuclear sources that has caused personal injury or property damage.

Armenia's laws and regulations require the preparation of emergency response plans for certain sectors of the society. In accordance with the Governmental Decision N.194 of 17.01.08, an emergency response plan has been developed under the coordination of the Ministry of Emergency Situations and the measures for the protection of the population are determined. The latter also regularly participates in different activities within the framework of IAEA.

There is no agreement or other legal mechanism by which one country within the region can easily provide medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency. Simultaneously, there is no mechanism enabling the countries in the region to jointly address a missing radioactive source, an accident involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country.

Information Sharing

Armenia does not have a central authority and international point of contact responsible for the physical protection of nuclear sources.

In the event of loss of control over a radioactive source, the owner of the source must immediately inform the National Security Service and ANRA.

Armenia has in place measures to protect the confidentiality of any information received in confidence from another State.

Public documents describing the available protections provided by Armenia to information relating to nuclear sources that is received in confidence from another nation are classified.

Armenia liaises with IAEA and the sender countries to promote cooperation and the exchange of information concerning radioactive sources.

A diplomatic forum addressing nuclear security related issues is run in the framework of IAEA.

AZERBAIJAN

Accountability

The government's authorization is required to possess, use, transport, and/or store radioactive sources. According to the Presidential Decree of 19 August 1998 on "Approving the Law of the Republic of Azerbaijan on Radiation Safety of Population" and other legislative and executive documents, the government agency responsible for issuance of licenses is the Ministry of Emergency Situations which does it through the *State Agency on Regulation of Nuclear and Radiological Activity (SANRAR)*. In addition, according to the Resolution of the Cabinet of Ministers of 13 December 2000 on "Safe transportation of dangerous goods by air", the State Civil Aviation Administration is responsible for granting permissions to the airplanes for transportation of dangerous goods over Azerbaijani airspace.

The Ministry of Emergency Situations through its Agency (SANRAR) as the primary agency responsible for granting licenses to possess, use, transport, and/or store radioactive sources in Azerbaijan can exchange such information with other countries, if requested, and if stipulated by the agreements concluded with the IAEA and other states (e.g. Ukraine, Lithuania, Belarus).

However, due to the lack of proper domestic mechanisms, Azerbaijan does not exchange information with other countries concerning the persons it has authorized to possess, use, transport and/or store radioactive sources.

The "Draft Regulation on State Register of ionizing radiation sources and nuclear materials" has been prepared by the SANRAR and submitted to the Ministry of Emergency Situations for consideration. According to this draft, the SANRAR is responsible for maintaining the State Register of ionizing radiation sources and nuclear materials and for the implementation of provisions of the Regulation. It defines the structure, maintenance of the Register, submission and provision of correct information, as well as requirements for registering ionizing radiation sources and nuclear materials in Azerbaijan. In case of an incongruence of information possessed by the SANRAR with the factual one, a user is required to investigate and submit all available information to the SANRAR. If disclosed that the incongruence is significant and the loss, theft or abuse of sources and materials is presumed, the SANRAR informs the relevant state agencies.

At the moment, no information to be contained in the future Register is yet being shared with other states in the region.

The reason for no information exchange with other countries in the region is the lack of relevant agreements with them. However, except for the Republic of Armenia, with whom Azerbaijan is in the state of war, there are no political or

other obstacles that inhibit liaising, exchange of information, holding of joint trainings, etc., with other countries in the region.

At present there is no a document that describes the national Register of radioactive sources, how it works, and how it exchanges information with other countries. The “Draft Regulation on State Register of ionizing radiation sources and nuclear materials” envisages use of the Register information by the SANRAR for the publication of official information booklets.

Once the above Regulation has been approved, SANRAR considers placing on its web-site information on the State Register, its operation methods, information exchange with other countries and other relevant documents.

Civilian Nuclear Facilities

If this question [in the questionnaire] implies directly nuclear facilities, such as research reactors or nuclear power plants, it should be mentioned that there are no such facilities in Azerbaijan. Hence, there is no any government agency responsible for providing guidance and oversight concerning the security of civilian nuclear facilities.

If the question [in the questionnaire] concerns ionizing radiation sources, then there is no any government agency responsible for their physical security, either. According to the national legislation, direct physical security is a responsibility of an operator. Control over the necessary level of such physical security is implemented by the relevant supervising state agency (the SANRAR).

If the question [in the questionnaire] implies directly nuclear facilities, such as research reactors or nuclear power plants, then due to the absence of such facilities in Azerbaijan, there is no any government agency responsible for providing guidance and oversight concerning the security of civilian nuclear facilities. Therefore, no external cooperation exists.

Accordingly, there is no any government agency responsible for security of civilian nuclear facilities.

Detection

The SANRAR, established in 2008 by the Presidential Decree, is charged with detection and monitoring of radioactive sources on the territory of Azerbaijan. At the same time, detection is also performed by different ministries (Ministry of Internal Affairs, Ministry of National Security, Ministry of Emergency Situations, etc.) depending on the situation. For instance, the Ministry of Defense is responsible for detection of radioactive sources on the territories of military units.

The State Customs Committee and the State Border Service of the Republic of Azerbaijan are responsible for the detection of nuclear and other radioactive sources and substances across borders and possess different types of radiation detection equipment. In addition, in order to prevent illicit movement of WMDs, their components and radioactive sources across the borders, all border crossing points have been equipped with portable radiation monitors, including the State Border Service Coast Guard patrol ships, equipped with radiation pagers and personal dosimeters.

The necessary measures, which are in conformity with international standards, are in place in order to detect illicit movement of nuclear and other radioactive sources and substances in the sea ports. Baku International Sea Trade Port is equipped with radiation detection equipment.

As regards airports, the works for installation of radiation detection equipments are to be launched soon.

The State Customs Committee and the State Border Service regularly liaise with their counterparts from Russia, Iran, Turkey, Georgia and Kazakhstan.

According to the national legislation and executive orders, the Republic's Center of Hygiene and Epidemiology of the Ministry of Health provides other state agencies with personal dosimeters. Those state agencies assign personal dosimeters to their own personnel.

Provision of border crossing points with radiation detection technology has been implemented within the framework of the IAEA Technical Cooperation Program and relevant projects of the US Department of Energy.

Under the bilateral US-Azerbaijan non-proliferation cooperation, border crossing points are being equipped with different types of radiation detection technology, such as portal monitors and portable detectors. At the same time, under the different US programs, Azerbaijan is being provided with different types of technology and trainings. Despite all those positive developments, Azerbaijan is interested in deepening multilateral and bilateral cooperation with the aim of strengthening its radiation detection capabilities.

All state agencies submit information concerning the movement of nuclear and radioactive sources to the SANRAR, which, in turn, regularly informs the IAEA. Also, the State Customs Committee engages in information exchange with its foreign counterparts within the existing procedure of the World Customs Organization.

Search, Confiscate, Establish Safe Control

When a radioactive source is missing, the relevant state agencies (Ministry of Internal Affairs and the Ministry of Emergency Situations) implement response measures. These agencies are responsible for recovering the missing radioactive source.

There is no concrete state agency that has a specific mission to search for missing radioactive sources. If a loss takes place, then the relevant structures of the Ministry of Emergency Situations (SANRAR, “Isotop” special enterprise, and Civil Defense forces), the Ministry of Interior and Ministry of National Security are involved into search activities. The process of search for missing radioactive sources is as follows: any case involving radioactive sources (loss, accident, etc.) is reported to the “112” hotline service active non-stop for 24 hours in the Ministry of Emergency Situations. Operators of the hotline service immediately inform the SANRAR and other relevant structures and then a search process is launched.

Due to the lack of agreed special procedures and mechanisms, the above-mentioned state agencies do not liaise and exchange information with similar government entities in other countries. However, our experts constantly participate in trainings on search for the missing radioactive sources.

Except for the Republic of Armenia, with whom Azerbaijan is in the state of war, there are no political or other obstacles that inhibit liaising, exchange of information, holding of joint trainings, etc., with other countries in the region.

The Ministry of Emergency Situations, Ministry of Internal Affairs and Ministry of National Security implement relevant response measures in the event of an accident or malicious act involving a radioactive source. Perpetrators are criminally persecuted.

The Ministry of Emergency Situations, Ministry of Interior and Ministry of National Security respond in the event of an accident involving a radioactive source, or a malicious act involving a radioactive source.

Due to the lack of agreed special procedures and mechanisms, the above-mentioned state agencies do not liaise and exchange information with similar government entities in other countries. However, our experts constantly participate in trainings on search for the missing radioactive sources.

Unlike other countries of South Europe and the Caucasus region, Azerbaijan does not participate in the Knowledge Management System (KMS) on the prevention of illicit trafficking of Chemical, Biological, Radiological and Nuclear (CBRN) weapons and materials in South Europe and Caucasus launched by the United Nations Interregional Crime and Justice Research Institute. KMS aims at improving the capabilities of states to counter this illicit activity, and has been designed to facilitate the interaction

of the national experts and representatives in order to increase the flow of information on CBRN incidents and develop in line with the UN strategies.

Prevent Terrorist Safe Haven

Azerbaijan conducts a formal national vulnerability assessment with respect to terrorism according to Articles 3.4 and 4.1.3 of the National Security Concept of Azerbaijan Republic which was adopted by Presidential Order No. 2198 dated 23 May 2007.

According to the Presidential Decree of 12 May 2009, the Ministry of National Security and the Ministry of Emergency Situations have been designated as competent bodies pursuant to Article 7.4 of the International Convention for the Suppression of Acts of Nuclear Terrorism.

There is a mechanism established by the Resolution 230 (2005) of the Cabinet of Ministers “On the approval of some normative acts concerning the application of the Law of the Republic of Azerbaijan on Export Control”. At the same time, it should be noted that Azerbaijan neither produces, nor exports radioactive sources.

According to the above-mentioned Resolution 230 of the Cabinet of Ministers, import of nuclear materials or radioactive sources into Azerbaijan is subject to prior approval by the Cabinet of Ministers based on opinions of SANRAR (the Ministry of Emergency Situations) and the Republic’s Center of Hygiene and Epidemiology of the Ministry of Health.

The Resolution 230 requires pre-approval by the receiving country of the export of radioactive sources. The Cabinet of Ministers is responsible for obtaining such approvals.

According to the Resolution 230, transportation of radioactive sources through the territory of Azerbaijan is subject to pre-authorization by the Cabinet of Ministers. One of the conditions for such authorization is the conformity of transit process with the IAEA standards.

It is the Ministry of Taxes that is responsible for the investigation of financial crimes.

Azerbaijan has joined the UN Convention of 9 December 1999 on Combating Financing of Terrorism (Law No. 174-IIQ of 1 October 2001). According to the Procedural Criminal Code of the Republic of Azerbaijan, the Ministry of Internal Affairs, Ministry of Taxes, Ministry of National Security, State Customs Committee, Prosecutor Bodies are responsible for the investigation of financial crimes within their competencies. Azerbaijan signed agreements with Georgia and Turkey on combating terrorism, organised crime and grave crimes. According to

these agreements, the parties were to create Information Data Base to collect information about the CBRN materials, terror organisations, etc. Before this Data Base has been created, the parties are exchanging information upon request.

Legal and Regulatory Frameworks

The Laws:

- 8 June 1999 – Law on Environment protection;
- 30 December 1997 – Law on Radiation Safety of the Population;
- 2 November 1999 – Law on Technical Safety.

Presidential Decrees:

- № 758, 19 August 1998 – On application of the Law on Radiation Safety of the Population;
- № 74, 3 April 2009 – On approval of the Statute of the State Agency on Regulation of Nuclear and Radiological Activity (SANRAR) of the Ministry of Emergency Situations.

Various decisions of the Cabinet of Ministers on export control, strengthening of control over radiation safety, transportation by land, air and sea of dangerous goods, preparation of list of potentially dangerous facilities, etc.

According to Article 149 of the Constitution, use and implementation of those laws only which have been published is obligatory for all citizens, legislative, executive and judicial power bodies, legal entities and municipalities. According to Article 38 of the Law on Normative Legal Acts, Laws of the Republic of Azerbaijan, decrees and orders of the President of the Republic of Azerbaijan shall be published in such official publications, as “Azerbaijan” newspaper and “Legislation Journal of the Republic of Azerbaijan”; Decisions of the Milli Mejlis (Parliament) of the Republic of Azerbaijan shall be published in the “Azerbaijan” newspaper and the “Bulletin of the Milli Mejlis of the Republic of Azerbaijan”; Decisions of the Cabinet of the Ministers shall be published in the official publications “Legislation Journal of the Republic of Azerbaijan” and the “Azerbaijan” newspaper. If necessary, other means of mass media shall be used for the immediate and extensive dissemination. All legal acts are placed on the official websites.

There is an effective legislation to control the management and protection of radioactive sources in Azerbaijan. In addition to laws, decrees and decisions mentioned above, the following decisions of the Cabinet of Ministers can be added:

- 11 July 1997 – Resolution 76 on measures to strengthen control over radiation safety on the territory of the Republic of Azerbaijan;

- 10 May 2001 – Resolution 94 on state registration of potentially dangerous facilities;
- 12 April 2004 – Resolution 42 on approval of “Guidelines for issuing special permits for scientific research and experiment designated activities involving the use of ionizing radiation sources”, “Guidelines for issuing special permits for projection, preparation, installation, construction, exploitation and removal from exploitation of ionizing radiation source facilities, radioactive material storages and radioactive waste warehouses” and “Guidelines for issuing special permits for activities concerning production, manufacture, transportation and use of radioactive materials”.

Apart from that, a number of draft legal acts have been prepared by the SANRAR and submitted for the Government’s consideration.

There will be a website of the SANRAR. It is envisaged that all national regulations concerning radioactive sources will be placed there.

As already mentioned, the SANRAR of the Ministry of Emergency Situations is an established regulatory body responsible for control of the safety and security of radioactive sources. The Agency is responsible for the security of radioactive sources, whereas the users are responsible for physical security. In addition, the SANRAR is in charge of participation in development of state policy and regulation of nuclear and radiological activity, and provision for such policy, identification of regulatory security mechanism of nuclear and radiological activity, monitoring of implementation and provision of security of such activity, implementation of response measures against violations of nuclear and radiation security, etc.

After its establishment, the SANRAR started implementing provisions of the Agreement on cooperation in the sphere of radiation security signed in 2006 between the Ministry of Emergency Situations of Azerbaijan and the Ukrainian State Committee on Nuclear Regulation.

There are a number of provisions concerning nuclear and radiation security in agreements signed by the Ministry of Emergency Situations with similar agencies in Turkey, Belarus and Germany.

In April 2009, the SANRAR concluded a bilateral agreement with the Radiation Protection Center of Lithuania, pursuant to which head of SANRAR participated in experience exchange program in Lithuania and Moldova.

Apart from that, the SANRAR experts actively participate in various seminars, conferences, trainings organized by the IAEA and in the exchange of information.

Except for the Republic of Armenia, with whom Azerbaijan is in the state of war, there are no political or other obstacles that inhibit liaising, exchange of information, holding of joint trainings, etc., with other countries in the region.

In accordance with Article 5.2.3 of the Cabinet of Ministers' Resolution 42 of 12 April 2004, all accidents involving radioactive sources are reported to the Ministry of Emergency Situations, the Ministry of Health and the Ministry of Ecology and Natural Resources, as well as to the heads of administrations of affected regions and to the population. The Resolution can be obtained from the website of relevant state agencies.

Moreover, events of loss of control over the use of radioactive sources are reported to the "112" hotline service active non-stop for 24 hours in the Ministry of Emergency Situations. Operators of the hotline service immediately inform the SANRAR and other relevant structures.

There is no any unified framework of complementary laws and regulations within the region that enables our country to monitor, account for, and protect nuclear materials as they move from originator countries to destination countries.

Response and Mitigation

The SANRAR of the Ministry of Emergency Situations is responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials. Also, administrative measures for legal violations are applied by the SANRAR, and the criminal persecution for crimes (Articles 226, 227 and 248 of the Criminal Code of the Republic of Azerbaijan) is carried out by the Ministry of Emergency, the Ministry of Internal Affairs and the Ministry of National Security within their competencies.

The Ministry of Emergency Situations is a national emergency response agency responsible for responding to an incident involving nuclear sources. Its Civil Defense Forces, Crisis Management Center, the SANRAR and "Isotop" Special Enterprise deal with incidents involving use of nuclear or radioactive materials. Incidents of radiation are dealt with by the Ministry of Health.

According to the Agreement between Azerbaijan and Ukraine on cooperation in preventing emergency situations and elimination of their consequences, signed on 29 August 2002, the two states cooperate in following spheres:

- development of system of joint response measures and mutual actions mechanisms for prevention of emergency situations and elimination of their consequences;
- organization of operative information exchange on mutual assistance requests and offers during emergency situations on their territories;

- provision of mutual assistance in elimination of consequences of emergency situations;
- prognostication of emergency situations and assessment of their consequences;
- information and technology exchange;
- assessment of environmental and health threats concerning possible contaminations resulting from emergency situations;
- assessment of trans-border environmental impact of emergency situations.

The Agreement between the Ministry of Emergency Situations of Azerbaijan and State Committee of Nuclear Regulation of Ukraine on cooperation in radiation safety, signed on 7 September 2006, envisages cooperation in the following directions:

- restoration of territories contaminated with radionuclide;
- combating illicit movement of radioactive materials;
- radiation safety of population and environment;
- environmental radiation monitoring.

This cooperation is implemented through information exchange.

On 4 July 2003, GUAM States concluded an agreement on cooperation in the prevention of emergency situations and elimination of their consequences. The agreement envisages cooperation of GUAM States in the spheres of application of response measures to, mitigation and elimination of, consequences of emergency situations, and exchange of experts, information, technology and assessment methodology. Article 4 of this agreement envisages coordination of activities for the rendering of assistance during emergency situations, including those of a trans-boundary nature and mutual notification on the threat of such situations. Another GUAM document is the 19 June 2007 Memorandum on mutual assistance and cooperation of GUAM States Governments in nuclear and radiation safety.

Within the framework of GUAM, Azerbaijan has implemented an Intergovernmental Agreement on cooperation in combating terrorism, organised crime and other hazardous crimes (Law No. 467-IIQ of 10 June 2003) which requires to prevent and combat criminal offences cooperatively as stipulated in Article 1. Azerbaijan has also implemented an agreement on creating a Virtual Center and an Inter-state Analytical System of GUAM on combating terrorism, organised crime, drug trafficking and other hazardous crimes (Law No. 665-IIQ dated 21 May 2004).

On 9 January 2001, the Governments of Azerbaijan and the Russian Federation signed an Agreement on prevention of emergency situations and elimination of their consequences. It envisages cooperation in the following spheres:

- planning and implementation of measures for the prevention and elimination of emergency situations;
- provision of mutual assistance during emergency situations;
- exchange of information, periodicals, video and photo materials, technology, etc;
- prognostication of emergency situations and assessment of their consequences;
- preparation of population to activities, including first aid, during emergency situations.
- other actions for prevention and elimination of emergency situations agreed between competent agencies of the two states.

Though Azerbaijan has never been involved in joint trainings on nuclear terrorism with other Black Sea region countries, it is interested in holding such trainings with other countries, except Armenia.

Except for the Republic of Armenia, with whom Azerbaijan is in the state of war, there are no political or other obstacles that inhibit liaising, exchange of information, holding of joint trainings, etc., with other countries in the region.

The Resolution 42 of the Cabinet of Ministers of 12 April 2004 requires all enterprises dealing with ionizing radiation sources and radioactive materials to develop a plan on prevention of radiation accident and elimination of its consequences (the radiation emergency plan).

The 1997 Law on Radiation Safety requires enterprises and organizations with a potential risk of radiation accident to have action plans on ensuring safety of its personnel and population from radiation accident and its consequences.

There is a need to adopt a national action plan for the nuclear and radiation emergency situations.

So far, agreements have been signed with the Black Sea region states, such as Ukraine, Russia, Georgia and Moldova on radiation safety, environmental protection and prevention of emergency situations and elimination of their consequences. There is a need to establish implementation mechanisms on the basis of these agreements.

Articles 5 and 6 of the Agreement between Azerbaijan and Ukraine on cooperation in preventing emergency situations and elimination of their consequences envisage respectively provision of assistance and forms of assistance.

Article 3 of the 9 January 2001 Agreement between the Governments of Azerbaijan and the Russian Federation on prevention of emergency situations and

elimination of their consequences envisages preparation of population to activities, including first aid, during emergency situations.

According to Article 2 of the Agreement between the Ministry of Emergency Situations of Azerbaijan and the State Committee of Nuclear Regulation of Ukraine on cooperation in radiation safety, signed on 7 September 2006, the two states cooperate in combating illicit movement of radioactive materials and control over protection and movement of radioactive materials.

Information Sharing

The Resolution 42 of the Cabinet of Ministers of 12 April 2004 requires all enterprises dealing with ionizing radiation sources and radioactive materials to timely ensure physical protection of all sources. The activity of these enterprises is regulated by the SANRAR.

Crisis Management Center has been established under the Ministry of Emergency Situations for effective management of manpower and means in the prevention of nuclear or radiation emergency situations and elimination of their consequences. The Center also accumulates, summarizes and analyzes information coming from different sources, and adopts relevant decisions in this regard. It immediately informs relevant state agencies about loss of control over radioactive sources, including theft, robbery and other illegal actions which may jeopardize neighboring states.

In order to have continuous radiological monitoring, six stations equipped with stationary detectors operate on the borders with neighboring states with potential threat of trans-boundary effect. Information gathered from these stations is transmitted via GSM to 2 monitoring centers. These centers are the Crisis Management Center of the Ministry of Emergency Situations and the Ministry of Ecology and Natural Resources.

The SANRAR duly informs the IAEA.

Mechanisms for the protection of confidentiality of any information received in confidence from another State are defined by the national legislation. Thus, the Law on State Secret regulates the existing strategy, whereas the Presidential decrees regulate the guidelines of consideration of information as confidential and establish the list of information considered as state secret.

It is possible to obtain publicly open legal documents from the newspapers which are publishing state documents and from the internet resources. These documents are:

- Law on State Secret, 7 September 2004

- Presidential Decree 249, dated 3 June 2005, on Approval of Guidelines for consideration of information as state secret
- Presidential Decree 248, dated 3 June 2005, on Approval of List of information which can be considered as state secret.

According to the legislation, the SANRAR of the Ministry of Emergency Situations has the right to cooperate within its competency with international organizations and relevant agencies from other countries, and to engage into exchange of experience. Another instance is the State Commission on the cooperation between the Republic of Azerbaijan and the IAEA, which is headed by the Deputy Prime Minister and is composed of high-level officials from a number of ministries.

At present, there is no any regional diplomatic forum that addresses nuclear security related issues.

Information exchange has been carried out pursuant to the Agreement between the Ministry of Emergency Situations of Azerbaijan and the State Committee of Nuclear Regulation of Ukraine on cooperation in radiation safety, signed on 7 September 2006. Nevertheless, systematic information and experience exchange in the sphere of nuclear security has not been the case.

BULGARIA

Accountability

State regulation of the safe use of nuclear energy and ionizing radiation, the safety of radioactive waste management and the safety of spent fuel management is implemented by the Chairman of the Nuclear Regulatory Agency (NRA). The Chairman is an independent specialized authority of the executive power and is vested with competencies. In accordance with the Act of the Safe Use of Nuclear Energy and Rules of Procedure of the NRA, the Chairman of the Agency can carry out interaction with the executive authorities in whose jurisdiction is granted regulatory and control functions in the use of nuclear energy and ionizing radiation and the safe management of radioactive waste and spent fuel and propose to the Council of Ministers measures for coordinating these activities. Such coordination is continuous and is a common expression in activities with the Ministry of Health, Ministry of Interior, Ministry of Environment and Water, Ministry of Defense, Civil Protection National Service, Customs, State Agency for metrological and technical control and others. He is vested with powers to issue, amend, modify, renew, suspend and revoke licences and permits for the safe conduct of these activities.

NRA keeps a central register of all nuclear materials on the territory of the Republic Bulgaria.

Civilian Nuclear Facilities

The Nuclear Regulatory Agency (NRA) is responsible for providing guidance and oversight concerning the security of civilian nuclear facilities.

NRA routinely liaises and/or exchanges information with Southeast European (SEE) countries and Russia; it also posts information on its web site.

Detection

The Nuclear Regulatory Agency (NRA) is responsible for the detection and monitoring of radioactive sources in Bulgaria.

NRA and the General Directorate of “Civil Protection National Service” under the Ministry of Interior are responsible for the possession and use of radiation monitoring equipment.

NRA routinely liaises and/or exchanges information with SEE countries. It has established procedures to request other countries (specifically Romania, Serbia, FYROM, Greece and Turkey) to monitor at their borders, posts and airports.

The Act of the Safe Use of Nuclear Energy, the Law on the Export Control on Arms and Dual Use Items and Technologies and the Regulation for its Implementation stipulate the system for identifying and tracing radioactive sources; it is implemented by the NRA.

NRA and the General Directorate “Civil Protection National Service” under the Ministry of Interior are responsible for issuing personal dosimeter equipment to government personnel.

Search, Confiscate, Establish Safe Control

The State Agency for National Security together with the Ministry of Interior and NRA are responsible for recovering missing radioactive sources.

In the event of an accident or malicious act involving radioactive sources, NRA and the General Directorate of “Civil Protection National Service” under the Ministry of Interior deal with the consequences while the State Agency for National Security together with the Ministry of Interior deal with the malicious persons.

Prevent Terrorist Safe Haven

State Agency for National Security and NRA conduct formal national vulnerability assessment with respect to the threat of nuclear terrorism.

The Act of the Safe Use of Nuclear Energy, the Law on the Export Control on Arms and Dual Use Items and Technologies and the Regulation for its Implementation stipulate the mechanism to notify the receiving country of Bulgaria’s intent to export radioactive sources to that country. The Ministry of Economy, Energy and Tourism is responsible for obtaining pre-approvals from these receiving countries.

Bulgaria requires that the import of nuclear materials into the country be pre-approved as stipulated in the above mentioned laws, with NRA issuing the approval.

Article 25 of the Act of the Safe Use of Nuclear Energy sets the standards for the transport of radioactive sources as the following: Any transit of nuclear material, radioactive waste and spent fuel through Bulgaria takes place under a decision of the Council of Ministers and after a permit issued by the NRA Chairman. Transit of radioactive substances through the territory of the Republic of Bulgaria shall take place after a permit issued by the NRA Chairman. A permit may be issued when (1) the applicant has obtained permission from the competent authorities of the state of origin and of the state of destination concerning the transportation, as well as consent for return of the shipment; (2) the means of transport and packaging conform to the requirements of relevant international treaties and conventions, and applicable Bulgarian legislation; and (3) the applicant has ensured the physical protection of the shipment.

The Financial Intelligence Agency under the Ministry of Finance is responsible for investigating financial crimes.

Legal and Regulatory Frameworks

The Act of the Safe Use of Nuclear Energy serves as the national legislation for the management and protection of radioactive sources (the Act can be accessed at: <http://www.bnsa.bas.bg/en/documents-en/legislation/laws/act-eng.pdf>).

The Rules of Procedure of the Nuclear Regulatory Agency control the management and protection of radioactive sources (accessible at: <http://www.bnsa.bas.bg/en/documents-en/legislation/rulesofproced/rules-of-procedure.pdf>).

NRA is the established regulatory body responsible for the safety and security of radioactive sources. Relevant information can be found at its web site: <http://www.bnsa.bas.bg/>.

Response and Mitigation

NRA and the Ministry of Interior are responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials. The General Directorate of “Civil Protection National Service” under the Ministry of Interior is responsible for responding to national emergency incidents.

The law enforcement and emergency response agencies are actively involved with similar agencies in the SEE countries under the NATO and EU auspices.

The preparation of emergency response plans is required by Chapter Eight - Emergency Planning and Preparedness of the Act of the Safe Use of Nuclear Energy, available at:

<http://www.bnsa.bas.bg/en/documents-en/legislation/laws/act-eng.pdf>

The Southeastern European Defense Ministerial (SEDM) and the Civil Protection Services of the SEE countries have established an initiative for regional emergency response. NATO and EU member states have also established emergency mechanisms.

Information Sharing

As the central authority, NRA exchanges information on possession, use, transport and/or storage of radioactive sources in Bulgaria with other countries' similar bodies. Some of this information is publicly available, some is provided upon request. Bulgaria is a party to the Agreement between the NATO member states in the Sphere of Cooperation Related to Nuclear Information.

NRA and the State Agency for National Security are responsible for promptly notifying neighboring states/the IAEA of any incidents involving radioactive sources. Bulgaria has signed agreements to protect the confidentiality of any classified information received from another state in this context (see: <http://www.dksi.bg/en/Regulatory+Framework/InterAgreements.htm>).

The Agency maintains public records in which the following acts issued by the NRA Chairman shall be recorded: 1) Licences and permits, as well as their amendment, renewal, suspension or revocation and 2) Individual licences for employment at nuclear facilities or with sources of ionising radiation.

Publicly available documents may be found at the web address of NRA: http://www.bnsa.bas.bg/en/front-page-en?set_language=en

GEORGIA

Accountability

Georgia requires persons to obtain government authorisation to possess, use, transport, and/or store radioactive sources. Such authorisation is granted by the Nuclear and Radiation Safety Service (NRSS) of the Ministry of Environment Protection and Natural Resources, and has two types: one authorisation for activity that involves/utilises radioactive sources, and one for their transit. Information regarding authorisation is not publicly available, however it can be obtained upon request.

Based on the Georgian Law on Nuclear and Radiation Safety N 1674 - Ib, Article 6, the State control for nuclear and radiation safety is performed by the Regulatory Body – the Ministry of Environment Protection and Natural Resources. Direct control within the Ministry is performed by the Nuclear and Radiation Safety Service. The text of the Georgian Law on Nuclear and Radiation Safety is reproduced below, after all answers to the Questionnaire by the Georgian experts.

Georgia routinely exchanges information with the IAEA on nuclear, but not on radioactive, materials. Based on the Georgian Law on Nuclear and Radiation Safety N 1674 - Ib, Article 8, the Ministry of Environment Protection and Natural Resources supplies the interested countries and the IAEA with information on nuclear and radiation safety, illegal movements, use or possession of nuclear materials. The information supplied by the Ministry of Environment Protection and Natural Resources should also be sent to the Georgian Ministry of Foreign Affairs. Also, the exchange of information is regulated by the Georgian Law on the State Secrets.

Georgia's national register of radioactive sources has been established with the assistance of the US government, program granted by USA NRC "RASOD". In accordance with the Law on Nuclear and Radioactive Safety, the Ministry of Environment Protection and Natural Resources is responsible for the registry of nuclear materials, radioactive substances and other ionizing radiation sources, and for monitoring accounting activities. The register's name is the Nuclear and Radiation Safety Service of the Ministry of Environmental Protection and Natural Resources of Georgia. The information is not exchanged formally with other countries and there have been no relevant requests from other countries. Generally, there seems to be lack of clearly outlined procedures on the publicity of

information. For the time being, there are no public documents describing the register. In any case, an exchange of information contained in the register is regulated by the Georgian Law on the State Secrets, taking into consideration the international principles and the interests of the country in the spheres of defence, economy, foreign affairs, state security.

Based on the Georgian Law on Nuclear and Radiation Safety N 1674 - Ib, Article 9, the Ministry of Environment Protection and Natural Resources is obliged to set up an Accounting System and the State Inventory of nuclear materials, radioactive substances and other ionizing radiation sources and monitor the accounting activities. The Accounting System falls under the Georgian Law on the State Secrets.

Civilian Nuclear Facilities

The oversight concerning the security of civilian nuclear facilities is provided by the Patrol Police Department of the Ministry of Internal Affairs (MIA) in close cooperation with the Ministry of Environment Protection and Natural Resources, while the Physical Protection Police Department of the Ministry of Internal Affairs is responsible for the physical protection of the civilian nuclear facilities. The guidelines are developed by the Nuclear and Radiation Safety Service (NRSS) and the guidance is implemented by the Ministry of Internal Affairs.

Georgia does not have any nuclear power plants or other objects that use nuclear weapons-grade materials such as uranium or plutonium. The only nuclear sites in the country are the former Mtskheta reactor, now the storage facility of all detected radioactive sources, and the Institute of Physics.

Exchange of relevant information with other countries within the region is regulated by the Georgian Law on the State Secrets.

Detection

NRSS and the Environment Protection Agency are responsible for the detection and monitoring of radioactive sources on Georgia's territory, while the specialised section of the Ministry of Internal Affairs is responsible for countering illicit trafficking. The NRSS and the Patrol Police of the MIA possess dosimeters and portable monitors at the borders (the Patrol Police replaced the Border Police in 2008 when the border policing was reformed). It is possible to liaise or exchange information with similar agencies in other countries of the region via official

central channels through the Ministry of Environment Protection and Natural Resources, or the Ministry of Foreign Affairs (MFA). The procedure is established in the Document on Operational Concept. A decision on this is taken based on each particular request.

Georgia has an established system for ensuring that radioactive sources are identifiable and traceable. The NRSS is the responsible agency for this and the registered sources are monitored by the NRSS through regular inspections. When the exploitation period of sources expires, they are transported to the Mtskheta storage facility. However, a related official document has to be elaborated.

Georgia does not issue personal dosimeter equipment to government personnel. The Technical Support Organization (TSO) partly covers the needs of the country. Other organizations bear their own responsibility for obtaining dosimeters.

Dosimeters and other detection equipment are issued to Georgia through various programmes run and funded by the IAEA and the US government. In 2008-2009, ten border crossings, two seaports, two airports and one training centre were equipped with detection equipment and overall 120-130 portable radiation monitors were issued to Georgia under the international programmes. The Georgian guards on the “green border” are equipped with portable radiation detectors. The international programmes have been effective also in terms of training (e.g. the EU programme) and provision of equipment. One needed improvement is the transfer of new technologies that may enhance detection capabilities, although Georgia is already equipped according to international standards.

All information is communicated via the protected channels to the Central Office Iori 1 and 2. It is subsequently passed over to the NRSS for analysis and elaboration of response. Information generated by radiation monitoring equipment is transmitted to the Patrol Police Headquarters or to the Ministry of Internal Affairs' Central Directorate. Although there is no mechanism to exchange information with other countries in the region, every piece of information related to nuclear weapons-grade materials is shared with IAEA and other international organisations. The circulation of radioactive materials is still mainly dealt at a national level, as officials argue that there is no reason to share information on the movement of X-ray machines or other “orphan sources” to counterpart

organisations in other countries. Thus, there is a distinction between weapons-usable and other materials.

Search, Confiscate, Establish Safe Control

In the event of a missing radioactive source NRSS is informed, and then the Ministry of Internal Affairs' special section initiates a criminal case and performs the search and investigation (in accordance with the law on nuclear and radioactive security, the local authorities of the region where the incident took place should also be informed). This special section is the only law enforcement structure entitled to search and recover missing sources. If the case is of lower significance, the NRSS is managing the situation. In general, the NRSS is responsible for organizing the search of the missing radioactive sources. However, the Law does not oblige the NRSS to participate in the search. It is the MIA that is responsible for the criminal investigation. Within the MIA, there is an Emergency Management Department which could participate in the appropriate response operation. ITDB and Enaci-s system are responsible for the exchange of information with similar government agencies in other countries. There is no regional framework through which these agencies could liaise or engage in exercises, nor are there any independent initiatives from particular countries to do so. In the event of an accident or malicious act, the government response is envisaged in Article 11 of the President's Order on Natural Disasters or Human Produced Emergency Situations. Responsibility for managing the radiological & chemical emergency situations lies with the Ministry of Environment Protection and Natural Resources. Other government agencies which could be involved in managing such situations are the NRSS, MIA and special cases – the Ministry of Defense (MD). The information on such cases is treated as confidential. The Administrative Codex, in its Article 10, specifies which kind of information could be open to the general public. Trainings are organised only under the umbrella of big power countries. In this context, joint exercises under the guidance of US government agencies, such as the Department of Homeland Security and the FBI, take place. The regional format is either Black Sea-centred (Romania, Bulgaria, Turkey, Russia, Ukraine, Moldova, Georgia, Armenia, Azerbaijan) or South Caucasus-centred (Georgia, Armenia, Azerbaijan), while the focus of training ranges from reacting to malicious acts related to radioactive sources to investigation of malicious acts and evacuation of the sources. All countries participate in these regional trainings with a few exceptions (such an exception was Russia's refusal to join a training session in Georgia immediately after the August 2008 crisis).

In the event of an accident involving a radioactive source, the procedure is the same with the one followed when a source is missing. The Ministry of Internal Affairs' specialised section contacts its counterparts from the neighbouring countries should it need help, e.g. when a citizen of a foreign country is arrested, the Prosecutor sends a request to the special agencies that are in charge of this issue in the country of interest. These agencies may search the houses of the detainees or gather additional information about them. Otherwise there is no liaison or regular exchange of information among the countries in the region.

Prevent Terrorist Safe Haven

Although Georgia does not yet conduct a formal national vulnerability assessment with respect to the threat of nuclear terrorism, informally the points of vulnerability and counter-measures to any malicious acts are regularly identified and carefully thought through according to the agencies in charge. A formal national vulnerability assessment is considered to be done in the future.

Georgia requires that the import of nuclear materials is pre-approved by the national government. The general conditions for issuing such licenses are defined in the Law on Licenses and Permissions, adopted in 2005. Paragraphs 9 and 10 of Article 24 of the same Law define the criteria necessary for receiving permission for the export/import/transit of radioactive materials. A detailed description of procedure for issuing permissions is defined by Article 11 of the Frame Law.

Only companies that possess those special licenses have the right to export and import radioactive sources, and an additional license is required for every act of export/import/transit. Issued permission includes all serial numbers and detailed description of the transported sources. Thus, legislative system allows controlling the transfer of radioactive sources both within the country and across borders.

The Ministry of Economic Development is responsible for issuing permissions for the import/transit of goods of dual-use, many of which contain radioactive materials. At the same time, the Law on Nuclear and Radioactive Safety states that the Ministry of Environment Protection and Natural Resources is responsible for issuing permission for the import/export/transit of radioactive materials. Thus, two permissions are necessary for the import/export/transit of radioactive materials in Georgia. Since the functions of the two Ministries overlap, this procedure should be eliminated.

The Law on Transit and Import of Wastes on the Territory of Georgia of 8 February 1995 bans the transit and import of toxic and radioactive wastes for the purposes of their utilisation, processing and storage. The import of any nuclear material into Georgia must be approved by NRSS, which also is responsible for notifying the receiving country of Georgia's intention to export nuclear materials. This information is also publicised to IAEA.

Georgia has ratified and follows IAEA's regulations on the transport of radioactive sources. Although there are also other regulations, such as the rules for packaging sources, there is no freight company that would implement the transportation. NRSS already has a problem with the shipping of medical equipment containing iridium to Germany where iridium sources are replaced and sent back to Georgia. NRSS considers using Azerbaijani companies for this purpose.

In case of a transit of radioactive sources through Georgia, licenses from the sender and the recipient are required, as well as the guarantees from the recipient country to receive the radioactive sources. In case of export, the guarantee from the recipient country to receive the radioactive sources is also required.

With regard to imports, each particular case requires a special permit from the Ministry of Environment Protection and Natural Resources.

With regard to exports, each particular case requires a special permit from the Ministry of Environment Protection and Natural Resources and the guarantee from the recipient country to receive the radioactive sources.

The regulation of transportation of radioactive source through the territory of Georgia is drafted according the IAEA TS-R-1.

The Ministry of Internal Affairs has a special unit for investigating financial crimes. Also, Georgia has two law enforcement units responsible for investigating financial crimes: the Financial Monitoring Service and the Ministry of Finances' Financial Police. The former was founded in 2003 in accordance with the Law on Facilitating the Prevention of Illicit Income Legalization of 6 June 2003 and the Regulation of the Financial Monitoring Service of Georgia, and its objective is to facilitate the prevention of illicit income legalisation and terrorism financing (more information available at www.fms.gov.ge), while the Financial Police is

charged with investigating financial crimes. Simultaneously, the Ministry of Internal Affairs' specialised section is responsible for investigating the financial transactions related to illicit sale and trafficking of radioactive sources, although all transactions related with this activity are cash-based and not sophisticated.

Legal and Regulatory Frameworks

Since 1998, a national legislation to control the management and protection of radioactive sources has been in place. Georgia has adopted several laws related to the control and security of nuclear and radioactive materials, such as the Law on Nuclear and Radioactive Safety of 30 October 1998, which assigns the Ministry of Environment Protection and Natural Resources as an implementer of state control in the field of nuclear and radiation safety in the country. For the purposes of organisation, direct co-ordination and management of the state control, NRSS was established within the Ministry. This law also defines the responsibilities of other state bodies: the Ministry of Economic Development (construction of nuclear and radiation facilities); the Ministry of Internal Affairs (prevention of natural and man-caused catastrophes and/or liquidation of consequences, physical protection of nuclear and radiation facilities); jointly the Ministry of Internal Affairs and the Ministry of Defense (physical protection of nuclear and radiation facilities, decontamination, etc.); and the Ministry of Labour, Health and Social Affairs (professional medical investigations). The law also defines the main principles and standards for radiation protection and sets general ways to their achievement. It bans every activity in nuclear and radiation safety fields without a license from the Ministry of Environment Protection and Natural Resources.

Other relevant legislature includes RSL-2000, adopted by the decree of the Minister of Health N.132 on safety standards of handling radioactive sources of 4 July 2000 which is similar to the IAEA BSS and establishes general requirements for the safety and security as regards ionizing radiation; the Presidential decree on Emergencies of 26 August 2008, which sets out the rules of behaviour in case of emergency and elaborates the response to the emergency involving a radioactive source, and it assigns the Emergency Management Department of the Ministry of Internal Affairs as responsible for the response; and the regulations on transportation of dangerous materials adopted by the Ministry of Economy that also concerns radioactive materials. However, some officials believe that the legislative basis regulating radioactive security is outdated and needs significant refining.

All laws are available at <http://www.parliament.ge> and are also published in a special magazine of the Ministry of Justice. The text of the Frame Law is provided at the end of these answers. The national regulations are published as a booklet, but not in English.

The Regulatory Body was established by Article 8, para. 2 of the Frame Law. Based on Art. 8, para.4 of the Frame Law, the Regulatory Body actively cooperates with regulatory bodies of other countries, particularly, of Sweden and the Czech Republic. The Ministry of Environment Protection and Natural Resources is empowered to establish direct contacts with any international or foreign organization to exchange information. The Regulatory Body has participated in the special ALARA networks to exchange information and experience in radiation protection matters. The obligations of the country as regards cases that require the prompt reporting are described in the Frame Law and in the Special Order of the President on Response to Technogenic Emergency Situations.

Information concerning the legislature is exchanged only informally. For instance, the Nuclear Regulatory Commission runs a regional project which focuses on the development of national registries. These meetings are attended by representatives of the neighbouring countries and facilitate regular contacts that are then used for liaising and information sharing.

There is no unified framework of complementary laws and regulations within the region. Officials argue that the key problem is institutional incompatibility. For instance, Azerbaijan has several structures dealing with radioactive security, but this function is not streamlined under one single organisation. Recently, a new structure was created that has all the rights, but the existing structures retained the same rights. Armenia has a regulatory commission which because of the instability is being transferred from one Ministry to another. In Georgia, NRSS cannot have direct relations with its counterparts without the Ministry of Environment Protection and Natural Resources' mediation.

According to some officials, it is too early to think about creating a unified framework because there is a lack of common topics among the countries in the region (e.g. Armenia has a nuclear power plant while Georgia does not). The only issue that can be dealt is the regulation of customs and border controls, which does not require such a framework.

Response and Mitigation

Since 2004, the Ministry of Internal Affairs is responsible for fighting against nuclear smuggling, assisted by the specialised law-enforcement agencies of the Ministry of Defence and of the Ministry of Finance. It carries out operational search, surveillance, and investigation activities to prevent the non-sanctioned import and the illegal export of radioactive materials to and from Georgia, making sure that terrorist and extremist organisations and groups do not take hold of radioactive materials.

The above functions are distributed among various agencies. The Regulatory Body can assert a non-compliance with the content of the license. The MIA is responsible for investigation of any criminal case. Use of unauthorized sources is considered a criminal case in Georgia.

The 1990s saw various attempts towards the creation of a nuclear smuggling fighting section. In 1998, the Chief of the Antiterrorist Centre of the then Ministry of State Security created such a section within the centre, which however existed only for several months until his successor decided that the existence of such a section was unnecessary. The Ministry of Internal Affairs' specialised section was founded in 2004, and its only function is to fight against the illegal circulation of nuclear materials by means of operational, surveillance and special activities. It carries out its function in close cooperation with other structural units of the Ministry of Internal Affairs and NRSS. In the event of an accident involving a radioactive source that occurs on military territory, the Ministry of Defence's military police is entitled to investigate.

The Ministry of Internal Affairs' Emergency Management Department is responsible for responding to an incident involving radioactive materials, since the department's rescue teams are trained in handling this kind of incidents. MIA has a special unit to address any type of emergency situation, including a nuclear and radiation emergency.

There is no formal mechanism of information sharing between the law enforcement and the emergency response agencies, since their representatives see no need for this. Any exchange of information takes place via the Ministry of Foreign Affairs. As mentioned above, if a foreign national is involved in a trafficking case, Georgia's agencies then request help from abroad (in most cases these requests are met, except for Russia); if the case does not involve foreign

nationals, it is considered as a matter of national security and information is not shared. Although informal links between the law enforcement agencies of Georgia, Turkey, and Azerbaijan are in place, analysts argue that those links do not facilitate sensitive information sharing.

The Emergency Response Plan is one of the documents required for issuing the license. Although there is no formal regional capacity of conducting emergency response or any formal legal mechanism through which one country within the region provides support to the other, officials argue that, in practice, support will be delivered if needed. Similarly, there is no regional mechanism of addressing a missing radioactive source, again due to mutual suspicion among the law enforcement bodies, a lack of general cooperation, and the absence of any formal or informal links.

Information Sharing

The Ministry of Internal Affairs is the central authority and international point of contact that has responsibility for physical protection of nuclear sources. The Ministry of Internal Affairs' protection police are responsible for the physical protection of nuclear sources. In the event of an accidental gain or loss, theft, robbery or illicit traffic of radioactive materials, local authorities inform IAEA. If the accident also involves a neighboring state, the authorities in this state are also informed. In accordance with the Law on State Secrets, information received from other states is confidential.

Georgia uses the ENACE system to provide and receive information on any incident related to any malicious act involving radioactive sources. The information is treated as confidential by the requirements of the Georgian Law on the State Secrets, based on which the information can be regarded as secret.

There is no formal mechanism or agency designated to promote cooperation with other countries, nor a regional diplomatic forum that addresses the nuclear security issues. That means that the instances of cooperation are scant and non-systematic. Collaboration with Russia is hindered by general political issues, while cooperation with Armenia is also difficult due to mutual distrust. Simultaneously, cooperation with allies is not easy, either, as Turkish agencies rarely share information with Georgia. Turkish agents prefer to work independently and do not trust their Georgian colleagues as they are afraid of potential leaks. Georgian officials claim that 95% of the Turkish citizens looking for radioactive materials in

Georgia are police agents or undercover officers. Nevertheless, an example of cooperation is the 2009 operation in Ukraine, the outcome of which was the arrest of an organised crime group involved in illicit radioactive materials trafficking.

Attachment

GEORGIAN LAW On Nuclear and Radiation Safety

Chapter I. General Provisions

Article 1. Aim of the Law

The aim of this Law is to protect man and the environment from the harmful effects of ionizing radiation in accordance with the obligations set forth in the Constitution of Georgia, international treaties, agreements and Georgian legislation.

Article 2. Scope of the Law

This Law regulates legal relations between State institutions and physical and legal persons in connection with the safety of nuclear and radiation activities.

Article 3. Georgian legislation in the nuclear and radiation safety field

Georgian legislation in the nuclear and radiation safety field consists of the Constitution of Georgia, international treaties and agreements signed by Georgia, the Georgian Law "On Protection of the Environment", the present Law and other regulatory instruments.

Article 4. Definition of terms

The terms used in this Law have the following meaning:

- (a) **Nuclear and radiation safety** - the set of measures which ensure safe working conditions at nuclear and radiation facilities and in nuclear and radiation activities, excluding radioactive contamination of the environment;
- (b) **Nuclear and radiation activities (24.07.06):**
 - b.a. Construction, ownership and operation of nuclear and radiation facilities;
 - b.b. Acquisition, transfer of nuclear and radiation facilities, nuclear material, radioactive substances;
 - b.c. Searching, recovering (including radiationally contaminated territories), processing, storing of nuclear materials, radioactive substances and radioactive waste;
 - b.d. Transport of nuclear materials, radioactive substances and radioactive waste;
 - b.e. Scientific research, control, monitoring, accounting, inspection, appraisal and expertise activities related to nuclear and radiation facilities, nuclear material, radioactive substances, other sources of ionizing radiation and radioactive waste;

- b.f. Export, import and transit of nuclear and radiation facilities, nuclear material, radioactive substances and radioactive waste, minerals from which it would be practically possible to produce nuclear material, anything which is made of nuclear material or radioactive substances, or contains them as a component part, and nuclear technologies and "know-how";
- b.g. Use of radiation generating devices not including radiation sources for medical application;
- b.h. Use of radiation generating devices not including radiation sources for industrial application;
- b.i. Use of nuclear materials and radiation sources for industrial application;
- b.j Use of radiation sources for medical application;
- (c) **Nuclear facility** - an enterprise, experimental research facility or facility of any other type, installation or device whose purpose is the production, processing and use of nuclear material (including nuclear fuel);
- (d) **Natural radiation background** - the radiation dose received from cosmic and natural radiation from radionuclides naturally present in soil, water, air, other elements of the biosphere, food products, the human body and other living organisms;
- (e) **Supervise area** - an area not designated as a controlled area but for which occupational exposure conditions are kept under review even though specific protective measures and safety provisions are not normally needed;
- (f) **Effective dose** - a quantity of ionizing radiation which indicates the risk of possible negative (including long-term) effects of irradiation of the human body and individual organs, taking into account their radiosensitivity;
- (g) **License or/and permission owner** - a physical or legal person (irrespective of the type of property involved or the organizational and legal system) who has received a license or/and permission from an authorized State body under this Law and Law "On Licenses and Permissions"(24.07.06);
- (h) **Ionizing radiation** - radiation generated by nuclear transformations or slowing-down of charged particles in a substance and the interaction of which with a physical or biological body gives rise to ions of different sign;
- (i) **Worker** - a physical person, who works directly with an ionizing radiation source or, as a result of his or her conditions of work, is in the zone of influence of such a source;
- (j) **Abolished**
- (k) **Nuclear accident** - loss of control of an ionizing radiation source as a result of faults in the source, incorrect action on the part of a worker, natural disasters or

other causes which might give rise or have given rise to exposure of the public in excess of the established norms or radioactive contamination of the environment, and uncontrolled dispersal in the environment of nuclear material, radioactive substances and radioactive waste, as a result of which the environmental radiation background level might exceed or has already exceeded the annual dose limit;

- (l) **Radiation protection** - the set of technical and organizational measures, and regulatory legislation in the field of nuclear and radiation safety, aimed at protecting the health and life of the public and future generations from harmful ionizing radiation;
- (m) **Radiation facility** - a production, experimental research or medical facility, or a facility, installation, equipment item or instrument of any other type which produces or uses radioactive substances and other ionizing radiation sources, or whose purpose is the management of radioactive waste - collection, storage, processing, transport and disposal;
- (n) **Radioactive waste** - substances of whatever physical state generated by the operation of nuclear and radiation facilities, and material, equipment, installations, products, biological objects, reprocessed nuclear fuel, damaged and spent ionizing radiation sources whose radionuclide content exceeds the level laid down by the regulatory standards, which cannot be used at the current level of scientific and technical development, and which have no consumer value;
- (o) **Radioactive waste management** - all types of activity related to accounting for, collection, pre-treatment (rendering less hazardous), processing and storage of radioactive waste, whose aim is to limit as far as possible the dispersal of radioactive waste in the environment and to isolate reliably elements of the biosphere from such waste;
- (p) **Radioactive waste processing** - technological operations involved in the pre-treatment, transport and storage of waste which result in a reduction of the volume of radioactive waste and a change in its physical state or physical and chemical properties;
- (q) **Radioactive waste processing facility** - a facility which receives, accounts for, retreats, processes, transports and prepares for storage radioactive waste, and which has a radioactive waste storage area in the form of a special complex of installations and equipment for storing radioactive waste;
- (r) **Controlled area** – any area in which specific protection measures and safety provisions are required for controlling normal exposures or preventing the spread of contamination during normal working conditions and preventing or limiting the extent or potential exposures (24.07.06);
- (s) **Artificially altered radiation background** - a natural radiation background which has changed as a result of human activities;
- (t) **Physical protection** - a set of technical and organizational measures whose aim is to prevent unauthorized access to nuclear and radiation facilities, nuclear material, radioactive substances, other ionizing radiation sources, radioactive waste, nuclear technology and "know-how", and associated technical and other documentation;
- (u) **Sievert** - a unit of effective dose indicating the amount of radiation energy absorbed by the human body, taking into account its radiosensitivity;

- (v) **Annual dose limit** - effective human radiation dose which must not be exceeded in one year;
- w) **Qualified expert** – physical person whose knowledge and practical experience gives him the capability to make conclusion (24.06.07);
- x) **Occupational exposure** – all exposures of workers incurred in the course of their work, with the exception of exposures excluded from the standards and exposures from practices or sources exempted by the standards (24/07.06).

Article 5. Basic principles of nuclear and radiation safety

The basic principles of nuclear and radiation safety are as follows:

- (a) **Principle of the use of nuclear energy for peaceful purposes** - nuclear energy, nuclear and radiation facilities, nuclear material, radioactive substances and other ionizing radiation sources shall only be used for peaceful purposes. Consequently, the following activities are prohibited in Georgia:
 - a.a. Export, import, transit and re-export of nuclear weapons or other nuclear explosive devices, and their production, study, testing and possession;
 - a.b. Construction and operation of nuclear facilities with a capacity of over 5 MW;
 - a.c. Import of radioactive waste for pretreatment, processing, storage, disposal or any other purposes;
- (b) **Principle of the safe use of nuclear energy, nuclear material and other ionizing radiation sources** - the use of nuclear energy, nuclear material and other ionizing radiation sources must not have any negative effect on public health or cause damage to the environment and property;
- (c) **Principle of compensation for damage** - the owner of license or/and permission must provide compensation for damage caused to the health and property of people, and to the environment, as provided for in the Georgian legislation (24.06.07);
- (d) **Principle of physical protection** - provision must be made for physical protection of nuclear material, radioactive substances, "know-how" and related documentation, in order to prevent their dissemination, theft, damage, acts of sabotage and terrorist attacks, unauthorized transport and damage during use, storage and transport, as well as attempts to gain control of nuclear and radiation facilities, nuclear material, radioactive substances and other ionizing radiation sources and misuse thereof;
- (e) **Principle of preliminary preparation and constant preparedness** - emergency action plans must be in place, i.e. preliminary planning of essential actions in the event of an emergency situation and implementation of pre-planned measures to prevent or mitigate radiation damage during possible nuclear accidents and oilier emergency situations;
- (f) **Principle of accessibility of information** - information on radioactive contamination of the environment, accidents or other emergency situations must be open and accessible to the public;

- (g) **Principle of standardization (limitation)** - the annual dose limit for radioactive exposure of the public must not be exceeded;
- (h) **Principle of justification** - no nuclear activity is allowed where the benefit to mankind and society does not exceed the presumed maximum damage caused by the activity;
- (i) **Principle of optimization** - the number of persons exposed and personal radiation doses must be kept as low as possible, taking into account economic and social factors;
- (j) **Principle of effectiveness** - measures following a radiation accident must yield a positive result which exceeds the damage caused. Clean-up activities following a radiation accident must be carried out in such a way and on such a scale that the positive effect arising from the reduction in the ionizing radiation dose, disregarding any harm caused by the above-mentioned activities (including social measures), is as great as possible;
- (k) **Principle of international co-operation** - nuclear and radiation-related activities in Georgia are one of the areas where there is scope for international co-operation;
- (l) **Principle of the minimization of the negative effect of radioactive waste**
 - a. Priority will be given to modern technologies aimed at minimizing radioactive waste;
 - b. Accumulation and spread of radioactive waste in the environment must be avoided;
 - c. Radioactive waste must be isolated from parts of the environment which are of vital importance to mankind;
 - d. Radioactive waste must be stored in accordance with the established requirements as the final stage of any nuclear and radiation-related activity generating radioactive waste;
 - e. Any gaseous radioactive waste discharged into the environment must be subjected to preliminary cleaning or the concentration of radionuclides in it must be diluted in order to bring it down to the permissible levels laid down in the relevant regulatory standards;
 - f. Radioactive waste, whatever its physical state, and installations, equipment and material contaminated above the permissible level must not be dumped in rivers, ponds, lakes, marshes, seas and other natural or artificial water systems.

Chapter II. State Regulation of Nuclear and Radiation-related Activities

Article 6. Powers of State bodies in the nuclear and radiation safety field

- 1. The competence of the principal State bodies of Georgia and the Autonomous Republics of Abkhazia and Adjara, and of local self-government and government bodies in the nuclear and radiation safety field is laid down in the Constitution of Georgia, this Law and other regulatory instruments.

2. The competence of the principal State bodies of Georgia in the nuclear and radiation safety field includes the following:
 - (a) Elaboration and adoption (promulgation) of Georgian laws and associated regulatory instruments, and monitoring of their implementation;
 - (b) Approval of State programmes, and supervision and control of their implementation;
 - (c) Setting up of a unified system of State control in the nuclear and radiation safety field;
 - (d) Specifying of the types of activity subject to licensing or/and issuing of permissions (24.006.07);
 - (e) Specifying of types of compensation, regulations for establishing the extent of such compensation and indemnification for increased risk of harm to public health and property as a result of the harmful effects of ionizing radiation and nuclear accidents;
 - (f) Establishment of conditions for vitally important activities and emergency living arrangements in areas contaminated by radionuclides;
 - (g) Control of the provision of assistance to people suffering from the harmful effects of ionizing radiation;
 - (h) Establishment of State standards, keeping of State statistics and setting up of an environmental surveillance system (environmental monitoring);
 - (i) International co-operation in the nuclear and radiation safety field, fulfillment of obligations under international treaties and agreements entered into by Georgia;
 - (j) Taking of decisions on the construction of nuclear and radiation facilities.
3. The competence of the Autonomous Republics and local self-government and government bodies in the nuclear and radiation safety field include the following:
 - (a) Assistance with the implementation of State policy;
 - (b) Participation in the implementation of State programmes and monitoring of such programmes, elaboration and implementation of local programmes;
 - (c) Provision of assistance to people suffering from the harmful effects of ionizing radiation;
 - (d) Participation, within the limits of their competence, in the taking of decisions on the siting of nuclear and radiation facilities.

Article 7. Competent State bodies in the nuclear and radiation safety field

The competent State bodies in the nuclear and radiation safety field are as follows:

- (a) The Ministry of Environment Protection and Natural Resources of Georgia - with regard to State control of protection of the environment and natural resources from the effects of radiation, ecological safety, state control of nuclear and radiation activities, monitoring of radiation background, planning, control and

- approving of emergency actions;
- (b) The Ministry of Economical Development – with regard of construction of nuclear and radiation facilities;
- (c) The Ministry of Internal Affairs of Georgia - with regard to the prevention of natural and man-caused catastrophes and/or liquidation of their consequences, physical protection of nuclear and radiation facilities;
- (d) The Ministry of Internal Affairs and the Ministry of Defense of Georgia - with regard to physical protection of nuclear and radiation facilities and, in the event of a nuclear accident by agreement with the Ministry of Environment Protection and Natural Resources, with regard to decontamination and any other area specified by legislation;
- (e) The Ministry of Labour, Health and Social Affairs – with regard to professional medical investigations (24.06.07).

Article 8. State control in the nuclear and radiation safety field

1. State control in the nuclear and radiation safety field is implemented by the Ministry of Environment Protection and Natural Resources of Georgia (hereinafter referred to as the Ministry).
2. For the purposes of organization, direct co-ordination and management of State control, a nuclear and radiation safety service is to be set up within the Ministry.
3. The Ministry is responsible for setting up a database on the ecological state of the country.
4. The Ministry will supply interested countries and International Atomic Energy Agency (IAEA) with information on nuclear and radiation safety; illegal movement, use or posses of nuclear materials or intention to posses nuclear material (24.07.06).
5. The information supplied by the Ministry should be sent also to Georgian Ministry of Foreign Affairs (24.07.06).

Article 9. Obligations of the Ministry in the nuclear and radiation safety field

The Ministry is obliged to do the following:

- (a) Implement regulatory instruments and international treaties and agreements signed by Georgia in the nuclear and radiation safety field;
- (b) Organize State regulation and control on the nuclear and radiation safety field;
- (c) Control and supervise the implementation of State programmes in the nuclear and radiation safely field;
- (d) Supervise physical protection systems;
- (e) Set up an accounting system and a State inventory of nuclear material, radioactive substances and other ionizing radiation sources, and monitor accounting activities;
- (f) Elaborate and promulgate regulatory instruments relating to non-proliferation of nuclear weapons and material and lo nuclear and radiation safety;

- (g) Elaborate, and submit to the President of Georgia for approval, emergency response plans for a nuclear accident;
- (h) Approve central and local emergency action plans;
- (i) In the event of a nuclear accident, submit proposals to the President of Georgia regarding the declaration or countermanding of an emergency ecological situation or ecological disaster zones;
- (j) Issue and revoke licenses and permissions for nuclear and radiation activities according the rules set by law “On License and Permissions” (24.07.06);
- (k) Within its fields of competence, maintain relations with the relevant departments of international organizations and other States;
- (l) Monitor periodically compliance of the operating conditions of issued licenses and permissions. For this purposes Nuclear and Radiation safety Service conducts inspection corresponded inspections (24.07.06);
- (m) Elaborate and approve regulations for the compilation of a radioactive waste register:
- (n) Elaborate and approve regulations for the transport of nuclear material, radioactive substances and other ionizing radiation sources within Georgia;
- (o) Approve the boundaries of the supervised area and controlled area (24.07.06);
- (p) In connection with the construction of nuclear and radiation facilities, arrange for the receipt, processing, storage and analysis of information, topographical plans, geological and prospecting data, borehole parameters, process control and environmental monitoring materials, and routine information accumulated during operation;
- (q) Organize monitoring of the radiation status of the environment (30.06.00).

Article 10. Supervisory functions of the Ministry

For the purposes of supervision of nuclear and radiation-related activities in accordance with Georgian legislation, the Ministry has the right to:

- (a) Inspect and monitor nuclear and radiation activities, check any technical, regulatory and other documentation, and carry out any measurements required for supervision;
- (b) Request any worker to provide necessary documentation and submit a report in the customary format and within a specified period of time.

Chapter III. System for licensing and permissions of nuclear and radiation activities (24.07.06)

Article 11. Licensing system for nuclear and radiation activities

1. The license issued by the Ministry according to requirements of Law “On Licenses and Permissions” is the only official document confirming the legality of any nuclear or radiation activity and define rights of licensee to carry out one or several types of activity pointed out in second paragraph of this article.
2. The following types of nuclear and radiation activities should be licensed:
 - (a) Operation of nuclear and radiation facilities;

- (b) Searching, recovering (including radiationally contaminated territories), processing, storing of nuclear materials, radioactive substances and radioactive waste;
 - (c) Transport of nuclear materials, radioactive substances and radioactive waste;
 - (d) Scientific research and expertise activities related to ionizing radiation sources;
 - (e) Use of radiation generating devices not including radiation sources for medical application;
 - (f) Use of radiation generating devices not including radiation sources for industrial application;
 - (g) Use of nuclear materials and radiation sources for industrial application;
 - (h) Use of radiation sources for medical application.
3. License applicant should appeal to Ministry by special notification. Reviewing the notification is carrying out according to requirements of Law “On Licenses and Permissions” (Art. 9).
4. Besides the documents considered by Law “On Licenses and Permissions”, license applicant should submit as the following documents:
- (a) Description of address and place where should be carried out license activity;
 - (b) Description of concrete type of activity;
 - (c) The order (copy) to assign radiation protection officer together with documents proved qualification of this person;
 - (d) The list of persons should be worked with ionization radiation sources together with documents proved their health condition and qualification;
 - (e) Conclusion of qualified expert;
 - (f) Data for radiation measured devices and their calibrations;
 - (g) Emergency situation management plan;
 - (h) Description of physical protection;
 - (i) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(a) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - i.a. Scheme of facility, its equipping;
 - i.b. Description of the territory of nuclear and radiation safety view;
 - i.c. Data for proposed to use radiation sources (radionuclide type, form, activity, serial number, chemical-physical form, placement into facility);
 - i.d. Data for proposed to use radiation generators (producer, model, serial number, date of production, type of use, placement into facility, power);
 - i.e. Plan-schedule of the possible reconstruction of the facility;
 - i.f. Programme of monitoring of workplaces and doses;
 - i.g. Programme for withdrawal of facility from operation;

- (j) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(b) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - j.a. Plan of placement for premises;
 - j.b. Radiation Protection Programme;
 - j.c. Working rules;
 - j.d. Constraint doses;
 - j.e. Handling with generated radioactive waste;
 - j.f. Transport of radioactive sources;
- (k) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(c) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - k.a. Instruction for transport of radioactive sources;
 - k.b. Description of transport mean;
 - k.c. Description of containers;
 - k.d. Radiation protection programme;
- (l) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(d) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - l.a. Data of proposed to use research apparatuses (placement in facility, producer, date of produce, working principle);
 - l.b. Radiation protection programme;
 - l.c. Data for proposed to use radiation sources (radionuclide type, form, activity, serial number, chemical-physical form, placement into facility);
 - l.e. Data for proposed to use radiation generators (producer, model, serial number, date of production, type of use, placement into facility, power);
- (m) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(e) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - m.a. Data for proposed to use radiation generators (producer, model, serial number, date of production, type of use, placement into facility, power);
 - m.b. Technical passport of X-ray cabinet;
 - m.c. Calculation of radiation protection parameters;
 - m.d. Radiation protection programme;
 - m.e. Description of ventilation system;
- (n) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(f) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:

- n.a. Data for proposed to use radiation generators (producer, model, serial number, date of production, type of use, placement into facility, power);
 - n.b. Working rules;
 - n.c. Programme of monitoring of workplaces and doses;
 - (o) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(g) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - o.a. Data for proposed to use radiation sources (radionuclide type, form, activity, serial number, chemical-physical form, placement into facility);
 - o.b. Description of the territory of nuclear and radiation safety view;
 - o.c. Programme of monitoring of workplaces and doses;
 - o.d. Working rules;
 - o.e. Transport of radioactive sources;
 - o.f. Description of storing of radioactive sources;
 - o.g. In case of activity of foreign organization in Georgia the following additional documents must be submitted:
 - o.g.a Copy of contract for organization activity in Georgia;
 - o.g.b. Guarantee to resent back all imported radioactive sources;
 - o.g.c. Schedule for import-export radioactive sources;
 - (p) In case of activity considered by Law “On Nuclear and Radiation Safety” art. 11, para.2, p.(h) besides of documents pointed out in p. (a)- (h) of this para.4, the following documents should be also submitted:
 - p.a. Data for proposed to use radiation sources (radionuclide type, form, activity, serial number, chemical-physical form, placement into facility);
 - p.b. Data for quantities of radionuclides used for medical application;
 - p.c. Programme of monitoring of workplaces and doses;
 - p.d. Transport of radioactive sources;
 - p.e. Description of storing of radioactive sources;
 - p.f. Description of radionuclides release into environment;
 - p.g. Working rules;
 - p.h. Analyze of radionuclides accumulation into environment.
5. To check license applicant the special inspection should be carried out.
 6. The Ministry takes decision to issue license according to para.10 of Law “On Licenses and Permissions”
 7. The right to refuse license issuing is defined by Law “On Licenses and Permissions”
 8. The rights of the Ministry to issue licenses is defined by para.13 of Law “On

Licenses and Permissions”

9. The form of license should be defined by normative act issued by the Ministry.
10. All license data (including the data for transport) besides the confidential information can not be state secret and according to art.8, para.4 of this Law must be used for information bank.
11. In case of lost license form para. 15 of Law “On Licenses and Permissions” should be used.
12. License has not time restriction.
13. Control on completion of license’s requirements is carried out by Nuclear and Radiation Safety of Ministry.
14. The rules for control and abolish of license is defined by Law “On Licenses and Permissions”.
15. The Ministry of Internal Affairs participates in process of license’s issuing as another organization.

Article 11¹. System of Permissions for Nuclear and Radiation Activity

1. The types of nuclear and radiation activity needing to issue permissions are defined by art. 24, para. 9 and 10 of Law “On Licenses and Permissions”.
2. Permission applicant should submit to Ministry special notification to describe detail his activity. The review of notification is carried out according to para. 25 of Law “On Licenses and Permissions”.
3. Permission applicant besides the document pointed out in para.2 of this article should submit to Ministry as the following documents:
 - (a) In case of activity considered by art.24, para.9 of Law “On Licenses and Permissions”:
 - a.a. Copy of licenses of seller and buyer;
 - a.b. Data for nuclear and radiation materials (serial number; activity, for, chemical-physical characteristics, type of using the source);
 - a.c. Copy of license of nuclear and radiation material transporter;
 - a.d. Description of storing of nuclear and radiation materials;
 - (b) In case of activity considered by art.24, para.10 of Law “On Licenses and Permissions”:
 - b.a. Copy of license of receiver of nuclear and radiation materials in Georgia;
 - b.b. Data for nuclear and radiation materials (serial number; activity, for, chemical-physical characteristics, type of using the source);
 - b.c. Copy of license of nuclear and radiation material transporter;
 - b.d. In case of transit, contract (copy) between sender and receiver of nuclear and radiation materials, giving guarantee that material is not waste and can not be stopped at Georgian territory.
4. The Ministry takes decision to issue license according to para.26 of Law “On Licenses and Permissions”.

5. The right to refuse permissions is defined by Law “On Licenses and Permissions”.
6. The rights of Ministry to issue permissions are defined by Law “On Licenses and Permissions”.
7. The form of permission should be defined by normative act issued by Ministry.
8. All permission data besides the confidential information can not be state secret and according to art.8, para.4 of this Law must be used for information bank.
9. In case of lost permission form para. 31 of Law “On Licenses and Permissions” should be used.
10. Permission is valid one case only. Validation of permission is 3 months.
11. Control on completion of permission’s requirements is carried out by Nuclear and Radiation Safety of Ministry.
12. The rules for control and abolish of permission is defined by Law “On Licenses and Permissions”.

Chapter IV. Safety requirements for nuclear and radiation-related activities

Article 12. Safety requirements for nuclear and radiation-related activities

1. The competent State authorities shall establish nuclear and radiation safety regulations, the principles of which shall be defined by the present Law, governing nuclear and radiation-related activities, including the planning, design, construction and operation of any nuclear or radiation facility, and scientific research work.
2. The procedures for the elaboration, agreement and approval of the regulations referred to in Article 12.1, for ensuring that they are complied with, and also for determining responsibility in the event of any non-compliance shall be established by Georgian legislation.

Article 13. Design, construction, siting and reconstruction of nuclear and radiation facilities

1. A feasibility study and a State expert appraisal of the safety of projects are obligatory for the construction or reconstruction of any nuclear or radiation facility.
2. The feasibility study for the siting and construction of nuclear and radiation facilities must include safety measures.

Article 14. Commissioning of nuclear and radiation facilities

1. Reconstructed or newly constructed nuclear or radiation facilities may only be commissioned as long as the work done at the facility complies with the provisions of the present Law and other legislative instruments of Georgia.
2. A nuclear or radiation facility shall not be commissioned if its workers have not received appropriate training.
3. The license and permission owner for radiation protection responsible to elaborate an emergency plan. For this purpose, prior to commissioning of the

facilities, the following must be prepared (24.07.06):

- (a) A classification of the types (categories) of potential nuclear (radiation) accidents, with a prediction of their likely consequences and changes in the radiation situation;
- (b) Criteria for decision-making in the event of a nuclear accident;
- (c) A plan of measures for radiation protection of workers and the public in the case of a nuclear accident and its aftermath, which must be agreed upon in advance with the Ministry and local self-government and government bodies;
- (d) Technical facilities for the rapid transmission of information;
- (e) The usual first-aid arrangements for facilities of this type (24.07.06).

Article 15. Suspension of operation, shutdown and mothballing of nuclear and radiation facilities

- 1. The suspension of operation, shutdown and mothballing of nuclear and radiation facilities shall be carried out in accordance with the provisions of the present Law.
- 2. In the event of the detection of violations of the health standards and regulations, hygiene standards, nuclear and radiation safety regulations, State standards, construction standards and regulations, and labour protection regulations laid down in the present Law and in the Georgian legislation, the Ministry has the right, acting on the basis of submissions by the competent State bodies indicated in the present Law or acting independently, to suspend the operation of a nuclear facility until the violations have been fully remedied, or if this is not possible, to shut down or mothball the facility.
- 3. A court appeal may be filed against the decision to suspend operation of or to shut down a nuclear or radiation facility.

Article 16. Obligation of the licensee to ensure safety during the operation of nuclear and radiation facilities

During operation of a nuclear or radiation facility, the licensee must:

- (a) Create safe working conditions for the personnel that meet the requirements established for this category of work;
- (b) Prohibit or suspend the use of facilities, machinery, equipment and instruments lacking the appropriate certification;
- (c) Ensure physical protection in accordance with the principles and procedures established by the present Law;
- (d) Ensure the establishment and implementation of plant-internal monitoring, agreed with the Ministry, in compliance with the provisions of the present Law;
- (e) Prepare a prognosis of changes in the radiation situation in the event of a nuclear accident;
- (f) Participate in the localization and management of a nuclear accident in accordance with a prepared response plan and making full use of his own

resources;

- (g) Ensure that there is a system for notification (communication) in the event of a nuclear accident so that the competent State authorities and the local self-government and government bodies can be informed immediately;
- (h) Ensure that workers are informed about possible occupational diseases and provide medical examinations of the type and frequency established for citizens of this category;
- (i) Prepare radioactive waste for transportation and dispatch it to the radioactive waste storage (24.07.06);
- (j) Make provisions for the pre-treatment (rendering less hazardous) of radioactive waste if this is technically feasible.

Article 17. Evaluation of a nuclear accident

A nuclear accident shall be evaluated in accordance with the following criteria:

- (a) **Anomaly** - an event going beyond the facility's authorized operating regime;
- (b) **Incident** - an equipment malfunction resulting in the significant release of radioactivity and the overexposure of workers;
- (c) **Serious incident** - a release of radioactivity that results in a dose causing significant damage to the health of workers. Off-site doses to the public and environment are within the established annual dose limit;
- (d) **Accident without significant off-site risk** - significant damage to the core of the facility and exposure of workers to fatal doses. Off-site doses to the public and the environment are within the established annual dose limit;
- (e) **Accident with off-site risk** - severe damage to the core of the facility. Off-site, **there is a** limited release of radioactivity requiring partial implementation of counter-measures included in emergency plans;
- (f) **Serious accident** - the uncontrolled release of radioactive substances into the environment requiring full implementation of countermeasures included in emergency plans;
- (g) **Major accident (disaster)** - the uncontrolled release of a large volume of radioactive substances into the environment, with exposure of the public and the environment to doses far exceeding the established annual dose limit.

Article 18. Responsibilities of the licensee for ensuring radiation protection in the event of a nuclear accident

In the event of a nuclear accident, the licensee must:

- (a) Take measures to protect workers and the public from the accident and its consequences;
- (b) Submit timely, objective information to the Ministry and the local self-government and government bodies in the territories where there is likely to be an increase in the radiation level;
- (c) Carry out measures to provide medical assistance to those affected by the

- accident;
- (d) Localize the radiation focus and minimize the release of radioactive substances into the environment;
 - (e) Prepare a prognosis of the development of the accident and the change in the radiation situation;
 - (f) Ensure that, after the accident has been brought under control, the necessary measures are implemented to normalize the radiation situation;
 - (g) Provide compensation, in accordance with the established procedures, for damage to human health, property and the environment caused by the accident.

Article 19. State of emergency during a nuclear accident and ecological disaster

- 1. The nuclear accidents referred to in Article 17(f) and (g) of the present Law constitute an ecological disaster. In such a case, the President of Georgia shall declare a state of emergency for the whole of Georgia or part of it.
- 2. The state of emergency regime shall be defined by Georgian legislation.
- 3. The territory where a state of emergency has been established by decision of the President of Georgia shall be declared an ecological emergency or ecological disaster zone.
- 4. The legal regime applying to the emergency ecological and ecological disaster zones shall be established by Georgian legislation, international treaties and agreements signed by Georgia.

Article 20. Investigation of nuclear accidents

- 1. Nuclear accidents, whatever their classification, must be investigated in order to establish the causes and to prevent a recurrence.
- 2. The investigation of nuclear accidents shall be conducted on the basis of legal regulatory instruments issued by the Ministry.
- 3. The Ministry must immediately report any nuclear accident to the President of Georgia and the IAEA, as well as to other countries liable to be affected.

Article 21. State accounting and control in respect of nuclear and radiation facilities, nuclear material, radioactive substances and waste

- 1. Nuclear and radiation facilities, nuclear material, radioactive substances and waste, other sources of ionizing radiation, the places where they are located, the conditions of storage and operation, transfer, utilization, export and import shall be subject to State accounting and control.
- 2. The license or permission owner shall carry out accounting in respect of nuclear and radiation facilities, nuclear material, radioactive substances and waste, and other sources of ionizing radiation in terms of their physical state, quantity, specific and total activity, content of nuclides and type of radiation (24.07.06).
- 3. The licensee shall, once a year, take an inventory of the nuclear and radiation facilities, nuclear material, radioactive substances and waste and these data

shall be submitted to the Ministry at the end of each financial year.

4. On the basis of the inventory of nuclear and radiation facilities, nuclear material, radioactive substances and waste, and other ionizing radiation sources, a State register shall be compiled containing systematized data on their characteristics, conditions of storage and operation, transfer, utilization, export and import, and storage and disposal locations.
5. The State register shall be kept for an unlimited period.
6. The procedure for compiling the State register and the Regulations for Inventory Taking shall be elaborated and approved by the Ministry.
7. The licensee shall be responsible for the completeness, objectivity and timeliness of the accounting process.

Article 22. Abolished

Article 23. Qualifications of nuclear and radiation facility managers and workers

1. Appropriate qualification requirements shall be established for nuclear and radiation facility managers and workers, and a medical certificate issued by the Georgian Ministry of Labour, Health and Social Affairs.
2. The managers of nuclear and radiation facilities shall be responsible for providing initial and regular instruction to workers, as well as training and advanced training to improve their qualifications in the field of nuclear and radiation safety.

Article 24. Ecological insurance

1. Ecological insurance must be taken out for nuclear and radiation activities.
2. The money paid out under an ecological insurance policy shall be used for mitigating the consequences of nuclear accidents and preventing a recurrence.
3. The legal regime for ecological insurance shall be established by Georgian legislation.

Article 25. Environmental monitoring in the field of nuclear and radiation safety

1. The environmental monitoring system in the field of nuclear and radiation safety shall cover the whole process of observation, analysis of information obtained and forecasts based thereon.
2. Monitoring of nuclear and radiation facilities (including accounting and control of the data from the monitoring conducted by the nuclear and radiation facilities themselves) shall be carried out by the Ministry.
3. Monitoring of natural radiation background is carried out by Department of Hydrometeorology (30.06.00).
4. The license and permission owner shall carry out self-monitoring.
5. Self-monitoring for nuclear and radiation safety field shall include:

- (a) The characteristics of environmental radiation contamination;
- (b) An analysis of the annual radiation dose both during normal operation of a facility and during nuclear accidents;
- (c) Keeping a record of members of the public and workers that have received a radiation dose exceeding the annual dose limit, with structuring of the doses received;
- (d) The full characteristics of the radiation situation existing at the workplaces.

Article 26. Transport of nuclear material, radioactive substances and other ionizing radiation sources

1. The safe transport of nuclear material, radioactive substances and other ionizing radiation sources is an extremely important part of nuclear and radiation safety.
2. Transport shall cover:
 - (a) Transport by air;
 - (b) Transport by rail;
 - (c) Transport by road;
 - (d) Transport by river;
 - (e) Transport by post.
3. The sealing of the material to be transported, the prevention of damage to packaging (containers) by any external factors, labeling, testing of types of package, and other aspects associated with the transport of goods shall be regulated by the Georgian Law "On the Transport of Radioactive Substances".

Chapter V. Radiation protection

Article 27. Radiation protection measures

1. Radiation protection of the public and workers must comply with principles and standards elaborated to protect people, their health and the environment from the harmful effects of ionizing radiation, and with the obligations undertaken by Georgia in international treaties and agreements.
2. Radiation protection is effected by:
 - (a) Carrying out various legal, administrative, engineering, health, prophylactic, educational and training measures;
 - (b) Application by the State authorities, public organizations, and other physical and legal persons of radiation protection measures, regulations, norms and standards;
 - (c) Public education in the field of radiation protection.

Article 28. State standard setting on radiation protection

1. State standard (norms) setting on radiation protection shall comprise the introduction of health (sanitary) standards and regulations, hygiene standards, radiation protection regulations, State standards, construction standards and regulations, labour protection regulations, administrative, instructional,

methodological and other standards.

2. The following basic health standards shall be established in Georgia for exposure (permissible annual dose limit) resulting from the use of nuclear material, radioactive substances and other ionizing radiation sources:
 - (a) For the population, a mean annual effective dose of 0.001 sieverts, corresponding to a lifetime (70 years) effective dose of 0.07 sieverts, with an increase in the mean annual effective dose to 0.005 sieverts being permitted provided that the dose for the following five years does not exceed 0.001 sieverts;
 - (b) For workers, a mean annual effective dose of 0.02 sieverts, corresponding to an effective dose for the whole working life (50 years) of 1 sievert, with an increase in the mean annual effective dose to 0.05 sieverts being permitted provided that the dose for the following five years does not exceed 0.02 sieverts.
3. The regulatory exposure dose limits do not include doses received from natural background radiation and doses received by citizens (patients) during X-ray diagnostic procedures and treatment.
4. In the event of a nuclear accident, exposure exceeding the established basic health standards may be permitted for a specific period of time and within the limits set by the health regulations and standards.
5. The basic health standards for exposure of the public established in this Article may be reduced for the whole territory or for individual territories depending on the specific health and ecological situation, the state of health of the population and the impact of other environmental factors.
6. The regulatory requirements of the radiation protection regulations for work with radioactive substances and other ionizing radiation sources shall be approved by the Ministry.

Article 29. Evaluation of the radiation protection situation

1. During the planning and implementation of radiation protection measures, when taking decisions on aspects of radiation safety and analyzing the effectiveness of these measures, the Ministry, the competent organs of the Executive Power, local self-government and government bodies and the licensee shall evaluate the radiation protection situation in accordance with the established procedures.
2. In evaluating the radiation protection situation, the following basic factors shall be taken into account:
 - (a) The characteristics of environmental radiation contamination;
 - (b) An analysis of the radiation protection measures and application of the standards, regulations and health norms existing in this area;
 - (c) The possibility of occurrence of nuclear accidents and the scale thereof;
 - (d) The effectiveness of measures to deal with nuclear accidents and their consequences;
 - (e) An analysis of the radiation dose to the population from all ionizing radiation sources, both during normal operation of a facility and in accident situations;

- (f) The number of persons that have received doses above the established limit, with a structuring of the doses received.

Article 30. Obligations of the licensee in the area of radiation protection

The licensee shall:

- (a) Comply with the requirement of the present Law and other regulatory instruments in the area of radiation protection;
- (b) Plan and implement radiation protection measures;
- (c) Carry out the necessary measures to provide radiation protection for new (upgraded) production plant, substances, elements and technological processes;
- (d) Carry out systematic control of the radiation situation and control of the release of radioactive substances into the environment at workplaces, in buildings, on the territory of organizations, in supervises and controlled areas (24.07.06);
- (e) Monitor and record the personal radiation doses of workers;
- (f) Provide radiation protection training and certification of managers and workers at a facility, specialists of the process control service and other persons working full- or part-time with ionizing radiation sources;
- (g) Provide for preliminary (before recruitment) and regular medical examinations of workers;
- (h) Provide regular information to workers on the ionizing radiation parameters and personal radiation doses at their workplaces.

Article 31. Radiation protection against natural radionuclides

1. Exposure of the public and workers in residential and industrial buildings caused by radon, its daughter products and other natural radionuclides must not exceed the established norms.
2. In order to protect the public and workers against the effects of natural radionuclides, the following measures shall be carried out:
 - (a) Plots for the construction of buildings and installations shall be selected taking into account the level of radon emanation from the soil and also gamma radiation;
 - (b) Buildings and installations shall be designed and constructed in such a way as to minimize the level of radon in the air;
 - (c) The radon content in the air and the gamma radiation dose from natural radionuclides shall be taken into account in the control of building materials and the acceptance of buildings and installations for use;
 - (d) The radon content in the air and the gamma radiation dose from natural radionuclides shall be monitored in buildings and installations.
3. The use of building materials and products not meeting the radiation protection requirements shall be prohibited.

Article 32. Providing radiation protection in the manufacture of food products and use of drinking water

Raw foodstuffs, food products, drinking water and materials coming into contact with them in the process of manufacture, storage, transport and marketing must comply with radiation protection requirements in accordance with the present Law and other Georgian regulatory acts.

Article 33. Providing radiation protection in medical X-ray diagnostic procedures and therapy

1. Methods of radiation protection of citizens (patients) shall be applied during medical X-ray procedures.
2. Radiation doses of citizens (patients) during medical X-ray procedures must comply with the norms, regulations and standards established in the radiation protection sphere.
3. At the request of a citizen (patient), he or she shall be provided with full information on the doses proposed or already given and the expected results following medical X-ray procedures.

Article 34. Control and register of individual radiation doses

The control and register of individual radiation doses: received during using ionization radiation sources, x-ray procedures, public exposure by natural and man-made radiation background is carried out by the rules set by Ministry within the frame of national register (24.07.06).

Article 35. Increased irradiation of workers participating in the cleanup of a nuclear accident

1. The increased irradiation of specially trained workers selected to participate in the cleanup of a nuclear accident, emergency rescue work and decontamination procedures may be permitted only in cases where there is no way of avoiding it or when this is justified on the grounds of saving people's lives, reducing the number of irradiated persons or preventing their exposure to even larger doses.
2. The radiation dose of workers participating in the cleanup of a nuclear accident must not exceed 10 times the value of the mean annual indices of the basic health standards for the exposure of workers established by Article 28 of the present Law.
3. The increased irradiation of workers participating in the cleanup of a nuclear accident shall be permitted only once in their lifetime with their voluntary agreement and with their having been first informed about the likely radiation dose and the risk to their health.
4. The nature and extent of compensation for damage to health and the increased risk of radiation effects being suffered by workers participating in the cleanup of a nuclear accident shall be established by the Ministry.

Article 36. State compulsory medical insurance

For all workers employed in nuclear and radiation facilities covered by the present Law, the State compulsory insurance shall be provided in accordance with the Georgian Law "On medical insurance".

Chapter VI. Physical protection

Article 37. State system of physical protection

1. The Ministry shall co-ordinate the State system of physical protection of the use, storage and transportation of nuclear and radiation facilities, nuclear material, radioactive substances and other ionizing radiation sources which shall function in conjunction with the corresponding systems of the Ministry of Internal Affairs of Georgia and the Ministry of Defense of Georgia (24.07.06).
2. The State system of physical protection shall operate at nuclear and radiation facilities and also in places where any type of use, storage and transport of nuclear material, radioactive substances and other ionizing radiation sources are performed.
3. The aim of the State system of physical protection shall be to prevent such premeditated acts as:
 - (a) Illicit acquisition, possession, use, transfer, modification, destruction or dispersion of nuclear material, radioactive substances and other ionizing radiation sources which could result in the death of persons or damage to their health and property, or contamination of the environment;
 - (b) Theft of radioactive material or seizure thereof by robbery;
 - (c) Misappropriation of radioactive material or acquisition thereof by fraud;
 - (d) Demanding the handing over of radioactive material by use of force or threat of use of force or by other form of intimidation;
 - (e) Violation of the law with the aim of requiring a physical or legal person, international organization or State to perform some act or refrain from some act.
4. The status of physical protection of nuclear and radiation facilities shall be the subject of an annual report to the President of Georgia compiled jointly by the Ministry of Internal Affairs of Georgia, the Ministry of Defense of Georgia and the Ministry for Environment Protection of the and Natural Resources of Georgia (24.07.07).

Article 38. Categorization of nuclear material, radioactive substances and other ionizing radiation sources for the purpose of applying different levels of physical protection and safety to them

1. Nuclear material, radioactive substances and other ionizing radiation sources shall be divided into three categories for the purpose of applying different levels of physical protection and safety to them.
2. The first category shall include:
 - (a) Unirradiated plutonium including ^{238}Pu in an amount of 2 kg or more, except Plutonium with isotopic concentration exceeding 80% (here and below "unirradiated" denotes material not irradiated in a reactor or material irradiated in a reactor but with a radiation level not exceeding 100 rads/h at one meter unshielded);

- (b) Unirradiated uranium-235 in an amount of 5 kg and above, including:
 - b. uranium enriched to 20% U or more;
 - c. uranium enriched to between 10% and 20% ²³⁵U;
 - c. uranium enriched above natural but less than 10% ²³⁵U;
 - (c) Unirradiated uranium-233 in an amount of 2 kg or more.
3. The second category shall include:
- (a) Uranium as indicated in paragraph 2 (b) above in an amount from 500 g to 2 kg;
 - (b) Uranium enriched to 20% ²³⁵U or more in an amount from 1 to 5 kg;
 - (c) Uranium enriched from 10% to 20% ²³⁵U in amount 10 kg and more;
 - (d) Uranium in an amount from 500 g to 2 kg;
 - (e) Depleted natural uranium or low enriched irradiated nuclear fuel with less than 10% fissile content.
4. The third category shall include:
- (a) Uranium as indicated in paragraph 2(b) above in an amount from 15 to 500 g;
 - (b) Uranium enriched to between 10 and 20% ^{U235}U in an amount from 15 g to 1 kg;
 - (c) Uranium enriched to between 10 and 20% ²³⁵U in an amount from 1 to 10 kg;
 - (d) Uranium enriched above natural but less than 10% ²³⁵U in an amount of 10 kg or more;
 - (e) Uranium as indicated in paragraph 2(c) above in an amount from 15 to 500 g;
 - (f) Other nuclear fuel prior to irradiation belonging to categories I and II and the category of which may be reduced by one level provided that the radiation level from the fuel does not exceed 100 rads/h at one meter unshielded.
- 3¹. During the transport of natural uranium (reprocessed ores) having mass 500 kg or more, competent organs should be notified before the carrying out transport. The notification should include description of transport mean, proposed date of transport and confirmation for load receiving (25.07.06)

Article 39. Levels of physical protection and safety of nuclear material, radioactive substances and other ionizing radiation sources and their categories

- 1. Different levels of physical protection and safety of nuclear material, radioactive substances and other ionizing radiation sources are called for according to their categories and taking into account the transport of such items and their location on site (including use and storage).
- 2. With regard to the location on site of the above material, the following type of physical protection is required:
 - (a) For material of category III - location in a zone, entry to which is controlled by State security;
 - (b) For material of category II - location in a zone which is under constant surveillance by members of the bodies indicated in the first paragraph of Article 37 of the present Law and electronic surveillance, which has a physical barrier and entry to which is possible only via a limited number of control points, or location in a zone where such control is maintained to the extent possible;
 - (c) For material of category I - location in a zone specified for material of category II,

where, in addition to the measures already indicated, there is a ban on entry to all persons except those having a special pass. This zone shall be guarded by the Physical Protection Service forming part of the State protection system whose duty it is to foil any attack on the protection zone, prevent illegal entry into the protection zone and prevent illegal removal of the aforementioned material.

3. Physical protection and safety during the transport of nuclear material, radioactive substances and other ionizing radiation sources involves the following requirements:
 - (a) For materials of categories II and III - transport shall be affected in compliance with special safety measures and in accordance with the terms of an agreement to be drawn up between the shipper, the transporter and the receiver;
 - (b) For materials of category I - transport shall be affected in line with measures laid down for material of categories II and III and shall be controlled by the Physical Protection Service over the whole of the route.
4. The ability to fulfill the physical protection and safety requirements covered by this Article is a necessary condition for obtaining a license for handling nuclear material, radioactive substances and other ionizing radiation sources and also for the transport of such material.
5. In accordance with the principles laid down in the present Law and Georgian legislation, during the presence on site and the transport of nuclear material, radioactive substances and other ionizing radiation sources, matters concerning physical protection and safety shall be regulated by the Law of Georgia "On the Transport of Radioactive Substances" and the Law of Georgia "On Radioactive Waste and Radioactive Waste Stores".
6. The Ministry of Internal Affairs of Georgia shall elaborate and approve the Statute of the Physical Protection Service for Nuclear and Radiation Facilities, Nuclear Material, Radioactive Substances and Other Ionizing Radiation Sources.
7. The Physical Protection Service shall be financed from the budgetary appropriations assigned to the Ministry of Internal Affairs of Georgia.
8. The Physical Protection Service, by agreement with the Ministry for Protection of the Environment and Natural Resources of Georgia shall elaborate physical protection action plans for dealing with emergency situations.

Chapter VII. Radioactive waste

Article 40. Right to manage radioactive waste

1. The right to receive radioactive waste and to collect, transport, account for, pre-treat, process and dispose of it in a radioactive waste store in accordance with the procedure laid down by Georgian legislation, and on the basis of agreements concluded with nuclear and radiation facilities, belongs to the facility processing the radioactive waste.
2. The collection, temporary storage, preparation, and transfer to the facility processing the radioactive waste and the accounting for (the radioactive waste shall be undertaken by and the cost of transportation borne by the nuclear and radiation facilities, in the course of whose operations the radioactive waste is produced.

Article 41. Transit, export, re-export and import of radioactive waste

In accordance with Georgian legislation the transit, export, re-export and import of any type of radioactive waste anywhere in the country for any purpose are forbidden.

Article 42. Radioactive waste storage

1. Nuclear and radiation facilities producing radioactive waste in the course of their operations must provide for its collection, temporary storing, preparation and transfer to a facility processing radioactive waste, and also to bear the costs of its transportation.
2. The holding of radioactive waste is permitted only in subterranean stores operating in accordance with the procedure laid by Georgian legislation and comprising a series of installations, plant and equipment.
3. The State alone has the right of ownership of radioactive waste held in any store.
4. During the whole period of operation of the store, constant radiation and environmental monitoring of the state of the waste, the store and the adjacent territory shall be performed in accordance with the established procedure.
5. All matters connected with the store shall be regulated by the Georgian Law "On Radioactive Waste and Radioactive Waste Stores".

Article 43. Selection of a site for a radioactive waste store

1. The selection of a site for a radioactive waste store shall be based on:
 - (a) An evaluation of all factors associated with the site which may affect the store and the plant installed there throughout its period of operation, to which end a State ecological appraisal shall be performed, as called for by environmental authorities responsible for issuing licenses;
 - (b) An evaluation of the likely effect of the store on workers and the environment;
 - (c) Publicization of the intention to set up a store.
2. It is forbidden to select for a radioactive waste store a site which would cause an increase in ionizing radiation in the bordering territory of a contiguous State to a level exceeding the annual exposure limit established for such territory of such a State.
3. In selecting a site for a radioactive waste store, there must be undertaken engineering-geological, hydro-geological, geophysical and health-hygiene surveys and such other surveys as may be required under Georgian legislation, on the basis of which the competent State organs specified in Article 7 of the present Law shall issue the appropriate licenses in accordance with the procedure established by Georgian legislation.
4. The selection of a site for a radioactive waste store shall be finally agreed with the Ministry.

Article 44. The legal regime on the site assigned for a radioactive waste store

1. The site assigned for a radioactive waste store shall be transferred to the facility processing the radioactive waste for the period of operation and conservation specified in the project.

2. On the site of the radioactive waste store it is forbidden to engage in production and other types of activity apart from that specified in the project.
3. In the case of conservation of a radioactive waste store for an indefinite period of time it is forbidden to expropriate the territory or to lease it to any person.

Chapter VIII. Rights and obligations of citizens and public organizations on the sphere of nuclear and radiation safety. Responsibility for breaches of the Law

Article 45. Rights of citizens in the sphere of nuclear and radiation safety

1. The rights of Georgian citizens and stateless persons in the sphere of nuclear and radiation safety are governed by the present Law, Georgian legislation and also international treaties and agreements signed by Georgia.
2. Georgian citizens and stateless persons enjoy the following rights both personally and in virtue of participation in public organizations:
 - (a) To be protected from radiation and other ionizing radiation, the doses of which exceed the standards set by Georgian legislation;
 - (b) To receive gratis from State organs complete, objective and timely information on workplaces and habitations regarding the existing radiation safety situation, anticipated nuclear accidents and their likely consequences;
 - (c) To require compliance with requirements for radiation safety in all nuclear and radiation-related activities;
 - (d) To obtain gratis information both for a specific case and on a national scale concerning past or present measures to provide for radiation safety;
 - (e) To participate in the discussion process and the taking of important decisions by State organs on matters concerning nuclear and radiation safety.
 - (f) To seek through legal action changes to decisions on the design, construction, siting, reconstruction and operation of nuclear and radiation facilities;
 - (g) To obtain in accordance with established procedure under Georgian legislation complete indemnification for nuclear damage caused to them and their business by an act performed in violation of the present Law;
 - (h) To make public declarations about past or expected nuclear accidents, and to notify the relevant State organs about them.
3. Information on past or expected nuclear accidents threatening the safety of citizens and also information on the radiation situation of the environment and on medical assistance to the population shall not be subject to State secrecy.
4. Representatives of public organizations shall have the right of access to the sites of nuclear and radiation facilities in accordance with the procedure established by Georgian legislation.

Article 46. Obligations of citizens in the sphere of nuclear and radiation safety

In the sphere of nuclear and radiation safety Georgian citizens and stateless persons, as well as subjects covered by international treaties and agreements signed by Georgia are obliged:

- (a) To comply with Georgian legislation in the sphere of nuclear and radiation safety;
- (b) To inform in a timely manner the competent State organs about expected nuclear accidents;
- (c) To fulfil the requirements for ensuring radiation safety;
- (d) To participate to the best of their ability in performing measures to ensure nuclear and radiation safety;
- (e) To fulfil the requirements of the organs of Executive Power responsible for State management, State supervision and control in the sphere of nuclear and radiation safety or involved with the provision of nuclear and radiation safety.

Article 47. Responsibility for breaches of the Law

Responsibility for breaches of the present Law shall be determined in accordance with the procedure laid down by Georgian legislation.

Chapter IX. Concluding and provisional clauses

Article 48. Regulatory instruments subject to adoption in connection with promulgation of the present Law

The following regulatory instruments are awaiting adoption in connection with the promulgation of the present Law:

- (a) The Georgian Law "On the Transport of Radioactive Substances";
- (b) The Georgian Law "On Radioactive Waste and Radioactive Waste Storages";
- (c) Abolished;
- (d) Decrees of the Minister for Protection of the Environment and Natural Resources of Georgia:
 - d.a. "On Register of Radioactive Waste";
 - d.b. "On Categorization of Radioactive Sources";
 - d.c. "On Security of Radioactive Sources";
- (e) Decrees of the Minister of Health of Georgia:
 - e.a. Abolished
 - e.b. "On radiation safety standards";
 - e.c. "On the basic health regulations for work, with radioactive substances and other ionizing radiation sources";
- (f) Instruction of the Minister of Internal Affairs of Georgia "On the Physical Protection Service for Nuclear and Radiation Facilities".

Article 49. Entry into force of the Law

The present Law shall enter into force on 1 January 1999.

The President of Georgia Eduard Shevardnadze

Tbilisi

30 October 1998

No. 1674-ls

Seal of the Parliament of Georgia

GREECE

Accountability

Greece requires persons to obtain government authorisation to possess, use, transport, and/or store radioactive sources. The Greek Atomic Energy Commission (GAEC) is responsible for granting such authorisations and shares such information with other countries, upon request however, in the framework of the International Atomic Energy Agency (IAEA). Generally, Greece is open to share non confidential information with other countries in accordance with the provisions of the international agreements and initiatives.

Apart from granting the aforementioned authorisations and sharing information with other countries, GAEC is also responsible for maintaining Greece's national register of radioactive sources. However, due to confidentiality requirements, it is not allowed to share that information with other countries, and therefore it exchanges only some statistical data with IAEA.

Greece does not have any publicly available documents that describe the country's national register of radioactive sources, how it works, and how it exchanges information with other countries.

Civilian Nuclear Facilities

Apart from a small reactor for research purposes only, there are no civilian nuclear facilities in Greece. In any case, GAEC is responsible for providing guidance and oversight concerning the security of radioactive sources.

Detection

GAEC is Greece's agency designated as being responsible for the detection and monitoring of radioactive sources on its territory. It is also responsible, jointly with the Customs Service, for monitoring and detecting the illicit movement of nuclear and other radioactive sources and substances across borders, ports, and airports. It then shares all information regarding radiation monitoring with all countries in the framework of the IAEA.

Greece has not established procedures to request other countries to monitor at their borders, ports, and airports to detect radioactive sources. In order to ensure

that radioactive sources are identifiable and traceable, Greece is using the IAEA's Illicit Trafficking Data Base (ITDB).

GAEC also issues personal dosimeter equipment to government personnel.

In the framework of the IAEA, Greece is cooperating with the US Department of Energy so that effective and useful radioactive source detection technology is provided to Greece.

Since all information that is generated by radiation monitoring equipment is exchanged through ITDB, Greece argues that there is no need for a separate mechanism to exchange such information with other countries in the region.

Search, Confiscate, Establish Safe Control

GAEC is also responsible for recovering a radioactive source in the event it is missing. In this case, GAEC immediately shares information about the missing source through ITDB, in which the police has a direct access, and exercises and exchanges information in the context of international organisations such as the EU and IAEA. GAEC has also all the appropriate equipment, procedures and trained personnel for searching radioactive sources.

In the event of an accident or malicious act involving a radioactive source, a Chemical, Biological, Radiological and Nuclear (CBRN) plan has been designed to deal with such situations. It is coordinated by the General Secretariat of Civil Protection and involves all the related agencies (GAEC, Police, Coast Guard, etc.), which then respond. Those agencies also exercise and exchange information with other countries in the context of international organisations, such as the EU and IAEA.

Prevent Terrorist Safe Haven

Since the 2004 Athens Olympic Games, Greece has been conducting a formal national vulnerability assessment with respect to the threat of nuclear terrorism based on the potential for loss of control and/or malicious acts involving one or more radioactive sources.

Additionally, the country has established mechanisms to notify the receiving country of its intent to export radioactive sources to that country. For EU member states, notification is conducted with the Annex document, while for third

countries a confirmation of acceptance by the receiving country is necessary. In this case, GAEC is responsible for obtaining the pre-approval by the receiving country.

Greece also requires that the import of nuclear materials is pre-approved by the national government. GAEC is the agency responsible to approve the import of such materials.

Greece requires that the transport of radioactive sources through its territory is conducted in a manner consistent with the IAEA standards for the transport of such material.

Greece's Special Investigation Agency, which is under the Ministry of Finance, is the country's law enforcement unit responsible for investigating financial crimes.

Legal and Regulatory Frameworks

Greece has in place national legislation and regulations to control the management and protection of radioactive sources. All relevant legislation and regulations are available at GAEC's official website: www.eeae.gr

GAEC is the regulatory body responsible for the safety and security of radioactive sources. It also liaises, exchanges information or engages in other routine activities and is the responsible regulatory body in Greece for cooperation with other similar regulatory agencies in other countries in the framework of the IAEA.

In the event of a loss of control over radioactive sources or an incident involving radioactive sources, in accordance with Greek law, GAEC must be immediately informed.

Since there is no unified framework of complementary laws and regulations within the region that enables countries to monitor, account for, and protect nuclear materials as they move from originator countries to destination countries, cooperation takes place in the context of the IAEA.

Response and Mitigation

GAEC is responsible for all functions related to enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials. There are no separate agencies for different functions. GAEC

is also Greece's national emergency response agency responsible for responding to an incident involving nuclear sources that has caused personal injury or property damage. GAEC liaises, exchanges information, engages in joint training and conducts joint exercises relating to nuclear terrorism with similar agencies in other regional countries in the context of international organisations such as the EU and IAEA.

In Greece, where there are no civilian nuclear facilities, laws and regulations on the preparation of emergency response plans concern only the one small reactor for research purposes that exists in the country.

However, Greece does not have the regional capacity to conduct emergency response operations that cross international borders. There is the IAEA's ER-NET (Emergency Response Network), but no regional capacity for conducting emergency response operations that cross international borders.

Although Greece has not signed any agreements or established other legal mechanisms by which one country within the region can easily provide medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency, it will provide any possible assistance in case of an emergency. Simultaneously, there is no mechanism that enables countries in the region to jointly address a missing radioactive source, an accident involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country. The ITDB is the only mechanism that enables countries in the region to jointly deal with such a situation.

Information Sharing

GAEC is the international point of contact within Greece responsible for the physical protection of nuclear sources.

Greece has a mechanism to promptly provide notice of any loss of control over radioactive sources, or any incidents, to include any theft, robbery or other unlawful taking with potential trans-boundary effects or a credible threat thereof to the IAEA but not to the potentially affected neighbouring states.

It has also established specific measures to protect the confidentiality of any information that is received in confidence from another state, and, thanks to the IAEA, it has an established mechanism between GAEC and other countries'

agencies to promote cooperation and the exchange of information concerning radioactive sources.

However, there are neither public documents available that describe the available protections provided by Greece to information relating to nuclear sources that is received in confidence from another nation, nor a regional diplomatic forum to address nuclear security related issues.

As far as regional cooperation on nuclear security is concerned, IAEA has appointed GAEC as the regional training centre for nuclear security issues. In this context, training has been provided to personnel from almost all countries in the region.

MOLDOVA

Accountability

Moldova requires persons to obtain government authorisation to possess, use, transport, and/or store radioactive sources. The government agency that is responsible for granting such authorisations is the National Agency on Regulation of Nuclear and Radiological Activities (NARNRA), established within the Ministry of Environment by the Government of the Republic of Moldova, in accordance with the Law on Safe Deployment of Nuclear and Radiological Activities No.111-XVI of 11.05.2006, published in the Official Monitor of the Republic of Moldova, No.98-101 of 30 June 2006; and Governmental Decision No. 328 of 23.03.2007, published in the Official Monitor of the Republic of Moldova No.43-46/344 of 30 March 2007.

NARNRA is also responsible for exchanging information with other countries. Depending on the kind of information requested, it might become openly available. In accordance with the Law No.111-XVI of 11.05.2006, information on authorised persons and agencies with regard to their functions and types of activity is available publicly at the official website of the Ministry of Environment: www.mediu.gov.md

Moldova has verified the International Atomic Energy Agency (IAEA) Statute (Parliament Decision No.1267-XIII of 14.08.1997) and eight other international conventions and agreements in the nuclear field, including the obligation to introduce and maintain an effective institutional framework and to ensure the security of nuclear and radiological hazards of overexposure and decrease of population and staff, using sources of ionizing radiation by implementing a radiation protection program.

Moldova has established a national register of radioactive sources, the National Register of Ionising Radiation Sources and Authorised Natural and Legal Persons, which is maintained by NARNRA, in accordance with Governmental Decision No.1017 of 01.09.2008 on the National Register of Ionising Radiation Sources and Authorised Natural and Legal Persons, published in the Official Monitor of the Republic of Moldova No.169-170 of 09 September 2008.

NARNRA exchanges the information contained in its registry with other countries in the region through IAEA. Depending on the restriction level of information, the access to information for partner countries might be limited.

General information on Moldova's national register of radioactive sources, how it works, and how it exchanges information with other countries is available publicly, while detailed data are available through IAEA. A copy of the National Register on Radioactive Sources can be officially obtained from NARNRA, provided that the interested party has an agreement with IAEA.

Civilian Nuclear Facilities

NARNRA is responsible for providing guidance and oversight concerning the security of civilian nuclear facilities, in accordance with the Law No.111-XVI of 11.05.2006; and Governmental Decision No.1220 of 30.10.2008 approving the Regulations on Control and State Supervision of Nuclear and Radiological Activities, published in the Official Gazette No.198-200 on 07 November 2008.

NARNRA routinely liaises and exchanges information with its counterpart government agencies in other countries within the region. Among others, Moldova cooperates with the member states of IAEA, GUAM, and the South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC).

Detection

Moldova has not designated one particular agency as being responsible for the detection and monitoring of radioactive sources on its territory, as the responsibility is within the limits of competence of each involved institution (army, Customs Service, etc.). However, the Hydrometeorological Service of the Department of Environment Monitoring is responsible for the monitoring of Moldova's entire territory.

Radiation monitoring equipment necessary to maintain a capability to detect the illicit movement of nuclear and other radioactive sources and substance is being introduced at all borders, ports and airports. The Border Guards Service and the Customs Service are designated as competent authorities to maintain the necessary capacity of the main border, ports and airports crossings (Government Decision No.475 of 26.03.2008). In addition, the Information and Security Service of the Republic of Moldova cooperates with the EU Border Assistance Mission to

Moldova and Ukraine (EUBAM) on issues related to border security, smuggling prevention and combat and other crimes, as well as on mutual interest information exchange. Moreover, all relevant organisations and institutions personnel have been trained at the WMD Crisis Incident Management Course held within the framework of the International Counterproliferation Program.

The aforementioned organisations liaise and exchange information with other countries at regional and international level in accordance to the individual cooperation plans. More specifically, Moldova and Slovakia have signed an agreement on combating organised crime and providing measures to combat nuclear terrorism; Moldova and Turkey have signed an agreement on combating illicit drug trafficking, international terrorism and other organised crimes and co-organised a bilateral working meeting with the participation of police, prosecution and trial representatives; Moldova and Israel have signed an agreement on the prevention, combat and punishment of human trafficking, illicit drug trafficking, international terrorism and other organised crimes; Moldova and Austria have signed an agreement on police cooperation and joint action plan in cases of human trafficking, illicit drug trafficking, international terrorism, and other organised crimes.

In order to prevent trafficking and illegal transit of goods and to ensure limited movement of radioactive and nuclear materials, the Border Guards Service cooperates with the special services of Ukraine and Romania. Simultaneously, in accordance with the Article 29 of the UN Convention against transnational organised crime, the Information and Security Service's National Institute of Information and Security organises training sessions on prevention, detection and repression of the organised crime. Training programmes are also organised in the context of bilateral agreements.

Moldova has implemented the Additional National Convergence Plan in accordance with the EUROCONTROL Strategy, and the 2005-2009 Local Convergence and Implementation Plan (LCIP) conveyance of air traffic use of airspace. In accordance with Article 31 of the UN Convention against transnational organized crime and its protocols on migrant smuggling and human trafficking, in order to prevent and counter cross-border organised crime, the Security Information Service cooperates with the appropriate agencies of Romania, Bulgaria, Germany, Hungary, Poland, the UK and the USA by

exchanging information and jointly combating crimes, should these arise from the Transnistrian region.

Moldova has an established system for ensuring that radioactive sources are identifiable and traceable. A periodical exchange of information on potential sources of risk with dual purpose is organised by the Ministry of Foreign Affairs and European Integration within the framework of the International Counterproliferation Program.

Moldova issues personal dosimeter equipment to government personnel. All government agencies responsible for fighting nuclear terrorism in the country are available to provide their personnel with such equipment.

International programmes that provide radioactive source detection technology to Moldova, such as the US Department of Defense's International Counterproliferation Program, the IAEA's Interphysical Protection Systems, and the US Nuclear Security Department's program through NARNRA are efficient and useful in preventing and stopping the theft of ionizing radiation sources with high activity.

Any government agency that has obtained information from the radiation monitoring equipment has to inform the Ministry of Internal Affairs' Emergency Situations Service and NARNRA. The Ministry will then appoint an *ad hoc* Commission for Emergency Situation, which consists of representatives of all state structures who will make a briefing of the situation and undertake the necessary measures. In case the situation proves to be a nuclear terrorism act, the management of the situation will be passed to the Security and Information Service.

Search, Confiscate, Establish Safe Control

In the event of a missing radioactive source, the company or agency responsible for the source has to proceed accordingly to the Emergency Action Plan of the Emergency Response Scheme within one hour. The Commission for Emergency Situations will then be convened with representatives of all relevant state structures (Security and Information Service, Ministry of Internal Affairs, Border Guards and Customs Services, Ministry of Health, NARNRA, etc.) which will decide on the response procedure.

NARNRA and the Security and Information Service are responsible for searching for the missing radioactive source. Since 2006, the latter is a member of the South East Europe Intelligence Conference (SEEIC), a body that convenes 26 special services from 14 European countries. SEEIC members electronically exchange and update encrypted information on persons involved in terrorist activities, financing of such acts, and transnational organised crime. Simultaneously, bilateral relations that facilitate the combat of international terrorism and other organised crime related activities are also established and maintained.

In the event of an accident or a malicious act involving a radioactive source followed by radioactive emissions, in accordance with the Governmental Decision No.347 of 25.03.2003 on information gathering and exchange on population and territories protection during emergencies, the local civil authorities and the territorial subunit of the Emergency Situations Service have to inform the Emergency Situations Service accordingly to the emergency response mechanism with detailed description of the events that took place within 30 minutes. If there is an emergency, information should indicate its category specifying the type according to its provocative factors.

The territorial sub units of the Emergency Situations Service will then call an *ad hoc* commission for emergency situations, attended by the representatives of all relevant agencies and the local authorities, which will analyse the situation and the level of emergency and decide whether it should be dealt at national level. If the population, the territory, or neighboring countries are in danger, then this should be immediately reported to the Emergency Situations Service, which convenes an *ad hoc* National Emergency Situation Commission to deal with the situation.

If liquidation or mitigation activities are decided, they are organised and conducted by the local committee for emergency situations, and carried out by local forces by using the resources of local authorities, organisations, enterprises, and operators, regardless of their form of ownership. However, if the situation cannot be dealt with the human resources and means available, then the territorial commission will address the National Emergency Situation Commission, asking for the involvement of the Ministry of Defense, the Ministry of Internal Affairs, etc.

Moldova participates in the Knowledge Management System on the prevention of illicit trafficking of Chemical, Biological, Radiological, and Nuclear (CBRN)

material in South East Europe and the Caucasus (KMS I), which was launched in May 2008 by the United Nations Interregional Crime and Justice Research Institute (UNICRI) jointly with the European Commission, IAEA, Europol, the Organization for the Prohibition of Chemical Weapons, the Southeast European Cooperative Initiative (SECI), and the World Customs Organization (WCO). Within the framework of the cooperation between GUAM and the US government, the following projects operate: the Virtual Law Enforcement Center (VLEC), and the Interstate Information-Analytical System (ISIAS).

Prevent Terrorist Safe Haven

Moldova conducts a formal national vulnerability assessment, which is stipulated in Article 1.3.3 of the National Security Concept of the Republic of Moldova of 22.05.2008, published on 3 June 2008 in the Official Gazette No. Article No. 97-98: 357.

Moldova does not require that the import of nuclear materials be pre-approved by the national government if the materials are imported by a NARNRA authorized agent whose activity was ensured to be in compliance with applicable national laws and international treaties on nuclear energy to which Moldova is a party. In accordance with the Article 29 of the Law No.111-XVI of 11.05.2006, the agent reports directly to NARNRA.

Authorisation for the import, export, or transit of ionizing radiation and radioactive materials defined as strategic must be issued in accordance with the Law on the control of re-export, import and transit of strategic goods No.1163-XIV of 26.07.2000, published in the Official Gazette of the Republic of Moldova 137-138 of 27 October 2000, and will be issued only if it is pre-approved by the Interdepartmental Commission on Strategic Goods Export, Re-export, Import, and Transit Control.

The aforementioned law also stipulates that a special agreement between countries is required in case of export of radioactive sources which belong to the group of strategic goods. The Interdepartmental Commission on Strategic Goods Export, Re-export, Import and Transit Control is responsible for controlling the whole process. In some other cases, NARNRA is responsible for export control.

Moldova requires that the transport of radioactive sources through its territory be conducted in a manner consistent with IAEA standards since it has ratified the

Non-Proliferation Treaty and the Convention on the Physical Protection of Nuclear Material. Additionally, the transport of radioactive sources is conducted in accordance with the Law on transportations, No.1194-XIII of 21.05.97, published in the Official Gazette of the Republic of Moldova No.67-68 of 16 October 1997.

In accordance with the Law on Prevention and Combating Money Laundering and Terrorism Financing Activities, No.190-XVI of 26.07.2007 and Criminal Code articles concerning financing of terrorism, the Center for Combating Economic Crimes and Corruption is Moldova's national law enforcement unit responsible for investigating financial crimes.

Legal and Regulatory Frameworks

Moldova has in place national legislation to control the management and protection of radioactive sources. Such is the Law No.111-XVI of 11.05.2006; the Law on radiation protection and nuclear safety, No.1440 of 24.12.1997, published in the Official Monitor of the Republic of Moldova, No.24-25 of 19 March 1998; and the Fundamental Rules for Radiation Protection Requirements and rules of hygiene (NFRR-2000). This legislation is publicly available at www.justice.md

Moldova has in place national regulations to control the management and protection of radioactive sources. Moldova has ratified the IAEA Statute, the Agreement on the application of safeguards against nuclear non-proliferation, the Agreement on the Privileges and Immunities, and the Convention on Physical Protection of Nuclear Material. In accordance with the Law No.111-XVI of 11.05.2006, NARNRA was established. The country has also approved the Law on radiation protection and nuclear safety; Governmental Decision No.1220 of 30.10.2008; and Governmental Decision No.328 of 23.03.2007. Those regulations are publicly available at www.justice.md

Moldova's established regulatory body responsible for the safety and security of radioactive sources is NARNRA, which liaises, cooperates, and exchanges information with similar regulatory bodies in other countries. As mentioned above, Moldova participates in the Knowledge Management System on the prevention of illicit trafficking of CBRN material in South East Europe and the Caucasus (KMS I), while within the framework of the cooperation between GUAM and the US government, it is involved in the Virtual Law Enforcement Center (VLEC), and the Interstate Information-Analytical System (ISIAS).

Moldova has laws and regulations that require the prompt reporting to NARNRA of a loss of control over radioactive sources or an incident involving radioactive sources. Such are the Law on Civil Protection, No.271-XIII of 09.11.1994, published in the Official Gazette of the Republic of Moldova No.20 of 29 December 1994; the Law No.111-XVI of 11.05.2006; and the Law on combating terrorism, No.539 of 12.10.2001, published in the Official Gazette of the Republic of Moldova No.147-149 of 06 December 2001. All these legislative acts can be found at www.justice.md

Response and Mitigation

Moldova's security agency responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials is NARNRA. More specifically, in accordance with chapters II and III of the Law No.111-XVI of 11.05.2006, NARNRA's functions and responsibilities are: i) to prepare draft legislation in the field of nuclear and radiological activities; ii) to ensure the implementation and enforcement of the legislation in force in the field of nuclear and radiological international treaties; iii) to ensure an appropriate regulatory framework that establishes general requirements for nuclear safety and radiological protection against ionizing radiation, quality control of nuclear non-proliferation, safety and physical protection of sources of ionizing radiation, intervention and research in radiological incidents and accidents, etc; iv) to establish procedures for licensing, supervision and control; v) to evaluate applications for authorisation for nuclear and radiological activities; vi) to register nuclear and radiological activities; vii) to issue security installations with ionizing radiation sources; viii) to give working permits for staff working in nuclear or radiological fields; ix) to inspect and supervise in order to verify the security of nuclear and radiological activities and the degree of compliance with the national and international laws and other regulations, the specific conditions set out in the license or certificate of registration, preparation of control documents and their issuance; x) to implement measures in accordance with the law if the facts of violation of the legislation requirements and other regulations in the field of nuclear and radiological activities; xi) to review legislative acts and, whenever necessary, correlate them with the relevant international treaties and standards, and to implement activities to enforce these provisions; xii) to manage the Ionizing Radiation Sources National Register and the activity of authorised natural and legal persons; xiii) to cooperate with regulators in other countries and relevant

international organisations; xiv) to credit nuclear and radiological experts with certificates.

However, there are also separate law enforcement agencies that have responsibility for different functions. Thus, the central government is responsible for several functions in medicine, such as i) hygienic monitoring and evaluation of radionuclide level in alimentary products within the entire alimentary chain, drinking water, including drinking water sources, construction materials and in other consumption goods, along with the issue of hygienic certificates for domestic and imported products; ii) monitoring of nuclear and radiological influence on population health and certificates issuance in accordance with legislation in effect; iii) hygienic framing of radiological factors; iv) sanitary-epidemiological surveillance of nuclear and radiological activities in accordance with applicable legislature; v) monitoring ionizing radiation exposure of the personnel working with sources of ionizing radiation, patients during medical investigations and population in case of radiological accident; vi) organisation of scientific research on medical and biological effects of ionizing radiation.

During exceptional situations, the central government authorities have i) to implement provisions of international treaties on prompt notification on nuclear accident and on assistance in case of nuclear accident as a contact point and competent body; ii) to coordinate the implementation of the International Convention on the Physical Protection of Nuclear Material with its following amendments to which Moldova is adherent; iii) to organise and coordinate the activity of the national monitoring network, surveillance and laboratory control of environmental pollution with radionuclides in case of radiological and nuclear accidents; iv) to plan and coordinate the implementation of measures to protect population and environment in case of radiological and nuclear accidents and terrorist acts with the use of nuclear material or ionizing radiation sources; v) to assist the Customs Service and other specialised institutions involved in combating trafficking and illicit use of nuclear material and sources of ionizing radiation.

In the area of environmental protection, the central public administration has to i) monitor, collect and analyse background information on environmental pollution; ii) forecast dispersion and movement of radioactive pollutants; iii) conduct research on the influence of radioactive pollutants and possible impacts on natural ecosystems. Likewise, in agriculture, it has to conduct radiological monitoring of cultivated soils and agricultural products and research on the impact of radioactive

pollution on soils and departmental supervision of radiological activities in the agrarian sector.

The Customs Service implements export, import or transit control and access based on the authorisation documentation (licenses or registration certificates) of ionizing radiation sources, equipment, materials and relevant information on proliferation of nuclear weapons or other nuclear explosive devices, while the Standardization and Metrology Service coordinates metrological activities and manages the state registration of standards and other documents regulating the activities of radiological activities. Likewise, the Licensing Chamber issues licenses for nuclear and radiological activities in accordance with article 23, on the basis of certificate on applicant's authorisation issued by NARNRA; the Moldovan Academy of Sciences carries out scientific researches and highly qualified scientific personnel trainings in the field of nuclear and radiological activities; and the National Radioprotection Committee is an advisory body of the Government in the field of nuclear and radiological security decisions of counselling nature.

The National Commission for Emergency Situations is Moldova's national emergency response agency responsible for responding to an incident involving nuclear sources that has caused personal injury or property damage. The Commission is chaired by the Prime Minister and it comprises the heads of appropriate governmental institutions.

Since 2002, Moldova's emergency response agencies participate in trainings, workshops and Basic Law Enforcement Techniques, organised by the US Department of Justice, the Defense Threat Reduction Agency, and the FBI.

In January 2010, a representative of the Information and Security Service's Counterterrorism Centre participated in the Response to Nuclear and Radiological Terrorism Workshop, organised by the Centre of Excellence/Defence Against Terrorism (COE-DAT) in Ankara, which was aiming at the exchange of experience and information on national security and combating terrorism strategies and cooperation in the area of nuclear and radiological counterterrorism. The main topics discussed were Nuclear Terrorism in the 21st century, terrorism and nuclear terrorist attacks on nuclear objects, "dirty bomb" attacks, prevention of nuclear and radiological attacks of terrorist groups, global nuclear security, national security in radiological issues, and nuclear and radiological terrorist threats in the near future.

Moldova's laws and regulations require the preparation of emergency response plans for certain sectors of the society. In accordance with the Law No.271-XIII of 09.11.1994, Governmental Decision No.475 of 26.03.2008, and the International Sanitary Regulations, all institutions, agencies, and companies who have or use nuclear or radiological sources are obliged to elaborate emergency response plans, which have to be coordinated with the Emergency Situations Service of the Ministry of Internal Affairs.

One country can easily provide medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency thanks to the Intergovernmental GUAM Agreement on cooperation with regard to the prevention and liquidation of the consequences of emergency, signed on 4 July 2003. The areas of cooperation include: i) adjusting the member states' legal framework; ii) creating and strengthening a system of cooperation between relevant national agencies; iii) development and implementation of methods and ways to prevent and liquidate the direct consequences of natural and technogenic disasters; iv) providing mutual support in the liquidation of the consequences of such disasters; v) providing assistance in the operational cooperation in emergency situations.

In order to establish a mechanism that enables countries in the region to jointly address a missing radioactive source, an accident involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country, operational cooperation and collaboration between the GUAM member states' law enforcement agencies is being implemented in accordance with the GUAM Intergovernmental Cooperation Agreement on combating terrorism, organized crime and other serious crimes. GUAM member states have established national agencies in this area of cooperation, such as the National Information Analysis Center and the National Virtual Center SECI-GUAM. Various committees conduct joint GUAM-VLEC operations in relevant sub-groups of the GUAM Working Group on combating terrorism, organised crime and trafficking of illicit drugs.

Information Sharing

NARNRA is Moldova's central authority and international point of contact that has responsibility for physical protection of nuclear sources, in accordance with the Law No.111-XVI of 11.05.2006 and Governmental Decision No.328 of 23.03.2007.

Moldova has installed physical protection systems at a number of radiological objects with assistance from the IAEA and the US National Nuclear Security Administration. All information obtained from the systems is centrally and automatically collected in the NARNRA's database, which is directly connected to the IAEA's database.

Moldova has in place measures to protect the confidentiality of any information received in confidence from another state if this is stipulated by a bilateral agreement and has been approved by the IAEA. Moldova also takes into consideration if the actions stipulated in such an agreement have any negative impact on the health of the population of the country.

There are no public documents available describing the available protections provided by Moldova to information relating to nuclear sources that is received in confidence from another nation.

Moldova's particular agency designated to liaise with other countries to promote cooperation and the exchange of information concerning radioactive sources is NARNRA, provided that the interested country has an agreement with the agency.

As far as a regional diplomatic forum that addresses nuclear security related issues is concerned, as already mentioned, Moldova's Security and Information Service is a member of SEEIC. SEEIC members exchange information on persons involved in terrorist activities, financing of such acts, and transnational organised crime electronically through an encrypted link. Simultaneously, bilateral relations with other European intelligence services that facilitate the combat of international terrorism and other organised crime related activities are also established and maintained.

Moldova cooperates with other IAEA member states in the context of the Committee on Safeguards and Verification, the Technical Assistance and Cooperation Committee, the meetings of the IAEA Board of Governors, the IAEA General Conferences, etc. In September 2007, Moldova participated for the first time in the "Eastern Shield 2007" international exercise held in Odessa under the auspices of the Proliferation Security Initiative (PSI).

Moldova cooperates in order to strengthen the UN's role in the multilateral fight against terrorism through the implementation of the UN Security Council Resolutions (UNSCR) 1373/01 and 1267/01 and the UN Convention on the Suppression of Terrorist Financing. It has also participated in activities and events that took place in the context of strengthening international and regional cooperation in the fight against organised crime. Those activities have been within the Stability Pact's Initiative against Organized Crime (SPOC); within the GUAM Intergovernmental Cooperation Agreement on fighting terrorism, organized crime and other serious crimes; and within the provisions of the Agreement on the establishment of the GUAM Virtual Center for combating terrorism, organized crime, illicit drug trafficking and other serious crimes and the GUAM Interstate Information-Analytical System.

Moldova has ratified the International Convention for the Suppression of Acts of Nuclear Terrorism and the Council of Europe Convention on the Prevention of Terrorism.

Since 2007, Moldova's Information and Security Service exchanges information with its European counterparts via the National SECI/GUAM Virtual Centre for combating terrorism, organized crime, illicit drug trafficking and other types of serious crimes, established by Governmental Decision No.93 of 27.01.2006. In November 2006, the Information and Security Service established its Counterterrorism Center, and its regulations were approved by Governmental Decision No.1295. The Centre created a centralised database and a centralised information system for accumulating information on organisations and individuals participating in terrorist activities, financing terrorist acts and providing material. The Service experts cooperate with their European counterparts on information and experience exchange.

ROMANIA

Accountability

Romania requires persons to obtain government authorisation to possess, use, transport, and/or store radioactive sources. The government agency that is responsible for granting such authorisations is the National Commission for Nuclear Activities Control (NCNAC). NCNAC exchanges information regarding authorisations with other countries only upon request and through law enforcement or other agencies. It also reports the status of all authorisations granted to the International Atomic Energy Agency (IAEA) and to EURATOM.

Romania has established a national register of radioactive sources, and the agency responsible for maintaining it is NCNAC. Generally, NCNAC does not share information contained in its registry with other countries in the region, as this kind of information is classified.

Romania does not have any publicly available documents describing its national register of radioactive sources, how it works, and how it exchanges information with other countries, as such information is classified.

Civilian Nuclear Facilities

The government agencies responsible for providing guidance and oversight concerning the security of civilian nuclear facilities are NCNAC and the Ministry of Internal Affairs' Emergency Situations Inspectorate. Those agencies routinely liaise and exchange information with its counterpart government agencies in other countries within the region, most usually Bulgaria, Ukraine, and Russia.

Detection

NCNAC and the Ministry of Health's Radiation Department are responsible for the detection and monitoring of radioactive sources in Romania.

Romania possesses and uses radiation monitoring equipment to maintain a capability to detect the illicit movement of nuclear and other radioactive sources and substances across borders, ports, and airports. Responsible for this equipment are NCNAC, the Border Police, the Customs Service, and the Intelligence Service's Counterterrorist Brigade. Those agencies liaise and exchange relevant information

with other countries, and especially with the EU member states, NATO members and the neighbouring states.

NCNAC has established some procedures to request other countries to monitor at their borders, ports, and airports to detect radioactive sources. The recipients of such requests could be Bulgaria, Hungary, Ukraine, and Serbia.

NCNAC is responsible for managing an established system for ensuring that radioactive sources are identifiable and traceable. This centralised system is classified.

NCNAC also issues personal dosimeter equipment to government personnel. The agencies responsible for this are NCNAC, the Border Police, the Customs Service, and the Intelligence Service's Counterterrorist Brigade.

International programmes that provide radioactive source detection technology to Romania are effective and useful.

Information generated by radiation monitoring equipment is disseminated to the local decisional authorities and shared with IAEA through NCNAC.

Search, Confiscate, Establish Safe Control

In the event of a missing radioactive source, the government entity that has responsibility for recovering it is NCNAC. Missing radioactive sources are reported to the Ministry of Internal Affairs, the Ministry of Health and to the Intelligence Service.

NCNAC is also responsible for searching for the missing source, and it must inform the Inspectorate for Emergency Situations, the Ministry of Internal Affairs, the Ministry of Health and the Romanian Intelligence Service about the disappearance.

Thus far, NCNAC has not liaised or exchanged information with similar government entities in other countries. It is available, however, to engage in exercises with other countries.

In the event of an accident or malicious act involving a radioactive source, the government entity that has overall responsibility for responding is NCNAC. It

must cooperate with the Inspectorate for Emergency Situations, the Police, the Gendarmerie, and the Ministry of Health. The NCNAC is also involved in establishing/identifying the causes of the event and its consequences.

NCNAC liaises, exchanges information, and engages in exercises with similar government agencies in other countries, and more specifically with Ukraine, Bulgaria, and Hungary.

Prevent Terrorist Safe Haven

Romania conducts a formal national vulnerability assessment with respect to the threat of nuclear terrorism based on the potential for loss of control and malicious acts involving one or more radioactive sources.

It also has mechanisms to notify the receiving country of its intent to export radioactive sources to that country. The export of a radioactive source needs an export authorisation that is issued on the base of an end-user statement of the importer. It also has to be pre-approved by the receiving country. The agency responsible for giving approvals is the Ministry of Foreign Affairs through General Directorate ANCEX (National Agency for Export Controls). An example of such a mechanism is the transfer of consumed enriched nuclear fuel from IFIN-HH Magurele to Russia, when NCNAC and its Russian counterpart agreed on the physical protection conditions for the transport. NCNAC then informed and asked for flight permission from all states that have been transited by air and informed the IAEA who agreed to the transfer. The entities from Romania and Russia agreed on and respected the rules and conditions imposed by the NCNAC, its Russian counterpart and the IAEA.

Romania also requires that the import of nuclear materials be pre-approved by the national government, and the export of radioactive sources be pre-approved by the receiving country. The government entity that is responsible for both giving and obtaining such pre-approvals is ANCEX.

Romania requires that the transport of radioactive sources through its territory be conducted in a manner consistent with IAEA standards for the transport of such material.

The Ministry of Internal Affairs and the Directorate for Investigating Organized Crime and Terrorism (within the General Prosecutor's Office attached to the High

Court of Cassation and Justice) are Romania's law enforcement units responsible for investigating financial crimes.

Legal and Regulatory Frameworks

Romania has national legislation and regulations to control the management and protection of radioactive sources, which is publicly available at NCNAC's official website: www.cncan.ro/en/default.php.

NCNAC is the agency responsible for the safety and security of radioactive sources. It also liaises, exchanges information and engages in other routine activities with similar regulatory bodies in other countries, and more specifically with Bulgaria, Ukraine, and Russia.

Romania's laws and regulations require the prompt reporting of a loss of control over radioactive sources or an incident involving radioactive sources to NCNAC. A unified framework of complementary laws and regulations within the region has also been established enabling countries to monitor, account for, and protect nuclear materials as they move from originator countries to destination countries. Regulation (EC) NO 764/2008 of the European Parliament and of the Council of 9 July 2008 laying down procedures relating to the application of certain national technical rules to products lawfully marketed in another Member State and repealing Decision No 3052/95/EC.

Response and Mitigation

The Directorate for Investigating Organized Crime and Terrorism is Romania's national law enforcement agency responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials. NCNAC is responsible for manipulating and transporting radioactive sources, while the National Agency for Radioactive Waste (ANDRAD) is responsible for the management and storage of radioactive waste. These two agencies are responsible until proving the crime. After that, the Directorate for Investigating Organized Crime and Terrorism takes over. NCNAC, the Inspectorate for Emergency Situations and the Counterterrorist Brigade are Romania's national emergency response agencies responsible for responding to an incident involving nuclear sources that has caused personal injury or property damage.

All aforementioned law enforcement and emergency response agencies liaise, exchange information, engage in joint training, and conduct joint exercises relating to nuclear terrorism with similar agencies in all neighbouring countries. Recently, there has been an exercise in collaboration with Bulgaria, and the agencies are in close cooperation with the Southeast European Cooperative Initiative (SECI) Center Romania.

The country's laws and regulations require the preparation of emergency response plans for certain sectors of the society, which do exist for all nuclear and radioactive units, and more specifically for the Cernavoda nuclear power plant, the Pitesti Institute for Nuclear Research, and the local communities close to the two facilities, namely the cities of Cernavoda and Mioveni.

As far as emergency response operations that cross international borders are concerned, those are conducted either by the SECI Regional Centre for Combating Transborder Crime or the IAEA expert missions and dedicated labs. The latter of the two is also capable of easily providing medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency, and of addressing a missing radioactive source, an accident involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country.

Border cooperation protocols enable the countries in the region to jointly address a missing radioactive source, an accident involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country.

Information Sharing

NCNAC is Romania's central authority and international point of contact responsible for physical protection of nuclear sources.

The country does have a mechanism to promptly provide notice of any loss of control over radioactive sources, or any incidents, to include any theft, robbery or other unlawful taking with potential trans-boundary effects or a credible threat thereof to potentially affected neighbouring states and to the IAEA. It also has measures in place to protect the confidentiality of any information that is received in confidence from another State. Such are the Law 182/2002 on classified information, and Governmental Order Nr. 585/2005 on the way the law should be

applied. There are also legal procedures regarding the protection of NATO and EU classified documents. All the above mentioned laws are publicly available.

NCNAC and the Nuclear and Radioactive Waste Agency form Romania's mechanism which liaises with other countries to promote cooperation and the exchange of information concerning radioactive sources. More information is available at the official website of the Nuclear and Radioactive Waste Agency: www.andrad.ro.

There is no regional diplomatic forum that addresses nuclear security related issues.

Romania has enhanced regional cooperation on nuclear security in the region by doing the following:

- Regional meeting on Physical Protection of Nuclear Research Reactors (Romania, 2008)
- International seminar on Physical Protection of Nuclear Plants (Russia/Ukraine, 2007)
- International Exercise (Romania, 2003)
- Nuclear Security Convention; working with Group 1 countries and OEWG (Open-Ended Working Group) countries
- *Third meeting within the "Black Sea Border Security Initiative,"* which constitutes the first multilateral initiative for fighting against the mass-destruction weapons in the region (2006). The Initiative, initiated by the US Government, had an operational character, representing a concrete activity in the field of assuring the security of the Black Sea borders. This action was attended by Romania, Bulgaria, Moldova, Georgia, and Ukraine. Romania was represented by members of the inter-agencies work group on Black Sea Border Security Initiative (BSBSI) issues, representatives of the Ministry of Foreign Affairs, the Ministry of National Defense, the Ministry of Administration and Internal Affairs, the Romanian Intelligence Agency (SRI), the External Intelligence Agency, the CNCAN, the Customs National Authority, and the National Agency for Control of Exports. The reunions consisted of a presentation of potential cases, and established contact points and documents that would be filled in on a case-to-case basis. This presentation was followed by a theoretical presentation of the STYX 2005 exercise in real time, which completes the operational process of BSBSI.

UKRAINE

Accountability

Ukraine requires persons to obtain government authorisation to possess, use, transport, and/or store radioactive sources. The State Nuclear Regulatory Committee of Ukraine (SNRCU) is the government agency that is responsible for granting such licenses. SNRCU exchanges information concerning authorisations only upon request from foreign partners.

Ukraine's main registration centre responsible for managing the national register of radioactive sources is the State Register of Ionizing Radiation Sources, part of the Ukrainian State Industrial Enterprise "IZOTOP." The register collects information and notifications transacted by SNRCU (on issued licenses for use and permissions for transportation of Ionizing Radiation Sources), the State Customs Service of Ukraine (on Ionizing Radiation Sources crossing the border), the State "Radon" Association (on deposited Ionizing Radiation Sources), the manufacturer (on produced Ionizing Radiation Sources and customers), the supplier (on export/import of Ionizing Radiation Sources and customers), and the owner (on registration or changes of status, such as location or use in facility or storage in depositary).

Relevant laws are the Law of Ukraine on Authorization Activity in Nuclear Energy Use, Cabinet of Ministers of Ukraine Decrees No.1525 of 18.12.96; On Provision of State Register and Control System of Nuclear Materials, No.1718 of 16.11.2000; On Issues Concerning the State Regulation of Activity on the Use of Ionizing Radiation Sources, No.1830 of 27.12.2006; On Approval of the Provision of the State Nuclear Regulatory Committee of Ukraine, No.847 of 04.08.97; On Creation of State Register of Ionizing Radiation Sources.

Ukraine's information system dealing with the transportation and change of Ionizing Radiation Sources status guarantees strict control of Ionizing Radiation Sources from "cradle to grave," from the import to the final disposal. This minimises the possibility of illegal import of Ionizing Radiation Sources into Ukraine. The State Register of Ionizing Radiation Sources exchanges the information contained in its registry only upon request from foreign partners.

Ukraine maintains publicly available documents describing the country's national register of radioactive sources, how it works, and how it exchanges information

with other countries. Resolution of the Cabinet of Ministers of Ukraine No.1718 of 16 November 2000 on some issues of state regulatory activity on the use of sources of ionizing radiation, regulates the registration procedure of Ionizing Radiation Sources and determines the list of Ionizing Radiation Sources used in activity that does not require licensing.

Civilian Nuclear Facilities

Ukraine's Ministry of Fuel and Energy is responsible for providing guidance and oversight on the security of the civilian nuclear facilities, by taking all necessary measures to guarantee nuclear security and physical protection. Simultaneously, SNRCU regulates nuclear energy use; makes sure that nuclear and radiological security requirements are fulfilled; exercises state oversight on the observation of legislation, norms, legal rules, regulations and standards of nuclear energy use, nuclear and radiological security requirements; determines security criteria, requirements and conditions when using nuclear energy; develops and sanctions norms, regulations and standards of nuclear and radiological security, physical protection of nuclear power systems, nuclear materials, radioactive waste and other sources of ionizing radiation; oversees the implementation of measures aimed at preventing accidents in the process of production and use of ionizing radiation sources in nuclear power systems, facilities destined for radioactive waste treatment, uranium facilities, and ensures the adequate readiness of enterprises, facilities and organisations to eliminate the consequences of such incidents.

SNRCU has established agreements with government agencies in other countries which make trans-boundary transportation of radioactive substances possible and provide notice of any nuclear or radioactive incidents. A meeting of experts is also organised once a year.

Additionally, SNRCU prepares national reports on Ukraine's progress on fulfilling its obligations towards the Convention on Nuclear Safety, the Joint Convention on the Safety Fuel Management and on the Safety of Radioactive Waste Management, which then presents to international organisations.

Detection

The Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster is Ukraine's government agency responsible for the detection and monitoring of radioactive sources. It measures the radiation level of scrap metal at metallurgical enterprises

and domestic waste junkyards, in order to detect Ionizing Radiation Sources or contaminated metal.

Ukraine's Border Service possesses and uses radiation monitoring equipment to maintain a capability to detect the illicit movement of nuclear and other radioactive sources and substances across borders, ports, and airports. It also liaises and exchanges information with similar agencies in other countries within the region.

Ukraine has a system that guarantees that radioactive sources are identifiable, defined by the Decree of the Cabinet of Ministers of Ukraine No.813 of 02.06.2003 "On Approval of Cooperation Order between executive power bodies and Juridical Persons, which conduct the activity in the sphere of nuclear energy, in the case of detection radionuclide sources of ionizing radiation in the illegal circulation" and managed by SNRCU. In the event illegal radioactive sources, such as nuclear materials, radioactive waste, or other sources of ionizing radiation, are detected, the local body of executive power sends the relevant information to SNRCU, which then searches the register for data concerning the radioactive source, such as contract number, name and address of both the owner and the recipient, date of delivery, storage place, Ionizing Radiation Sources characteristics, etc. In case the identification of the owner through the register is impossible, SNRCU addresses its counterparts in other countries, in order to establish where the ionizing radiation source was manufactured and to identify its owner. Additionally, the Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster has a specialised laboratory capable of running radioactive sources identification tests.

Ukraine's Ministry of Industrial Policy is responsible for issuing personal dosimeter equipment to government personnel.

International programmes that provide radioactive source detection technology to Ukraine are effective and useful. Ukraine obtained such equipment in order to manage the boundaries and perimeter of the Chernobyl Zone.

Ukraine's Border Service analyses the information generated by the radiation monitoring equipment. In case an Ionizing Radiation Source not included in the register is detected, the Border Service contacts the relevant agencies of the

neighbouring states. Simultaneously, upon request from the neighbouring states, it provides information on radioactive sources transit through Ukraine's borders.

Search, Confiscate, Establish Safe Control

In the event of a missing radioactive source, SNRCU sends a written notice to Ukraine's Security Service, which then acts towards the search and return of the source, and is involved in the searching process itself. It also liaises, exchanges information, and engages in exercises with similar government entities in other countries.

In the event of an accident or malicious act involving a radioactive source, Ukraine's Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster is responsible for responding. Depending on the nature and aftermath of the incident, other agencies might be involved. Then, the Security Service and the Ministry for Internal Affairs are responsible for investigating criminal cases on the intended malicious acts.

The procedure is determined by the Decree of the President of Ukraine No.80 of 09.02.2001 on measures concerning increase of level of population health and of territory protection in case of technological and natural accidents; and Cabinet of Ministers Decree No.1567 of 16.11.2001 on approval of the Reaction Plan in the case of emergency of the state level.

All the government entities charged with responding to such situations liaise, exchange information, or engage in exercises with similar government agencies in other countries. Ukraine participates in international cooperation schemes by conducting joint scientific research; elaboration and implementation of international programmes, treatments, memorandums, etc.; creation of joint working group for accompaniment and management of international projects; information exchange and international experience study; participation in international congresses, conferences, symposia, exhibitions, trade fairs, joint trainings and retraining of rescue service and special rescue service management staff; obtaining membership in international organisations; support of professional and international contacts, etc.

Prevent Terrorist Safe Haven

Ukraine conducts a formal national vulnerability assessment with respect to the threat of nuclear terrorism based on the potential for loss of control and/or malicious acts involving one or more radioactive sources. Moreover, it has mechanisms to notify the receiving country of its intent to export radioactive sources to that country, and acts in case a certificate of the final recipient is necessary.

Ukraine requires that the import of nuclear materials is pre-approved by the national government, only when the exporter requires the government to guarantee, and when there are appropriate intergovernmental agreements in place. Simultaneously, depending on the source radiation rate, Ukraine requires the export of some radioactive sources is pre-approved by the receiving country, although the export of some low-rate or specific radioactive sources does not have to be pre-approved. The Service of Export Control is responsible for obtaining such approvals.

In the same manner, Ukraine requires that the transport of radioactive sources through its territory is conducted in a manner consistent with IAEA standards for the transport of such material. Additionally, in case an accident involving a radioactive source occurs while being transported, Ukraine demands an intergovernmental agreement or guarantee to be in place as compensation.

Appropriate units of the Ministry of Internal Affairs and the Security Service are responsible for investigating financial crimes.

Legal and Regulatory Frameworks

Ukraine has in place national legislation and regulations to control the management and protection of radioactive sources. For example, there is a law on physical protection of nuclear facilities, nuclear materials, radioactive waste and other radioactive sources, while there are SNRCU's requirements which represent instructions/regulations, developed on the basis of IAEA's appropriate requirements/recommendations. Both the legislature and the regulations are publicly available.

SNRCU is responsible for the safe and secure use and storage of radioactive materials, while governmental and commercial entities are directly responsible for the safety and security of radioactive sources in the sphere of their activity. It also

liaises, exchanges information and engages in other routine activities with similar regulatory bodies in other countries.

Ukraine has laws and regulations that require the prompt reporting to SNRCU of a loss of control over radioactive sources or an incident involving radioactive sources.

The region is home to a unified framework of complementary laws and regulations that enable countries to monitor, account for, and protect nuclear materials as they move from originator countries to destination countries. Various intergovernmental agreements regulate special procedures of nuclear material transportation, delivery, and security services, and procedures of cooperation between Ukrainian agencies and services from origin and destination countries. Those agreements designate the order of interaction in the event of an incident involving radioactive materials during their transportation and also the financial liability for incurred losses/damages. Those agreements are confidential.

Response and Mitigation

Ukraine's Security Service is responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials, while the Ministry for Internal Affairs' Internal Troops are responsible for the transportation and storage of radioactive materials.

The Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster is the country's national emergency response agency responsible for responding to an incident involving nuclear sources that has caused personal injury or property damage. It also liaises, exchanges information, engages in joint training and conducts joint exercises relating to nuclear terrorism with similar agencies in other NATO countries, Russia, Belarus, Kazakhstan, Armenia, and other countries.

Ukraine's laws and regulations require the preparation of emergency response plans for certain sectors of the society, e.g. nuclear power plants, communities located close to nuclear sources, objects where radioactive materials are used or stored, etc. Such are a plan for response in the event of an accident involving a radioactive source, and a plan for response in the event of an accident at an object where works with radioactive and nuclear technology take place. Those plans are

to be developed by central and local executive authorities as well as state-owned companies, and implemented by the directors of the latter.

Emergency response operations that cross international borders are conducted in accordance with intergovernmental agreements.

Information Sharing

The Ministry for Internal Affairs' Internal Troops are the central authority and international point of contact within Ukraine responsible for the physical protection of nuclear sources.

Ukraine has a mechanism to promptly provide notice of any loss of control over radioactive sources, or any incidents, to include any theft, robbery or other unlawful taking with potential trans-boundary effects or a credible threat thereof to potentially affected neighbouring states. SNRCU informs IAEA of any such loss or incident by means of a notice written in accordance to a set form sent to IAEA's illegal radioactive materials storage or using database.

Ukraine has in place measures to protect the confidentiality of any information that is received in confidence from another country, while documents describing the available protections provided by Ukraine to information relating to nuclear sources that is received in confidence from another nation are confidential. However, SNRCU liaises with other countries to promote cooperation and the exchange of information concerning radioactive sources.

There is a diplomatic forum in the region that addresses nuclear security related issues.

6. Final Assessment

Overall, judging from the assessment of the status quo among the Black Sea region countries, which is based on the answers received in reply to the Questionnaire, most of the countries seem to be satisfyingly prepared as far as combating nuclear terrorism is concerned. More precisely, all of them have established government agencies responsible for nuclear-related issues and national registers.

Nevertheless, the main setbacks are primarily:

- (i) insufficient cooperation among the states of the region;
- (ii) limited channels of cooperation between some states of the region and with the international community;
- (iii) fragile situation in the existing 'hot spots' (e.g. Nagorno-Karabakh, etc.) and their transformation into the smuggling corridors;
- (iv) presence of registered and non-registered (orphaned) sources of nuclear and radiological materials, especially in Georgia.

The analysis which follows is basically a state-oriented (in the alphabetical order).

The situation in **Armenia** can not be comprehensively assessed due to the fact that the country's answers to the Questionnaire were incomplete and no experts from Armenia participated in the session of Task Force in Istanbul. Armenia is not especially active as far as international cooperation is concerned, and moreover, the fact that in Armenia the owners of the civilian nuclear facilities are responsible for their facilities' security and safety is in many regards worrisome.

Azerbaijan, on the other hand, seems to be better prepared for combating nuclear terrorism. Except for the Republic of Armenia, with whom Azerbaijan is in the state of war, there are no political or other obstacles that seem to inhibit liaising, exchange of information, holding of joint trainings, etc., with other countries in the region. Possible conclusion by Azerbaijan of further agreements on the exchange of information with other countries of the region could facilitate this process.

Under the bilateral US-Azerbaijan agreement on non-proliferation cooperation, border crossing points of the country are being equipped with different types of

radiation detection technology, and under the various US programs, Azerbaijan is being provided with different types of technology and training.

Furthermore, within the framework of GUAM, Azerbaijan has implemented an Intergovernmental Agreement on Cooperation in Combating Terrorism, organized crime and other hazardous crimes (Law No. 467-IIQ of 10 June 2003) which requires preventing and combating criminal offences cooperatively as stipulated in its Article 1.

Regarding Armenia and Azerbaijan, the most worrying issue stems from the situation in Nagorno-Karabakh that is officially not under control. The situation there is not transparent and the same applies to other 'hot spots' of the 'gray zones'. On a purely legal basis, the international organizations cannot collect information on the non-proliferation situation in such 'hot spots', since the key question remains - what is the authority to be addressed. For instance, the IAEA has such difficulties in collecting information on the situation in Nagorno-Karabakh.

Bulgaria, as a member state of the NATO and EU, seems to be in good posture in combating nuclear terrorism. The responsible institution is the Nuclear Regulatory Agency (NRA) that routinely liaises and/or exchanges information with countries of South Eastern Europe. Bulgaria has established procedures to request other countries (specifically Romania, Serbia, FYROM, Greece and Turkey) to monitor possible traffic in radioactive materials at their borders, check-points and airports. Furthermore, the law enforcement and emergency response agencies are actively involved with similar agencies in countries of South Eastern Europe under the NATO and EU auspices. Lastly, it should be noted that Bulgaria is a party to the Agreement of the NATO member states in the Sphere of Cooperation Related to Nuclear Information.

Georgia seems to be well prepared, although some changes in the nuclear fighting mechanisms can occur. Such proposals have been made by Georgian officials and can be found in the relevant country sheet. Georgia has relevant legislature in place and its agencies seem to cover every aspect of fighting nuclear terrorism. One of the major problems, however, seems to be the fact that some agencies' missions overlap and there seems to be an unnecessary bureaucracy. Furthermore, it should be mentioned that Georgia is a small country situated on the territory of the South Caucasus region and neighbored by some countries with the developed

nuclear industries. The country had received difficult heritage from the Soviet past – a number of abandoned (orphaned) radioactive sources. There have been found 293 sources of such type in Georgia. Last, but not least, another big issue is the export-import control: Georgia is a transit country, therefore, many cargoes cross the Georgian territory and this is exactly why special attention should also be paid to illegal movement of radioactive sources through the Georgian borders.

Greece is perhaps the best prepared country in the region, very much thanks to the organisation of the 2004 Olympic Games. It has one agency responsible for nuclear-related issues which cooperates efficiently with other relevant agencies. Greece is a key country in the region, and its international activity is valuable in the context of combating smuggling of radioactive materials.

Moldova has an extensive relevant legislature in place which seems to cover every aspect of the struggle against nuclear terrorism and the mechanisms of response to a radioactive accident. The fact that Moldova participates in a series of international programs, many of them led and funded by the US government and IAEA, satisfactorily demonstrates that the country is well prepared. However, the country has also a large number of relevant agencies, which might mean, in reality, that it would be hard to synchronize their action in the event of emergency. By and large, when it comes to Moldova, one should bear in mind that it is not a complicated case as there are no nuclear facilities on its soil and the existing very small quantities of nuclear materials are accounted for and reported by the NARNRA (regulatory authority). Nevertheless, as in other states of the region, there are transit issues and one should also take into account the ‘hot spot’ situation in Transnistria.

Romania is very active internationally, but keeps many documents classified. Generally, Romania does not share information contained in its registry with other countries in the region, as this kind of information is classified. Overall, Romania does not have any publicly available documents describing its national register of radioactive sources, how it works, and how it exchanges information with other countries, as such information is classified. Nevertheless, in the case of Romania, it is positive that the country is a member state of the EU and NATO, exchanges information in recent years on a regular basis, and engages in exercises with similar government agencies in other countries of the region.

Ukraine, having already encountered a nuclear disaster, has all the necessary legislation and infrastructure in place to handle anything similar in the future. The fact that there is the Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster is very positive in its own. Lastly, Ukraine is also willing to cooperate with other states of the region in combating nuclear terrorism. More precisely, the Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster also liaises, exchanges information, engages in joint training and conducts joint exercises relating to nuclear terrorism with similar agencies in other NATO countries, as well as in Russia, Belarus, Kazakhstan, Armenia, and other countries.

Last, but not least, it is worrying that the experts/practitioners from **some of the region's most important states** did not provide any answer to the Questionnaire.

The information presented in the tables below is meant to facilitate the comparison among the Black Sea countries as far as the assessment of their status quo in responding to the threat of nuclear terrorism is concerned. It is to be used as an illustration of answers to the Questionnaire, provided by experts/practitioners from most of the Black Sea countries and included in this very Report, but not as a self-standing material.

Abbreviations

ANCEX	National Agency for Export Controls
ANDRAD	National Agency for Radioactive Waste
ANRA	Armenian Nuclear Regulatory Authority
CBRN	Chemical, Biological, Radiological and Nuclear
ER-NET	Emergency Response Network
EU	European Union
FBI	Federal Bureau of Investigation
GAEC	Greek Atomic Energy Commission
GUAM	Georgia-Ukraine-Azerbaijan-Moldova Organization for Democracy and Economic Development
IAEA	International Atomic Energy Agency
ITDB	Illicit Trafficking Data Base
NARNRA	National Agency on Regulation of Nuclear and Radiological Activities
NATO	North Atlantic Treaty Organization
NCNAC	National Commission for Nuclear Activities Control
NPT	Nuclear Non-Proliferation Treaty
NRSS	Nuclear and Radiation Safety Service
SECI	Southeast European Cooperative Initiative
SEDM	Southeastern European Defence Ministerial
SEEIC	South East Europe Intelligence Conference
SEESAC	South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons
SNRCU	State Nuclear Regulatory Committee of Ukraine
UK	United Kingdom
USA	United States of America

Table I: Accountability

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Government authorization to possess, use, transport, or store radioactive sources required	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes
Government agency granting such authorizations	Ministry of Energy and Natural Resources; ANRA	State Agency on Regulation of Nuclear & Radiological Activity (SANRAR) of Ministry of Emergency Situations and the Sanitary-Hygiene Centre of the Ministry of Health. In addition, the State Civil Aviation Administration is responsible for granting permissions	Chairman of the Nuclear Regulatory Agency (NRA)	NRSS	GAEC	NARNRA	NCNAC			SNRCU

		to the airplanes for transportation of dangerous goods through Azerbaijan's airspace								
- Information on authorizations exchanged with other countries - If so, under what circumstances - If not, why	Yes, upon request	SANRAR can exchange such information with other countries, if requested, and if stipulated by the agreements concluded with the IAEA and other states (e.g. Ukraine, Lithuania, Belarus)	N/A	Yes, upon request	Yes, upon request via IAEA	Yes, depending on the nature of information	Yes, upon request and through law enforcement or other agencies			Yes, upon request
National register of radioactive sources established	Yes	Regulation on register drafted and submitted to Ministry of Emergency Situations	N/A	Yes	Yes	Yes	Yes			Yes

Government agency responsible for maintaining the register	ANRA	SANRAR is proposed to be such agency in the draft Regulation	N/A	Ministry of Environment Protection and Natural Resources	GAEC	NARNRA	NCNAC			State Register of Ionizing Radiation Sources
- Information contained in registry exchanged with other countries - If so, under what circumstances - If not, why	Yes, publicly available	No information which will be included in the future Register is yet being shared with other states in the region	N/A	Lack of clearly outlined procedures on the publicity of information	No, due to confidentiality requirements	Yes, depending on the restriction level, access to information might be limited	No, this kind of information is classified			Yes, upon request
Publicly available documents describing the national register of radioactive sources	Yes	Once the Regulation has been approved, SANRAR will place on its website information on the Register, its operational methods, exchange of information with other countries and non-classified documents	N/A	No	No	Yes	No			Yes, upon request

If so, can you provide a copy of such documents or tell us how to obtain a copy of such documents?	Upon request	The future website	N/A			A copy can be officially obtained from NARNRA, provided that the interested party has an agreement with IAEA				Yes
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Table II: Civilian Nuclear Facilities

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Government agency responsible for providing guidance and oversight concerning the security of civilian nuclear facilities	None (the owners of the civilian nuclear facilities are responsible)	There are no civilian nuclear facilities in Azerbaijan	NRA	Ministry of Internal Affairs' nuclear smuggling fighting section; Ministry of Environment Protection and Natural Resources; Ministry of Internal Affairs' protection police	GAEC	NARNRA	NCNAC			Ministry of Fuel and Energy; SNRCU
- Information on the security of civilian nuclear facilities exchanged with other countries shared - If so, please identify the countries - If not, why	N/A	Due to the absence of civilian nuclear facilities in Azerbaijan, there is no exchange of such information	NRA routinely liaises and/or exchanges information with Southeast European (SEE) countries and Russia; it also posts information	<i>[General note: Georgia does not have any nuclear power plants or other objects that use nuclear weapons-grade materials]</i>	<i>[General note: Greece does not have any Civilian Nuclear Facilities]</i>	Yes, with the member states of IAEA, GUAM, and the South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light	Yes, mostly with Bulgaria, Ukraine, and Russia			Yes, with the member states of IAEA

			on its website	<i>such as uranium or plutonium/</i> Georgia does not liaise or exchange relevant information with other countries within the region, since officials see no need for such an action		Weapons (SEESAC)				
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Table III: Detection

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Agency responsible for the detection and monitoring of radioactive sources	ANRA	SANRAR, Ministry of Internal Affairs, Ministry of National Security, Ministry of Emergency Situations, Ministry of Defense, State Customs Committee, State Border Service	NRA	NRSS; Ministry of Internal Affairs	GAEC	No, the responsibility is in the competence of each involved institution The Hydrometeorological Service of the Dept. of Environment Monitoring is responsible for the monitoring of Moldova's entire territory.	NCNAC; Ministry of Health's Radiation Department			Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster
-Country possesses and uses radiation monitoring equipment -If so, what agencies are responsible for it?	Yes; the Customs Service	Yes. All above agencies are responsible and possess various types of radiation monitoring	Yes, NRA and General Directorate "Civil Protection National Service" under the Ministry of	Yes; the Patrol Police	Yes; the Customs Service	Yes; the Border Guards Service and the Customs Service	Yes; NCNAC, the Border Police, the Customs Service, and the Intelligence Service's			Yes; Border Service

		equipment. In addition, the Hygiene and Epidemiological Center of the Ministry of Health provides other state agencies with personal dosimeters	Interior				Counterterrorist Brigade			
-Agencies liaise or exchange information with similar agencies in other countries within the region -If so, please identify the countries	No, Customs Service agents only participate in joint training sessions	Azerbaijan exchanges information with some countries, but is interested in deepening multilateral & bilateral cooperation to strengthen its radiation detection capabilities	NRA routinely liaises and/or exchange information with SEE countries.	No	Yes	Yes, with Slovakia, Turkey, Israel, and Austria	Yes, EU and NATO member states, neighbouring countries			Yes
-Procedures to request other countries to monitor at	Yes	All state agencies submit information concerning	Yes, NRA has established procedures to request	No	No	Yes, with the appropriate agencies of Romania,	Yes, Bulgaria, Hungary, Ukraine, and Serbia			Yes, RF, Moldova, Belarus, Slovak Republic, Hungary,

their borders, ports, and airports to detect radioactive sources established -If so, please identify the countries		the movement of nuclear and radioactive sources to the SANRAR, which regularly informs the IAEA. Also, the State Customs Committee engages in information exchange with its foreign counterparts within the existing procedure of the World Customs Organization	other countries (specifically Romania, Serbia, Macedonia, Greece and Turkey) to monitor at their borders, posts and airports.			Bulgaria, Germany, Hungary, Poland, the UK and the USA				Poland, Romania
-System for ensuring that radioactive sources are identifiable and traceable established -If so, please	Yes	Yes. As above	Yes, the Act of the Safe Use of Nuclear Energy, the Law on the Export Control on	Yes	Yes, Greece uses IAEA's Illicit Trafficking Data Base (ITDB)	Yes, a periodical exchange of information on potential sources of risk with dual purpose	Yes			Yes

describe it			Arms and Dual Use Items and Technologies and the Regulation for its Implementation			is organised by the Ministry of Foreign Affairs and European Integration within the framework of the International Counterproliferation Program				
-Personal dosimeter equipment to government personnel issued -If so, what agencies issue it	Yes, issued by IAEA	The Hygiene and Epidemiological Center of the Ministry of Health provides other state agencies with personal dosimeters	Yes, the NRA and General Directorate "Civil Protection National Service" under the Ministry of Interior are responsible for issuing personal dosimeter equipment to government personnel.	Yes, issued through various international programmes run by the US government	Yes, issued by GAEC	Yes, all government agencies responsible for fighting nuclear terrorism in the country are available to provide their personnel with such equipment	Yes, issued by NCNAC			Yes, Ministry of Industrial Policy
-Are international	Yes	Yes	N/A	Yes	Yes	Yes	Yes			Yes

programs effective and useful? -If not, why?										
What happens to information that is generated by radiation monitoring equipment?	N/A	Such information is reported to IAEA by SANRAR. Also, State Customs Committee exchanges information with its foreign counterparts under the existing procedure of the World Customs Organization	N/A	Information generated by radiation monitoring equipment is transmitted to the Patrol Police Headquarters or to the Ministry of Internal Affairs' Central Directorate	All information is exchanged through ITDB	Any government agency that has obtained information from the radiation monitoring equipment has to inform the Ministry of Internal Affairs' Emergency Situations Service and NARNRA. The Ministry will then appoint an <i>ad hoc</i> Commission for Emergency Situation, which consists of representatives of all state	All information is disseminated to the local authorities and shared with IAEA through NCNAC			The Border Service analyses the information generated by the radiation monitoring equipment

						structures who will make a briefing of the situation and undertake the necessary measures. In case the situation proves to be a nuclear terrorism act, the management of the situation will be passed to the Security and Information Service				
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Table IV: Search, Confiscate, Establish Safe Control

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Government response to a missing radioactive source	The Ministry of Emergency Situations, the National Security Service and ANRA open an investigation	When a radioactive source is missing, the Ministry of Interior and Ministry of Emergency Situations implement the response measures	N/A	NRSS is informed, and then the Ministry of Internal Affairs' specialised section initiates a criminal case and performs the search and investigation	GAEC immediately shares information about the missing source through ITDB, in which Police has a direct access, and exercises and exchanges information in the context of international organisations such as the EU and IAEA	In the event of a missing radioactive source, the company or agency responsible for the source has to proceed accordingly to the Emergency Action Plan of the Emergency Response Scheme within one hour. The Commission for Emergency Situations will then be convened with representatives of all relevant state	Missing radioactive sources are reported to the Ministry of Internal Affairs, the Ministry of Health and to the Intelligence Service.			SNRCU sends a written notice to Ukraine's Security Service, which then acts towards the search and return of the source, and is involved in the searching process itself

						structures which will decide on the response procedure.				
Government entity responsible for recovering the missing radioactive source	ANRA	Ministry of Interior and Ministry of Emergency Situations are responsible for recovering the missing radioactive source	The State Agency for National Security together with the Ministry of Interior	Ministry of Internal Affairs' specialised section	GAEC	NARNRA and the Security and Information Service	NCNAC			Security Service
-Government entity designated to search for missing radioactive sources -If so, please name it	No	There is no concrete state agency that has a specific mission to search for missing radioactive sources. If a loss takes place, the relevant structures of Ministry of Emergency Situations	N/A	Ministry of Internal Affairs' specialised section	GAEC	NARNRA and the Security and Information Service	NCNAC			Security Service

		(SANRAR, “Izotop” special plant, and Civil Defense forces), the Ministry of Interior and Ministry of National Security are involved in the search activities. All cases involving radioactive sources (loss, accident, etc.) are reported to 112 hotline service in Ministry of Emergency Situations. Operators of the hotline service immediately inform SANRAR and other relevant								
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		structures and a search process is launched								
-Government entity liaises, exchanges information, or engages in exercises with similar government entities in other countries -If so, name the countries	No, such activities take place only in the framework of IAEA	Due to the lack of agreed special procedures and mechanisms, the above-mentioned state agencies do not liaise and exchange information with similar government entities in other countries. However, national experts constantly participate in trainings on search for the missing radioactive sources	N/A	No	Yes	N/A	No, but it is available to engage in exercises with other countries			Yes

<p>-Government response in the event of an accident or malicious act involving a radioactive source -Government entity responsible</p>	<p>The Ministry of Emergency Situations, which is responsible for responding in the event of an accident, localises, monitors and conducts breakdown elimination. Depending on the nature of the incident, the National Security Service is also involved</p>	<p>In the event of an accident or malicious act involving a radioactive source, the Ministry of Emergency Situations, Ministry of Interior and Ministry of National Security implement relevant response measures. Perpetrators are criminally persecuted</p>	<p>In the event of an accident or malicious act involving radioactive sources, NRA and General Directorate “Civil Protection National Service” under the Ministry of Interior deal with the consequences while the State Agency for National Security together with the Ministry of Interior deal with the malicious persons.</p>	<p>NRSS is informed, and then the Ministry of Internal Affairs’ specialised section initiates a criminal case and performs the search and investigation</p>	<p>In the event of an accident or malicious act involving a radioactive source, a Chemical, Biological, Radiological and Nuclear (CBRN) plan has been designed to deal with such situations. It is coordinated by the General Secretariat of Civil Protection and involves all the related agencies (GAEC, Police, Coast Guard, etc.), which then respond</p>	<p>In the event of an accident or malicious act involving a radioactive source followed by radioactive emissions the local civil authorities and the territorial subunit of the Emergency Situations Service have to inform the Emergency Situations Service accordingly to the emergency response mechanism with detailed description of the events that</p>	<p>NCNAC cooperates with the Inspectorate for Emergency Situations, the Police, the Gendarmerie, and the Ministry of Health, and then is involved in establishing/identifying the causes of the event and its consequences.</p>			<p>Ukraine’s Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster is responsible for responding. Depending on the nature and aftermath of the incident, other agencies might be involved. Then, the Security Service and the Ministry for Internal Affairs are responsible for investigating criminal cases on the intended malicious acts</p>
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						took place within 30 minutes. If there is an emergency, information should indicate its category specifying the type according to its provocative factors.				
Government agencies responding in the event of an accident or a malicious act involving a radioactive source	Ministry of Emergency Situations; National Security Service	Ministry of Emergency Situations, Ministry of Interior and Ministry of National Security	NRA; General Directorate "Civil Protection National Service; State Agency for National Security; Ministry of Interior	NRSS; Ministry of Internal Affairs' specialised section	GAEC, Police, Fire Dept.	Local authorities, organisations, enterprises, and operators, regardless of their form of ownership. However, if the situation cannot be dealt with the human resources and means available, then the territorial	NCNAC, the Inspectorate for Emergency Situations, Police, Gendarmerie, and the Ministry of Health			Ministry for Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster; Security Service; and the Ministry for Internal Affairs

						commission will address the National Emergency Situation Commission , asking for the involvement of the Ministry of Defense, the Ministry of Internal Affairs, etc.				
-Government liaise, exchange information, or engage in exercises with similar government agencies in other countries -If so, name the countries	No, such activities take place only in the framework of IAEA	Due to the lack of agreed special procedures and mechanisms , the above-mentioned state agencies do not liaise and exchange information with similar government entities in other countries. However,	N/A	Yes, the specialised section contacts its counterparts abroad when it needs help	Yes	Moldova participates in the Knowledge Management System on the prevention of illicit trafficking of Chemical, Biological, Radiological , and Nuclear (CBRN) material in South East Europe and the Caucasus	Yes, Bulgaria, Hungary, and Ukraine			Yes

		national experts constantly participate in trainings on search for the missing radioactive sources				(KMS I), by the United Nations Interregional Crime and Justice Research Institute (UNICRI)				
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Table V: Prevent Terrorist Safe Haven

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Formal national vulnerability assessment with respect to the threat of nuclear terrorism	N/A	Yes. According to Presidential order of 12 May 2009, Ministry of National Security and Ministry of Emergency Situations are the competent authorities re: Art. 7.4 of the Internat’nal Convention for the Suppression of Acts of Nuclear Terrorism	Yes, the State Agency for National Security and NRA conduct formal national vulnerability assessment with respect to the threat of nuclear terrorism.	No, however the points of vulnerability and counter-measures to any malicious acts are regularly identified and carefully thought through according to the agencies in charge	Yes	Yes	Yes			Yes
-Mechanisms to notify the receiving country of its intent to export radioactive	Yes, the country informs IAEA of its intention and only then the	There is a mechanism established by the Decision 230 (2005) of the	Yes, the Act of the Safe Use of Nuclear Energy, the Law on the Export	N/A	Yes, for EU member states notification is conducted with the Annex	N/A	Yes, the export of a radioactive source needs an export authorization, and also			Yes

sources to that country -Describe them	receiver, with whom it signs a contract to possess, use, transport and store radioactive sources	Cabinet of Ministers “On the approval of some normative acts concerning the application of the Law of the Republic of Azerbaijan on Export Control”. The Decision 230 requires pre-approval by the receiving country of the export of radioactive sources. The Cabinet of Ministers is responsible for obtaining such approvals. At the same time, it	Control on Arms and Dual Use Items and Technologies and the Regulation for its Implementation stipulate the mechanism to notify the receiving country of Bulgaria’s intent to export radioactive sources to that country.		document, while for third countries a confirmation of acceptance by the receiving country is necessary. GAEC is responsible for obtaining such confirmations		to be pre-approved by the receiving country. The agency responsible for giving approvals is ANCEX			
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		should be noted that Azerbaijan neither produces, nor exports radioactive sources								
-Import of nuclear materials pre-approved by the national government -Please identify the agency or body that issues such approvals	Yes, the Ministry of Energy and Natural Resources is responsible for issuing licenses for the import of nuclear sources, while ANRA for radioactive sources	According to the above Decision 230, import of nuclear materials or radioactive sources into Azerbaijan is subject to prior approval by the Cabinet of Ministers based on opinions of SANRAR (the Ministry of Emergency Situations) and the Hygiene and Epidemiological Center of the Ministry of Health	Bulgaria requires that import of nuclear materials into the country be pre-approved as stipulated in the Act of the Safe Use of Nuclear Energy, the Law on the Export Control on Arms and Dual Use Items and Technologies and the Regulation for its Implementation, with NRA issuing the approval	Yes, the Ministry of Economic Development	Yes, GAEC	No, if the materials are imported by a NARNRA authorized agent whose activity was ensured to be in compliance with applicable national laws and international treaties on nuclear energy to which Moldova is a party	Yes, ANCEX			Yes

<p>-Export of radioactive sources pre-approved by the receiving country. -Please identify the government entity that is responsible for obtaining such pre-approvals</p>	<p>Yes, however approval is issued only if there is a license or a contract. There is no government entity responsible for obtaining such pre-approvals</p>	<p>The above Decision 230 requires pre-approval by the receiving country of the export of radioactive sources. The Cabinet of Ministers is responsible for obtaining such pre-approvals. At the same time, it should be noted that Azerbaijan neither produces, nor exports radioactive sources</p>	<p>N/A</p>	<p>Yes, the Ministry of Environment Protection and Natural Resources</p>	<p>Yes, GAEC</p>	<p>Yes, if the radioactive sources belong to the group of strategic goods. The Interdepartmental Commission on Strategic Goods Export, Re-export, Import, and Transit Control is responsible</p>	<p>Yes, ANCEX</p>			<p>Yes, the Service of Export Control</p>
<p>Transport of radioactive sources conducted in a manner consistent with IAEA standards</p>	<p>Yes</p>	<p>According to the above Decision 230, transportation of radioactive sources</p>	<p>Article 25 from the Act of the Safe Use of Nuclear Energy sets the standards</p>	<p>Yes, however there is no freight company that would implement the</p>	<p>Yes</p>	<p>Yes</p>	<p>Yes</p>			<p>Yes, in case an accident involving a radioactive source occurs while being transported, the country</p>

		through the territory of Azerbaijan is subject to pre-authorization by the Cabinet of Ministers. One of the conditions for such authorization is the conformity of transit process with the IAEA standards	for transport of radioactive sources	transportation, and NRSS considers using Azerbaijani companies for this purpose						demands an intergovernmental agreement or guarantee to be in place as compensation
-Law enforcement unit responsible for investigating financial crimes -Please identify the agency responsible for this unit.	N/A	It is the Ministry of Taxes that is responsible for the investigation of financial crimes	The Financial Intelligence Agency under the Ministry of Finance is responsible for investigating financial crimes.	Yes, the Financial Monitoring Service and the Ministry of Finance's Financial Police	Yes, the Ministry of Finance's Special Investigation Agency	Yes, the Center for Combating Economic Crimes and Corruption	Yes, the Ministry of Internal Affairs and Directorate for Investigating Organized Crime and Terrorism (within the General Prosecutor's Office at the High Court of Cassation and Justice)			Yes, the Ministry of Internal Affairs and the Security Service

Table VI: Legal and Regulatory Frameworks

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
National legislation to control the management and protection of radioactive sources in place	Yes	Yes	Yes, the Act of the Safe Use of Nuclear Energy	Yes	Yes	Yes	Yes			Yes
-Copy publicly available -If so, can you provide one?	Yes, ANRA's official website	Yes. Available in official publications and websites	Yes, http://www.bnsa.bas.bg/en/documents-act-eng.pdf	N/A	Yes, GAEC's official website	Yes, at the State Registry's official website	Yes, NCNAC's official website			Yes
National regulations to control the management and protection of radioactive sources in place	Yes	Yes, such regulations are in place	Yes, the Rules of Procedure of the Nuclear Regulatory Agency control the management and protection of radioactive sources	Yes	Yes	Yes	Yes			Yes

-Copy publicly available -If so, please provide one	Yes, ANRA's official website	Yes. Available in official publications and websites	Yes, http://www.bnsa.bas.bg/en/documents-en/legislation/rulesofproced/rules-of-procedure.pdf	N/A	Yes, GAEC's official website	Yes, at www.justice.md	Yes, NCNAC's official website			Yes
-Regulatory body responsible for the safety and security of radioactive sources established - If so, please identify it	Yes, ANRA	Yes, SANRAR of the Ministry of Emergency Situations is the established regulatory body responsible for the safety and security of radioactive sources	Yes, NRA	Yes, the Ministry of Environment Protection and Natural Resources	Yes, GAEC	Yes, NARNRA	Yes, NCNAC			SNRCU is responsible for the safe and secure use and storage of radioactive materials, while governmental and commercial entities are directly responsible for the safety and security of radioactive sources in the sphere of their activity
-Established regulatory body liaising, exchanging information or engaging in	N/A	SANRAR is cooperating with the similar regulatory bodies in	N/A	No, information exchanged only informally	Yes, GAEC	Yes, NARNRA	Yes, NCNAC			Yes, SNRCU

other routine activities with similar regulatory bodies in other countries -If so, please describe		Ukraine, Turkey, Belarus, Germany, Lithuania, Moldova. SANRAR is also liaising with IAEA								
-Laws and/or regulations that require the prompt reporting to a national agency of a loss of control over radioactive sources or an incident involving radioactive sources -If so, please identify the national agency responsible -Please provide a copy	Yes, the owner of a radioactive material must report its loss	Yes, there are such laws in place. In accordance with Article 5.2.3 of the Decision 42 of the Cabinet of Ministers dated 12 April 2004, all accidents involving radioactive sources are reported to Ministry of Emergency Situations, Ministry of Health and Ministry of Ecology and Natural Resources,	N/A	Yes	Yes, the agency responsible is GAEC	Yes, NARNRA	Yes			Yes

		as well as to the heads of administrations of affected regions and to the population. The above Decision 42 can be obtained from the website of the relevant state agencies								
-Unified framework of complementary laws and regulations within the region enabling countries to monitor, account for, and protect nuclear materials as they move from originator countries to destination	No, because the current situation in the South Caucasus makes cooperation in issues like that difficult	There is no unified framework of complementary laws and regulations within the region that enables Azerbaijan to monitor, account for, and protect nuclear materials as they move from originator	N/A	No, due to institutional incompatibility in the countries in the region	No	N/A	Yes, <i>Regulation (EC) NO 764/2008 of the European Parliament and of the Council of 9 July 2008 laying down procedures relating to the application of certain national technical rules to</i>			Yes, various intergovernmental agreements regulate special procedures of nuclear material transportation, delivery, and security services, and procedures of cooperation between Ukrainian agencies and services from origin and

countries -If so, please describe -If not, why		countries to destination countries					<i>products lawfully marketed in another Member State and repealing Decision No 3052/95/EC</i>			destination countries
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Table VII: Response and Mitigation

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
-National law enforcement or security agency responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials -If so, please identify it	Yes, ANRA	Yes, SANRAR of Ministry of Emergency Situations is responsible for enforcing national laws and regulations pertaining to the proper possession, use, transportation and storage of radioactive materials	Yes, the NRA and Ministry of Interior	Yes, the Ministry of Internal Affairs, assisted by the specialised law-enforcement agencies of the Ministry of Defense and of the Ministry of Finance	Yes, GAEC	Yes, NARNRA. Other agencies involved are the Central Government, the Customs Service, the Standardization and Metrology Service, the Licensing Chamber, the Moldovan Academy of Sciences, and the National Radioprotection Committee	Yes, the Directorate for Investigating Organized Crime and Terrorism is Romania. NCNAC is responsible for manipulating and transporting radioactive sources, while ANDRAD is responsible for the management and storage of radioactive waste			Yes, the Security Service. The Ministry for Internal Affairs' Internal Troops are responsible for the transportation and storage of radioactive materials
-National emergency response agency responsible for	Yes, the Ministry of Emergency Situations	Yes, the Ministry of Emergency Situations is a national emergency	Yes, the General Directorate "Civil Protection National	N/A	Yes, GAEC	Yes, the National Commission for Emergency Situations	Yes, the Directorate for Investigating Organized Crime and			Yes, the Ministry for Emergency Situations and the Protection of the

responding to an incident involving nuclear sources that has caused personal injury or property damage -If so, please identify it		response agency responsible for responding to an incident involving nuclear sources. Its Civil Defense Forces, Crisis Management Center, SANRAR and "Izotop" Special Plant deal with incidents involving the use of nuclear or radioactive materials. Incidents of radiation are dealt with by the Ministry of Health	Service" under the Ministry of Interior				Terrorism, NCNAC, the Inspectorate for Emergency Situations, and the Counterterrorist Brigade.			Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster
-Law enforcement	N/A	Yes, such agencies	The law enforcement	Information is shared	Yes	Yes, Moldova's	Yes, with Bulgaria and			Yes, the Ministry for

and/or emergency response agencies liaise, exchange information, engage in joint training and/or conduct joint exercises relating to nuclear terrorism with similar agencies in other regional countries -If so, please identify them		liaise, exchange information and cooperate with Georgia, Moldova, Russia, Ukraine in the framework of the relevant agreements	and emergency response agencies are actively involved with similar agencies in the SEE countries and NATO and EU auspices.	only if help from abroad is needed. Otherwise, information is considered confidential		emergency response agencies participate in trainings, workshops and Basic Law Enforcement Techniques, organised by the US Department of Justice, the Defense <i>Threat Reduction Agency, and the FBI.</i>	the Southeast European Cooperative Initiative (SECI) Center Romania			Emergency Situations and the Protection of the Population in the Aftermath of the Chernobyl Nuclear Power Station Disaster, with similar agencies in other NATO countries, Russia, Belarus, Kazakhstan, and Armenia
-Laws and/or regulations require the preparation of emergency response plans for certain sectors of the society -If so, please identify the sectors	Yes	The above Decision 42 of the Cabinet of Ministers requires all enterprises dealing with ionizing ray sources and radioactive materials to develop a plan on the prevention	The preparation of emergency response plans is required by Chapter Eight - Emergency Planning and Preparedness of the Act of the Safe	N/A	In Greece, where there are no Civilian Nuclear Facilities, laws and regulations on the preparation of emergency response plans concern	Yes, all institutions, agencies, and companies who have or use nuclear or radiological sources are obliged to elaborate emergency response plans, which	Yes, more specifically for the Cernavoda nuclear power plant, the Pitesti Institute for Nuclear Research, and the local communities close to the two			Yes, a plan for response in the event of an accident involving a radioactive source, and a plan for response in the event of an accident at an object where works with radioactive and nuclear

		of radiation accident and elimination of its consequences. The 1997 Law on Radiation Safety requires enterprises and organizations with a potential risk of radiation accident to have action plans on ensuring safety of its personnel and population from radiation accident and its consequences. There is a need to also adopt a national action plan for the	Use of Nuclear Energy, available at: http://www.bnsa.bas.bg/en/documents- legislation/laws/act-eng.pdf .		only the one small reactor for research purposes that exists in the country	have to be coordinated with the Emergency Situations Service of the Ministry of Internal Affairs	facilities, namely the cities of Cernavoda and Mioveni			technology take place.
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		nuclear and radiation emergency situations								
Existing regional capacity to conduct emergency response operations that cross international borders -If such a regional capacity exists, please describe how it works and identify the regional nations that participate in it	N/A	Article 4 of the 4 July 2003 GUAM States Agreement on cooperation in prevention of emergency situations and elimination of their consequences envisages cooperation in emergency situations of a trans-boundary nature and mutual notification on the threat of such situations	SEDM and the Civil Protection Services of the SEE countries have established an initiative for regional emergency response. NATO and EU member states have also established emergency mechanisms	No	No, only IAEA's ER-NET (Emergency Response Network)	N/A	Yes, emergency response operations conducted either by the SECI Regional Centre for Combating Transborder Crime or			Yes, emergency response operations that cross international borders are conducted in accordance with intergovernmental agreements
Agreements or other legal	There are no such	In the Black Sea region,	N/A	No	No, but Greece will	Yes, via the GUAM	The IAEA expert			Yes

mechanisms by which one country within the region can easily provide medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency	agreements. Such cooperation can take place only in the framework of IAEA	Azerbaijan is a party to the above GUAM Agreement, as well as bilateral agreements with Georgia, Moldova, Russia, Ukraine. The Agreement with Russia envisages preparation of population to activities, <u>including provision of first aid</u> , during emergency situations			provide any possible assistance in case of an emergency	agreement	missions and dedicated labs are capable of easily providing medical support, transportation, supplies, or other emergency assistance to another country in the region in case of an emergency			
Mechanism that enables countries in the region to jointly address a missing radioactive source, an accident	No	The GUAM Agreement, and bilateral agreements of Azerbaijan with Georgia, Moldova,	N/A	No, due to mutual suspicion among the law enforcement bodies, lack of general cooperation,	No, IAEA's ITDB is the only mechanism that enables countries in the region to jointly deal with	Yes, GUAM member states have established national agencies in this area of cooperation, such as the	Yes, border cooperation protocols			Yes, GUAM countries

involving a radioactive source, or a malicious act involving a radioactive source that affects more than one country -If so, please identify it		Russia, Ukraine		and absence of any formal or informal links	such a situation	National Information Analysis Center and the National Virtual Center SECI-GUAM				
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Table VIII: Information Sharing

	Armenia	Azerbaijan	Bulgaria	Georgia	Greece	Moldova	Romania	Russia	Turkey	Ukraine
Central authority and international point of contact responsible for physical protection of nuclear sources	No	Yes, SANRAR. Decision 42 of the Cabinet of Ministers of 12 April 2004 requires all enterprises dealing with ionizing ray sources and radioactive materials to timely ensure physical protection of all sources. The activity of these enterprises is regulated by the SANRAR	N/A	Yes, the Ministry of Internal Affairs' protection police	Yes, GAEC	Yes, NARNRA	Yes, NCNAC			Yes, the Ministry for Internal Affairs' Internal Troops
Mechanism to promptly provide notice of any loss of	In the event of loss of control	The Crisis Management Center under the	NRA and State Agency for National	Yes, local authorities inform IAEA, while	Yes, to IAEA but not to the potentially	Yes, all information obtained is centrally	Yes, NCNAC and the Nuclear and			Yes, SNRCU informs IAEA of any such loss or incident

control over radioactive sources, or any incidents, to include any theft, robbery or other unlawful taking with potential trans-boundary effects or a credible threat thereof to potentially affected neighbouring states and IAEA	over a radioactive source, the owner of the source must immediately inform the National Security Service and ANRA	Ministry of Emergency Situations immediately informs relevant state agencies about loss of control over radioactive sources, including theft, robbery and other illegal actions which may jeopardize neighboring states	Security are responsible for promptly notifying neighbouring states/the IAEA of any incidents involving radioactive sources.	if the accident involves a neighbouring state, the authorities in this state are also informed	affected neighbouring states	and automatically collected in NARNRA's database, which is directly connected to IAEA's database	Radioactive Waste Agency form Romania's mechanism			by means of a notice written in accordance with a set form sent to IAEA's illegal radioactive materials storage or using database
Measures to protect the confidentiality of any information that is received in confidence from another State in place	Yes	Yes, mechanisms for the protection of confidentiality of any information received in confidence from another State are defined by the national	Yes, Bulgaria has signed agreements to protect the confidentiality of any classified information received from another state in this context	Yes	Yes	Yes, if this is stipulated by a bilateral agreement and has been approved by IAEA	Yes			Yes

		legislation. Thus, the Law on State Secret regulates the existing strategy, while the Presidential decrees regulate the guidelines for consideration of information as confidential and establish the list of information considered as state secret								
Public documents available that describe the available protections provided by your country to information relating to	No, such documents are classified	It is possible to obtain publicly open legal documents from the newspapers which are publishing state documents	Yes, http://www.dksi.bg/en/Regulatory+Framework/InterAgreements.htm	N/A	No	No	Yes, available at the official website of the Nuclear and Radioactive Waste Agency: www.andrad.ro			No, such documents are classified

nuclear sources that is received in confidence from another nation -If so, please provide a copy		as well as from the internet resources								
Mechanism or a particular agency to liaise with other countries to promote cooperation and the exchange of information concerning radioactive sources -If so, please identify it	Yes	According to the national legislation, SANRAR of the Ministry of Emergency Situations has the right to cooperate within its competency with international organizations and relevant agencies from other countries, and to engage into exchange of experience. Another	N/A	No	Yes	Yes, NARNRA	Yes			Yes

		relevant body is the State Commission on the cooperation between the Republic of Azerbaijan and the IAEA, which is headed by the Deputy Prime Minister and is composed of high-level officials from a number of ministries								
Regional diplomatic forum that addresses nuclear security related issues -If so, please describe it	Yes, run in the framework of IAEA	At present, there is no any regional diplomatic forum that addresses nuclear security related issues	N/A	No	No	Yes, Moldova's Security and Information Service is a member of SEEIC. Simultaneously, bilateral relations with other European intelligence services that	No			No

						facilitate the combat of international terrorism and other organised crime related activities are also established and maintained				
Examples of regional cooperation on the issue of nuclear security	N/A	The most significant example of information exchange is provided under the Agreement between the Ministry of Emergency Situations of Azerbaijan and the State Committee of Nuclear Regulation of Ukraine on cooperation in radiation safety,	N/A	N/A	IAEA has appointed GAEC as the regional training centre for nuclear security issues. In this context, training has been provided to personnel from almost all countries in the region	Moldova cooperates with other IAEA member states in the context of the Committee on Safeguards and Verification, the Technical Assistance and Cooperation Committee, the meetings of the IAEA Board of	Regional meeting on Physical Protection of Nuclear Research Reactors (Romania, 2008); International seminar on Physical Protection of Nuclear Plans (Russia/Ukraine, 2007); International Exercise (Romania, 2003)			

		<p>signed on 7 September 2006. Nevertheless a systematic exchange of information and experience in the sphere of nuclear security has not yet been the case</p>				<p>Governors, the IAEA General Conference, etc.</p>				
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Conclusions

1. The focus by GTSN on the fostering of an international partnership capacity by countries surrounding the Black Sea is very timely since the Black Sea region is at a high risk of illicit access to, or theft of, nuclear and other radioactive materials and substances.
2. The Black Sea region is becoming increasingly insecure and unstable with the continuing existence of unrecognized states, the geopolitics of the so called “gray zones”/security vacuum countries and administrative entities, areas of backwardness or of stagnant economic development. The situation is complicated by unresolved regional conflicts, the emergence of several secessionist or separatist movements, inter-state disputes and long-standing conflicts, such as in Nagorno-Karabakh, Transnistria, Abkhazia and South Ossetia, as well as political and ethnic grievances expressed by sections of certain populations.
3. Some parts of the Black Sea region continue to witness armed conflicts and political tension, border disputes, and geo-strategic rivalry for regional hegemony.
4. The outbreak of a war between Russia and Georgia in August 2008 resulted in a change of the geopolitical balance in the region and an impact on it of new actors such as Abkhazia and South Ossetia. It is believed that the current high-level of geopolitical volatility of the Black Sea region can again ignite at any given moment into open warfare.
5. Given the above situation, the presence on the territory of a number of the Wider Black Sea countries of “orphaned” radioactive waste, particularly in nuclear tailing dumps and the abandoned nuclear instruments is of great concern.
6. The Black Sea region is a well-established transit corridor, both westwards and eastwards, for potentially large-scale illicit trafficking operations in nuclear and other radioactive materials and substances, particularly from/to Russia, Central Asia, Afghanistan, Pakistan, and Iran.
7. Close connections have developed between groups involved in international terrorism and transnational organized crime gangs, particularly in the conflict-ridden parts of the Black Sea region. Criminal networks of different origin, including terrorist organizations, already have a well-established presence and a safe haven in the region while the Black Sea countries are being increasingly affected by spill-over from their subversive activities.

8. The Black Sea arena today is one of the world's most multi-polar regions, characterized by lack of requisite synergy among states, their differing political agendas and increased geopolitical volatility.
9. Insufficient political will and commitment, and the absence of closer political cooperation in the region negatively affect prospects for establishing an adequate nuclear security community in the Black Sea region.
10. Consequently, the political and strategic factors currently present in the region are not conducive to establishing international cooperation in the development of a regional “partnership capacity” as called for in the *Statement of Principles of the Global Initiative to Combat Nuclear Terrorism*.
11. The Black Sea countries therefore require external assistance in the development of a regional “partnership capacity” to prevent, detect, and respond to the threat of nuclear terrorism.

Recommendations

1. The Black Sea countries need to promote regional cooperation to effectively secure nuclear and other radioactive materials and substances in each of the eight areas set forth in the Statement of Principles of the Global Initiative to Combat Nuclear Terrorism (GICNT).
2. To achieve the above, the Black Sea countries need to launch concerted action with a view to elaborating a *Black Sea Regional Cooperation Programme for the Suppression of Acts of Nuclear and Radiological Terrorism*, aimed at developing a “partnership capacity” through the following coordinated activities:
 - (i) Strengthening of the accounting, control and physical protection systems for nuclear and other radioactive materials and substances;
 - (ii) Enhancement of the security of civilian nuclear facilities;
 - (iii) Improvement of the detection of nuclear and other radioactive materials and substances and the strengthening of cooperation in the research and development of national detection capabilities;
 - (iv) Improvement of the capabilities to search for, confiscate, and establish safe control over unlawfully held nuclear or other radioactive materials and substances or devices;

- (v) Denial of safe haven to terrorists and financial or economic resources to terrorists seeking to acquire or use nuclear and other radioactive materials and substances;
 - (vi) Establishment of adequate national legal and regulatory frameworks that provide for appropriate criminal and civil liability for terrorists and those who facilitate acts of nuclear terrorism;
 - (vii) Improvement of the capabilities to respond, mitigate, and investigate terrorist attacks involving nuclear and other radioactive materials and substances, including the development of technical means to identify nuclear and other radioactive materials and substances that are, or may be, involved in the incident;
 - (viii) Information sharing pertaining to the suppression of acts of nuclear terrorism consistent with national laws and international obligations to protect the confidentiality of information.
3. A convenient framework for regional concerted action in the above eight areas set forth in the Statement of Principles of the Global Initiative to Combat Nuclear Terrorism (GICNT) could be the conclusion between Governments of the Black Sea countries of a *Memorandum of Understanding (MoU) on Cooperation in Countering the Threat of Nuclear Terrorism in the Black Sea Region through Implementation of the Global Initiative to Combat Nuclear Terrorism*.
4. The regional cooperation activities under the MoU may, *inter alia*, include:
- mutual assistance in the strengthening of national nuclear control structures and mechanisms;
 - harmonization of the nuclear control legislation within the region;
 - promotion of information / intelligence exchange at the regional level on the methods and *modus operandi* used by non-state actors involved in illicit proliferation of nuclear and other radioactive materials and substances;
 - exchange of experience among the Governments in pre-emption of trafficking in nuclear and other radiological materials and substances and in prevention of use by the terrorists of such materials in the Black Sea region;

- establishment of regional coordination and cooperation mechanisms at policy and operational levels;
 - arrangement of joint training for staff involved in countering nuclear and radiological terrorism in the Black Sea region;
 - establishment and promotion of cross-border cooperation within the Black Sea region to prevent illicit trafficking in nuclear and other radiological materials and substances across the borders;
 - implementation of joint cross-border and border control operations against illicit trafficking in nuclear and other radiological materials and substances in the Black Sea region.
5. A draft MoU is attached.
 6. Extra-regional actors should assist, as far as possible, in the development of a regional “partnership capacity” by the Black Sea countries to prevent, detect, and respond to the threat of nuclear terrorism. The formation of a *high level consultative group* composed of former officials and experts from the region and beyond, involved in initiatives for the Black Sea region, such as the Commission on the Black Sea, the Euro-Atlantic Security Initiative (EASI), and the Black Sea Trust, could, *inter alia*, contribute qualitatively to this process.
 7. The considerable national and international resources devoted to counter-terrorism and non-proliferation could benefit from greater coordination among programs in each country as well as among donors to ensure that non-proliferation norms and awareness are built into current border security strengthening and capacity-building programs and are regional in scope.
 8. The Black Sea countries should facilitate face-to-face exchanges of experts and specialists in non-proliferation of WMD at the regional level, encourage regular meetings and provide increased funding for cross-border cooperation.
 9. More effective control over nuclear and other radioactive materials and substances could be achieved through the promotion of inter-agency cooperation within each country to ensure that Police, Customs, Border authorities, Intelligence and Immigration Services work together in sharing information and conducting joint operational activities. In this regard, political commitment is required to ensure that agencies work together and that there was a match between political and operational priorities. This

should be complemented by the development of cooperation between the neighbouring states. For instance, international experience in other geographical regions demonstrates that the deployment of liaison officers has proved to be viable in developing information-sharing and operational law enforcement cooperation.

10. Non-proliferation norms and awareness should firmly be built into the current border security activities.
11. Enhanced control at the borders over nuclear and other radioactive materials and substances at national, regional and international levels could be strengthened through the development of partnerships/effective working relationships with the organizations and structures, such as the ICPO/Interpol (particularly, Interpol's "Geiger" Program), Europol, WCO, OSCE, SECI Center, NATO. Priority should be given to corrective measures on the weaker borders.
12. Traffic in nuclear materials concealed in commercial cargos requires particular attention. Attention should be devoted to the analysis of methods of concealment, particularly in the TIR trucks and sea containers.
13. The Black Sea region should be transferred from a competitive security environment into one that fosters and strengthens regional cooperation.
14. Structural security dialogue within the region should be established, and likewise, an inclusive mechanism for regular consultation and coordination with the BSEC, especially through its Working Group on Cooperation in Combating Crime, in particular in its Organized Forms, as well as for regular consultation and coordination with all the regional organizations and initiatives (governmental and non-governmental) and with "extra-regional" partners.
15. Finally, it is recommended to more actively use for non-proliferation purposes the regional media (e.g. Black Sea Association of National News Agencies – BSANNA) which is more tuned to the interests of local readers.