FIRST
NATIONAL REPORT ON THE IMPLEMENTATION OF OBLIGATIONS UNDER THE CONVENTION ON NUCLEAR SAFETY

PODGORICA, AUGUST 2016
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2. Section A: Introduction

*Picture 1. Map of Montenegro*
By its geographic position, Montenegro belongs to a group of small European countries and is one of the central Mediterranean countries covering the total of 13,812 km² with the population of 620,029 (Census of Population, Households and Dwellings in Montenegro in 2011; www.monstat.org). Montenegro is a multicultural, multiethnic and multi-confessional country. Montenegro is a continental, mountainous and coastal country (coastline is 293 km long).

Montenegro regained its independence through a democratic referendum held on 21 May 2006, and the same year became 192nd member state of the United Nations (UN) and a full member of the International Atomic Energy Agency (hereinafter referred to as the "IAEA"). In 2007, shortly after regaining its independence, Montenegro promulgated its own Constitution which places a particular emphasis on the environmental orientation, which means that the State is making every effort to protect its environment. This objective can be achieved by adequate policy, strategy, legislation and overall protection of the environment by appropriate economic activities which are performed in Montenegro.

The protection of human life and health, and of the environment, against harmful effects of ionizing radiation and radioactive waste management and nuclear safety and security are important activities of the Government of Montenegro which are needed to achieve environmental objectives, and this requires a well-designed plan and actions to ensure all necessary organizational, human and financial resources, and infrastructure.

Aware of the importance to the international community of ensuring that nuclear energy is properly used for peace purpose, affirming the necessity of continuing to promote a high level of nuclear safety worldwide, desiring to promote an effective nuclear safety culture, the Parliament of Montenegro promulgated the Act on Ratification of the Convention on Nuclear Safety (Official Gazette of Montenegro - International Treaties, No. 003/15 of 26 March 2015). The instrument on accession of Montenegro to the Convention on Nuclear Safety was deposited with the IAEA on 23 April 2015, and it entered into force on 22 July 2015. No Declarations or Reservations were made with the accession instrument. As a full member of the Convention, Montenegro sends a clear message that only by strengthening international cooperation and willingness to participate in the process of reporting and reviewing reports of other member states, it will contribute fully to the global nuclear safety improvement framework.

Montenegro is a country with no nuclear installations and, therefore, many requirements of the Convention on Nuclear Safety do not apply to Montenegro. There is no nuclear fuel in the territory of Montenegro. The Energy Policy of Montenegro until 2030, adopted by the Government of Montenegro on 3 March 2011, or the Energy Development Strategy of Montenegro until 2030 - White Book with the Strategic Environmental Impact Assessment and the Report on Public Hearing, which were adopted by the Government of Montenegro at the session of 10 July 2014, do not envisage construction of nuclear power plants, nuclear installations respectively. Also, provisions of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09) prohibit construction of nuclear installations.

Montenegro has a small number of activities related to ionizing radiation, which is why the use of radioactive material and sources of ionizing radiation is limited to medicine, industry, education and scientific-research activities. The total quantity of radioactive waste in Montenegro is very small due to the size of the country with 620,029 inhabitants, small industry and legally prohibited import, possession and use of sources of radiation which constitute radioactive waste upon expiry of the period of envisaged exploitation, unless conclusive evidence is acquired to confirm that upon expiry of this...
period, it will be returned to the supplier outside Montenegro or leave Montenegro otherwise. Regardless of the relatively low activity and a small quantity of radioactive waste, a central storage facility for management of radioactive waste exists in Montenegro. The Government of Montenegro, that is the Ministry of Sustainable Development and Tourism, is the owner of the storage, and as of 13 June 2012 it is managed by the Centre for Ecotoxicological Research Ltd. Podgorica on the basis of the licence issued by the Environment Protection Agency.

In order to secure the conditions for implementation of the policy in the field of protection against ionizing radiation, radiation safety and radioactive waste management, the Government of Montenegro adopted at the session of 22 September 2011 the *Strategy for Ionizing Radiation Protection, Radiation Safety and Radioactive Waste Management with the Acton Plan for its implementation (2012-2016)* on the proposal of the Ministry of Sustainable Development and Tourism. This strategic document is undergoing revision, and it is planned to be reviewed and adopted by the Government of Montenegro in quarter IV of 2016.

In order to fulfil the obligations regulated by the Act on Ratification of the Convention on Nuclear Safety (Official Gazette of Montenegro - International Treaties, No. 003/15 of 26 March 2015), the Ministry of Sustainable Development and Tourism prepared, in cooperation with competent authorities and institutions, the First National Report on the Implementation of Obligations Under the Convention on Nuclear Safety. The First National Report is aimed at demonstrating that Montenegro is fully committed to fulfilling the obligations resulting from the Convention on Nuclear Safety. The First National Report is prepared in line with the requirements and guidelines contained in the document IAEA INFCIRC/572/Rev.5 of 16 January 2015 - Guidelines regarding National Reports under the Convention on Nuclear Safety. According to the instructions provided in the Guidelines INFCIRC/572/Rev.5, Montenegro, as a non-nuclear country, reports to the IAEA Secretariat on the implementation of Art. 7, 8, 15 and 16 (legislative and regulatory framework, regulatory body, radiation protection and emergency preparedness) and proposes nuclear safety improvement measures.


Montenegro takes its full membership in the *Convention on Nuclear Safety* as an opportunity to present the situation in the field of nuclear safety in the country and to contribute to constructive dialogue and exchange of information for the purpose of further improvement, thus contributing to the global nuclear safety improvement framework.
3. Section B: Summary

Since becoming a member state of the Convention on Nuclear Safety in 2015, Montenegro has an opportunity for the first time to describe the manner in which the State is fulfilling the obligations regulated by this international legal instrument.

Since 2009, when the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) was adopted, Montenegro has made a significant progress with regards to radiation and nuclear safety in the country. The progress is particularly important with regards to the establishment of the regulatory body and strengthening of its capacities, as well as adopting of secondary legislation in the field of radiation and nuclear safety. Montenegro has ratified the majority of the most important international legal instruments in the field of nuclear and radiation safety and security and is strongly committed to implementation of its international obligations. The most recent IAEA standards and legislation of the European Union are taken into consideration in the legislative process.

Montenegro is fully committed to Euro-Atlantic integration as the primary strategic goal of Montenegro. As a candidate country for membership in the European Union, Montenegro opened negotiations with the EU on 29 June 2012, thereby clearly setting the agenda of accepting and implementing the highest standards in all fields. Montenegro received the invitation to NATO at the meeting of NATO member states held in Brussels on 2 December 2015. Montenegro will maintain continuity in achieving good results and relations through which it is recognized as a reliable and responsible partner in the region and by international organisations and operations, and will remain committed to implementing fundamental reforms in key areas of democratization of the society.

Regarding cases of radiation accidents which may cause the state of emergency, the Government of Montenegro adopted the National Strategy for Emergency Situations in 2006, and then the Parliament of Montenegro also adopted the Protection and Rescue Act (Official Gazette of Montenegro 013/07, 005/08, 086/09, 032/11). In 2010, the Ministry of Interior also adopted, in cooperation with all relevant institutions, the National Plan of Action in the Case of a Radiation Accident. In accordance with this Plan, relevant institutions of Montenegro responded in an organized and timely fashion in the case of the nuclear accident in the nuclear power plant Fukushima Daiichi in Japan in 2011.

In 2010, Montenegro became a contracting party to the Safeguards Agreement, Additional Protocol and the Small Quantities Protocol. Within implementation of the Act on Ratification of the Agreement between Montenegro and the International Atomic Energy Agency for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, Additional Protocol to the Agreement between Montenegro and the International Atomic Energy Agency for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons (Official Gazette of Montenegro – International Treaties, No. 16/10 of 28 December 2010), Montenegro has drafted sixteen (16) national reports and declarations on nuclear material under provisions of the above Act and provided them to the IAEA. Reporting follows the defined schedule. The Ministry of Sustainable Development and Tourism, as the focal institution for reporting, use the Protocol Reporter software as well.
Pursuant to Article 71 of this Agreement, an ad-hoc inspection was carried out between 12 and 14 November 2012, during which the IAEA inspectors verified in the presence of environmental inspection and representatives of the Ministry of Sustainable Development and Tourism the nuclear material inventory data provided by Montenegro. Also, the first comprehensive inspection by the IAEA was performed on 28 April 2016 when inspection controls were performed in the radioactive waste storage of the Centre for Ecotoxicological Research Ltd. and Plantaže JSC.

For the purpose of fulfilling the obligations regulated by the Act on Ratification of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Official Gazette of Montenegro - International Treaties, No. 03/10 of 19 March 2010), Montenegro has presented two national reports on the implementation of obligations under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The first report was presented at the Fourth Review Meeting of the Contracting Parties to the Joint Convention from 14 to 23 May 2012, while the Second National Report was presented at the Fifth Regular Meeting of the Contracting Parties to the Joint Convention from 11 to 22 May 2015.

For the purpose of strengthening regional cooperation, and starting from provisions of Article 110 of the European Union Stabilization and Association Agreement (SAA) encouraging the promotion of agreements between Member States of the European Union or between EURATOM and Montenegro, it should be pointed out that the Memorandum of Understanding is signed between the State Regulatory Agency for Radiation and Nuclear Safety of Bosnia and Herzegovina and the Environment Protection Agency of Montenegro (on 25 March 2011) and the Memorandum of Understanding between the Radiation Safety Directorate of the Republic of Macedonia and the Environment Protection Agency of Montenegro (on 25 May 2011). Activities are ongoing concerning drafting of the Proposal of Cooperation Agreement between the Ministry of Sustainable Development and Tourism and the Agency for Ionizing Radiation Protection and Nuclear Safety of the Republic of Serbia and Proposal of Cooperation Agreement between the Ministry of Sustainable Development and Tourism and the Kosovo Agency on Protection from Radiation and Nuclear Safety.

While significant progress has been made in the field of radiation safety and security, Montenegro will be committed in the forthcoming period to strengthening the national legal framework in this field so as to transpose and implement the most recent international standards and the European Union acquis.
4. Section C: Reporting by Articles

4.1 Article 7 Legislative and regulatory framework

"1. Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of nuclear installations.

2. The legislative framework shall provide for:
   (i) the establishment of applicable national safety requirements and regulations;
   (ii) a system of licensing with regard to nuclear installations and the prohibition of the operation of a nuclear installation without a licence;
   (iii) a system of regulatory inspection and assessment of nuclear installations to ascertain compliance with applicable regulations and the terms of licences;
   (iv) the enforcement of applicable regulations and of the terms of licences, including suspension, modification or revocation."

4.1.1 Article 7 (1) Establishing and maintaining a legislative and regulatory framework

The commitment of Montenegro to implementing the major international standards in the field of radiation protection, radiation and nuclear safety and security have imposed the need to adopt international legal instruments, guidelines and standards in order to regulate further this field by legislation and improve international cooperation in this field. In relation to that, the Parliament of Montenegro passed the Act on Ionizing Radiation Protection and Radiation Safety in 2009 (Official Gazette of Montenegro 56/09, 58/09, 40/11). This Act regulates protection of human life and health as well as protection of the environment against harmful effects of ionizing radiation, performing radiation activities, trade in ionizing radiation sources and radioactive material, radioactive waste management, actions taken in case of radiation accidents, as well as other relevant issues for protection against ionizing radiation and radiation safety.

The Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) covers all relevant matters of radiation safety. Indirectly, within the review of issues of transport and trade in radioactive material, the ionizing radiation protection is also addressed by: the Criminal Code of Montenegro (Official Gazette of the Republic of Montenegro 070/03, 013/04, 047/06, Official Gazette of Montenegro 040/08, 025/10, 073/10, 032/11, 064/11, 040/13, 056/13, 014/15, 042/15, 058/15), the Act on International Legal Assistance in Criminal Matters (Official Gazette of Montenegro 004/08, 036/13), the Act on Inspection Supervision (Official Gazette of the Republic of Montenegro 039/03, Official Gazette of Montenegro 076/09, 057/11, 018/14, 011/15) and the Act on Transport of Dangerous Materials (Official Gazette of Montenegro 33/14), the Act on Foreign Trade (Official Gazette of the Republic of Montenegro 028/04, 037/07, Official Gazette of Montenegro 073/10, 001/14, 014/14, 057/14), the Act on Export Control of Dual Use Goods (Official Gazette of Montenegro 030/12), the Act on Foreign Trade in Weapons and Military Equipment (Official Gazette of Montenegro 040/16), the Food Safety Act (Official Gazette of Montenegro 057/15), the Act on Environment (Official Gazette of Montenegro 48/08,
40/10, 27/14) and the Decision on the Checklist for Export and Import of Goods (Official Gazette of Montenegro 022/14, 038/15, 029/16).

From the aspect of regulations under national legislation which facilitate implementation of the Convention on Nuclear Safety, in addition to provisions of the above regulations, important are also provisions of the Environmental Impact Assessment Act (Official Gazette of the Republic of Montenegro 080/05, Official Gazette of Montenegro 040/10, 073/10, 040/11, 027/13), Decree on Projects Subject to Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 020/07, Official Gazette of Montenegro 047/13, 053/14) and the Act on Strategic Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 080/05, Official Gazette of Montenegro 073/10, 040/11, 059/11). Particularly important are provisions of the Act on Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context (Official Gazette of Montenegro - International Treaties, No. 008/08), the Act on Promulgating the Act on Ratification of the Protocol on Strategic Environmental Impact Assessment in a Transboundary Context (Official Gazette of Montenegro - International Treaties, No. 002/09) and the Act on Ratification of the Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Official Gazette of Montenegro - International Treaties, No. 003/09).

In the field of ionizing radiation protection, radiation and nuclear safety and security, Montenegro is a contracting party to sixteen (16) international legal instruments listed below:

1. Act on Ratification of the Vienna Convention on Civil Liability for Nuclear Damage (Official Gazette of the Federal Republic of Yugoslavia – International Treaties, No. 005/77);
3. Decree on Ratification of the Convention on Early Notification of a Nuclear Accident (Official Gazette of the Federal Republic of Yugoslavia – International Treaties, No. 015/89-3);
4. Convention on Assistance in the Event of a Nuclear Incident or Radiological Emergency, Vienna (Official Gazette of the Federal Republic of Yugoslavia – International Treaties, No. 004/91-29);
5. Act on Ratification of the Treaty on Non-Proliferation of Nuclear Weapons (Official Gazette of Socialist Federal Republic of Yugoslavia – International Treaties, No. 010/70-313);
8. Comprehensive Nuclear Test Ban Treaty with the Protocol (Official Gazette of Serbia and Montenegro – International Treaties, No. 4/04-3);
9. Agreement on the Privileges and Immunities of the International Atomic Energy Agency (in force since 30.10.2006, by succession since 21.03.2007);


13. Act on Ratification of the Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage (Official Gazette of Montenegro – International Treaties, No. 16/10 of 28 December 2010);


In December 2015, the Ministry of Sustainable Development and Tourism prepared a letter to the Director General of the International Atomic Energy Agency by which Montenegro formally expressed readiness for voluntary implementation of non-binding Code of Conduct on the Safety and Security of Radioactive Sources and supplementary Guidelines on the Import and Export of Radioactive Sources, and a contact person for the Code was appointed at the same time.

4.1.2 Article 7 (2) (i) National safety requirements and regulations

On the basis of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11), Montenegro applies seventeen (17) regulations (some regulation in this field from SRY are still used until drafting of new ones, which are planned, according to the timeline for drafting of regulations and harmonization with the European Union legislation within negotiation process, integration of Montenegro to the European Union respectively). Particularly important are the regulations defining radiation protection for the entire population and professionally exposed persons, radiation protection in medicine, safe transport of radioactive materials, etc.

Below is the list of regulations:
**Nuclear safety**

1. Decision on conditions of location, construction, trial run, commissioning, operation and permanent closure of nuclear facilities (Official Gazette of the Federal Republic of Yugoslavia 42/97); (Chapter V of this Decision has ceased to be applied);
2. Decision on the method and conditions for systematic examination of radionuclide presence in the environment surrounding a nuclear facility (Official Gazette of the Federal Republic of Yugoslavia 42/97);
3. Decision on the conditions to be fulfilled by persons working on process control tasks in nuclear facility and on the process supervising position (Official Gazette of the Federal Republic of Yugoslavia 2/98);
4. Decision on conditions for trade and use of nuclear materials and methods of keeping records of nuclear material by zones of material balances - Official Gazette of the Federal Republic of Yugoslavia 42/97);

**Radiation protection**

5. Rulebook on intervention and derived intervention levels and measures of protection of the population, domestic animals and agriculture (veterinary medicine, crop production and water management) in case of emergency (Official Gazette of the Federal Republic of Yugoslavia 18/92 and Official Gazette of Serbia and Montenegro 1/2003 - Constitutional Charter);
6. Decision on records on ionizing radiation and irradiation of population, patients and persons exposed to the ionizing radiation at work (Official Gazette of the Federal Republic of Yugoslavia 45/97);
7. Decision on systematic examination of the radionuclide contents in the environment (Official Gazette of the Federal Republic of Yugoslavia 45/97);
8. Decision on conditions to be fulfilled by legal persons in order to perform the measurements for assessing the degree of exposure to ionizing radiation of persons working with sources of radiation, patients and population (Official Gazette of the Federal Republic of Yugoslavia 45/97);
9. Decision on qualifications and health conditions for persons working with sources of ionizing radiation (Official Gazette of the Federal Republic of Yugoslavia 45/97);
10. Rulebook on the method of applying ionizing radiation in medicine (Official Gazette of the Federal Republic of Yugoslavia 32/98, 33/98);
11. Rulebook on conditions to be fulfilled by legal entities for performing systematic examination of radionuclide in the environment (Official Gazette of the Federal Republic of Yugoslavia 32/98, 67/02, 70/02);
12. Rulebook on conditions for trade and use of radioactive materials, X-ray generators and other devices that produce ionizing radiation (Official Gazette of the Federal Republic of Yugoslavia 32/98);
13. Rulebook on the limits of exposure to ionizing radiation (Official Gazette of the Federal Republic of Yugoslavia 32/98);
14. Rulebook on the limits of radioactive contamination of the environment and decontamination procedures (Official Gazette of the Federal Republic of Yugoslavia 9/99);
15. Rulebook on the conditions to be met by legal entities for conducting decontamination procedures (Official Gazette of the Federal Republic of Yugoslavia 9/99);
16. Rulebook on closer conditions for obtaining a licence to manage radioactive waste storage (Official Gazette of Montenegro 56/11);
17. Rulebook on the method of collection, keeping, processing and storing of radioactive waste (Official Gazette of Montenegro 58/11).

Having in mind that an imperative of the Government of Montenegro is the harmonization of the legal framework with the most recent international standards of the IAEA and the European Union legislation in the field of radiation and nuclear safety and security and ionizing radiation protection, there are two ongoing national projects approved by the IAEA (MNE9006 "Improvement of regulatory infrastructure in the field of nuclear and radiation safety") and by the European Union (IPA multi-beneficiary project "Further strengthening of nuclear regulatory bodies of Albania, Macedonia, Bosnia and Herzegovina, Serbia, Kosovo and Montenegro"), whose implementation will last 3 years, until the end of 2018. Objectives of the projects include further strengthening of regulatory infrastructure in the field of radiation safety and 100% harmonization of national regulations with legislation of the European Union and international standards in this field.

Establishing of the new Act on Radiation and Nuclear Safety and Security and Ionizing Radiation Protection by the Government of Montenegro is planned for quarter III of 2018, and soon after it is passed by the Parliament of Montenegro, adoption of a set of improved regulations is planned as well.

4.1.3 Article 7 (2) (ii) System of licensing

The licences in the field of ionizing radiation protection and radiation safety, which are not time-limited, are issued by the Environment Protection Agency under provisions of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) and supporting regulations, the Act on General Administrative Procedure (Official Gazette of the Republic of Montenegro 060/03, Official Gazette of Montenegro 073/10, 032/11), the Act on Administrative Procedure (Official Gazette of Montenegro 056/14, 020/15, 040/16) and the Act on Transport of Dangerous Materials (Official Gazette of Montenegro 33/14).

On the basis of RAIS database (Regulatory Authority Information System - information system of the competent institution), which is managed by this authority, the Environment Protection Agency issued 132 licences in total between 1 September 2013 and 1 September 2015 (Table 1).
Table 1: Licences issued between 1 September 2013 and 1 September 2015

<table>
<thead>
<tr>
<th>LICENCE</th>
<th>NUMBER OF ISSUED LICENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licences for performing radiation activities</td>
<td>64</td>
</tr>
<tr>
<td>Licence for temporary performing of radiation activities</td>
<td>1</td>
</tr>
<tr>
<td>Licences for trade in sources of ionizing radiation - import</td>
<td>51</td>
</tr>
<tr>
<td>Licences for trade in sources of ionizing radiation - export</td>
<td>5</td>
</tr>
<tr>
<td>Licences for transporting (carrying) sources of ionizing radiation</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>132</td>
</tr>
</tbody>
</table>

For the purpose of more effective and more efficient work, the staff of the Department for Radiological and Nuclear Safety and Security and Ionizing and Non-ionizing Radiation Protection of the Environment Protection Agency participated in the work of 64 commissions for assessing fulfilment of the conditions for performing radiation activities.

The Environment Protection Agency, as one of important participants of the radioactive waste management process, is working continuously on the inventory of radioactive waste in Montenegro. In addition, data on radioactive sources in Montenegro are continuously updated, and they are still used and found in RAIS database, as well as data on professionally exposed persons. The database is updated every day with relevant data concerning trade and transport of radioactive materials and trade, transport and use of all sources of ionizing radiation in our country.

According to the Act on Transport of Dangerous Materials (Official Gazette of Montenegro 33/14), the Ministry of Interior - Directorate for Emergency Situations issued 26 permits for transport of dangerous materials between 1 September 2013 and 1 September 2015 in the regular procedure of issuing licences for trade in radioactive materials issued by the Environment Protection Agency.

The Environment Protection Agency developed six procedures relating to issuing of various licences:

- Procedure for issuing licences for mobile industrial radiography (gamma defectoscope);
- Procedure for issuing licences for performing radiation activities in medicine - use of high energy ionizing radiation generators – accelerators;
- Procedure for issuing licences for performing radiation activities - use of devices with sealed source of ionizing radiation in medicine for radiotherapy – brachytherapy;
- Procedure for issuing licences for trade (import/export/transit) in sources of ionizing radiation;
- Procedure for issuing licences for performing radiation activities – use of dental X-ray machine; and
- Procedure for issuing licences for performing radiation activities - use of open sources of ionizing radiation for diagnostics and therapy in nuclear medicine.

Advisory Board of the Department for Ionizing Radiation Protection and Radiation Safety of the Environment Protection Agency has approved these procedures.

The most demanding procedure in Montenegro in this field related to issuing licences for radioactive waste storage management. Namely, Montenegro has a licenced and operational radioactive waste storage, which is constructed in accordance with international standards. The Government of Montenegro recognized radioactive waste management as a problem which needs to be addressed as soon as possible, particularly from the aspect of safety and security. In relation to this, the Ministry competent for environmental protection has established an Expert Team tasked with development of the design for temporary storage of radioactive waste in 2005, and after that, in the period 2006 - 2008, the Government of Montenegro allocated funds and constructed a temporary radioactive waste storage located within the complex of the Centre for Ecotoxicological Research Ltd. The site selected as the most favourable for this facility is the vicinity of the building of the Centre for Ecotoxicological Research Ltd. due to the requirements of physical protection, infrastructure and vicinity of professional and analytical support, which is necessary for operation and smooth functioning of the planned installation. Having in mind that Montenegro has small quantities of radioactive waste, and that significant increase is not expected, this location is accepted as the most favourable. The radioactive waste storage was constructed with support from the International Atomic Energy Agency through the national project MNE3002 – "Strengthening of Radioactive Waste Management". A number of expert mission were implemented within the project, who visited the storage and reviewed entire project documents, provided suggestions which were implemented in all phases of construction of the storage. The project provided equipment for the storage, a number of training courses were organized for employees of the Centre for Ecotoxicological Research Ltd. (holder of the licence for managing radioactive waste storage).

For the purpose of higher public participation in the decision-making process, **Public Hearing on draft licence** for managing radioactive waste storage was organized on 30 May 2012.

The radioactive waste storage became operational on 13 June 2012 by issuing of the licence for managing radioactive waste storage by the Environment Protection Agency. The storage is fully compliant with all safety requirements defined by legislation and regulations for safe and secure storage of radioactive waste and disused sealed radioactive sources, in accordance with international standards.

For the purpose of better public information and implementation of provisions of Aarhus Convention, a round table on safe radioactive waste management, "Radioactive waste and challenges in the implementation of legislation and other regulations" was held on 6 June 2011 in the organization of **OSCE Office in Montenegro and Non-Governmental Organisation "OZON"**. Current matters and issues in this field were discussed at the round table, which was attended by representatives of relevant institutions of Montenegro, non-governmental organisations and media.
It is important to point out that the Government of Montenegro adopted decrees and made mandatory for drafting process of strategic documents, laws and regulations to involve representatives of civil sector and non-governmental organisations, and that public hearings must be implemented for strategic and legal regulations and important plans, and cannot last less than 40 days.

4.1.4 Article 7 (2) (iii) System of regulatory and assessment

Inspection supervision in the field of ionizing radiation protection, radiation and nuclear safety and security is performed by the ecological inspection of the Administration for Inspection Affairs according to annual plan and programme, announced or unannounced, under the Inspection Supervision Act (Official Gazette of the Republic of Montenegro 039/03, Official Gazette of Montenegro 076/09, 057/11, 018/14, 011/15) and the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11). The above legislation entitle inspectors to institute misdemeanour or criminal proceedings, as needed and based on assessment, in cases of observed breaches of provisions of these regulations.

For the purpose of more efficient work, the following internal inspection procedures have been developed and approved:

- Procedure for transport of radioactive material;
- Procedure for inspection when removing radioactive lighting rods (dismantling and removal of radioactive lighting rods, transport and response in emergencies);
- Procedure for inspection of sealed sources of radiation (fixed devices for calibration, detection and other devices);
- Procedure for control of radioactive sources which are used in industrial radiography;
- Procedure for control of nuclear medicine;
- Procedure for inspection of X-ray machines;
- Procedure for control of mobile sealed radioactive sources of radiation;
- Procedure for inspection of stationary devices which are used for industrial radiography;
- Procedure for inspection of linear accelerator;
- Procedure for inspection of gamma irradiators;
- Procedure for inspection of open radioactive sources of radiation which are used in industry; and
- Procedure for inspection of radiotherapy; and
- Procedure for inspection of radioactive waste storage.

4.1.5 Article 7 (2) (iv) Enforcement of applicable regulations and terms of licences

Pursuant to provisions of the Inspection Supervision Act (Official Gazette of the Republic of Montenegro 039/03, Official Gazette of Montenegro 076/09, 057/11, 018/14, 011/15), Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11), Act on General Administrative Procedure (Official Gazette of the Republic of Montenegro 060/03, Official Gazette of Montenegro 073/10, 032/11), Act on Administrative Procedure (Official Gazette of Montenegro 056/14, 020/15, 040/16), Misdemeanour Act (Official Gazette of Montenegro 001/11, 006/11, 039/11, 032/14) and on the basis of the Criminal Code of Montenegro (Official Gazette
of the Republic of Montenegro 070/03, 013/04, 047/06, Official Gazette of Montenegro 040/08, 025/10, 073/10, 032/11, 064/11, 040/13, 056/13, 014/15, 042/15, 058/15), in the period between 1 September 2013 and 1 September 2015, the ecological inspector:

– conducted 634 inspection supervisions to control persons performing radiation activities (verbal warning for minor irregularities, etc.);
– issued 235 Decisions regarding taking of certain measures and actions to remove established irregularities, measure the level of individual external exposure of professionally exposed persons, conducting health examination of professionally exposed persons who work in a radiation zone, dosimetry examinations, control of working environment and measuring for the purpose of implementation of the programme of quality assurance and control for sources of ionizing radiation, obtaining the Decision on fulfilment of prescribed conditions for using sources of ionizing radiation;
– filed 4 requests for instituting misdemeanour proceedings under the Act on Ionizing Radiation Protection and Radiation Safety;
– controlled 40 deliveries in trade in sources of ionizing radiation.

On the basis of inspection order, the total of 89,033 controls of radioactivity of goods at import were performed between 1 September 2013 and 1 September 2015 in cooperation with the Centre for Ecotoxicological Research Ltd. and the Ferrous Metallurgy Institute JSC Nikšić.

Inspection controls were also conducted during collection and transport of disused sealed radioactive sources, and during conditioning of disused sealed radioactive sources in the radioactive waste storage.

Regarding administrative procedure and a possibility to appeal which, *inter alia*, reflect independence of work of the competent institution, the Act on Administrative Procedure envisages that any individual or organisation whose right has been violated by the decision of the first-instance authority (in this case the Environment Protection Agency or Administration for Inspection Affairs) may appeal to the second-instance authority (Ministry of Sustainable Development and Tourism) within 15 days from the date of the Decision. Appeal is the general remedy for instituting the administrative procedure at the second instance and represents a process of control of the first-instance authority. The second-instance procedure may not be instituted without filing an appeal, nor can it be implemented ex officio. The above Act regulates general administrative procedure and unless special regulations in the field of environment protection regulate these matters, provisions of this Act shall apply in the decision-making process.

**4.2 Article 8 Regulatory body**

“1. Each Contracting Party shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework referred to in Article 7 of this Convention, and provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities.

2. Each Contracting Party shall take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organisation concerned with the promotion or utilisation of nuclear energy.”
The national regulatory body for radiation and nuclear safety and security and ionizing radiation protection is structured within the Ministry of Sustainable Development and Tourism, Environment Protection Agency and Administration for Inspection Affairs. In case of an accident which may cause a state of emergency (emergency situation) in the country, the Ministry of Interior is competent, which has established National Coordination Team. A clear division of responsibilities is provided under the Decree on State Administration Organization and Manner of Work (Official Gazette of Montenegro 005/12, 025/12, 044/12, 061/12, 020/13, 017/14, 006/15, 080/15, 035/16) passed by the Government of Montenegro. Inter-institutional cooperation is regulated by the State Administration Act (Official Gazette of the Republic of Montenegro 038/03, Official Gazette of Montenegro 022/08, 042/11).

According to the Decree on State Administration Organization and Manner of Work (Official Gazette of Montenegro 005/12, 025/12, 044/12, 061/12, 020/13, 017/14, 006/15, 080/15, 035/16), the Ministry of Sustainable Development and Tourism, among others, performs tasks relating to creating policies and legislation for all aspects of ionizing radiation protection and radiation safety, and radioactive waste management as well. Also, it leads the policy of international cooperation, concluding of international treaties, following up on international standards, negotiations, coordination and implementation of international conventions and agreements, process of accession to the European Union, harmonization with international standards, regulations and recommendations, etc.

The Act on Environment (Official Gazette of Montenegro 48/08, 40/10, 27/14), the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) and the Decree on State Administration Organisation and Manner of Work (Official Gazette of Montenegro 005/12, 025/12, 044/12, 061/12, 020/13, 017/14, 006/15, 080/15, 035/16) provide that expert and related administrative activities in the field of ionizing radiation protection and radiation safety should be performed by the Environment Protection Agency (issuing licences, systematic examination of radioactivity in the environment, keeping central register-database, etc.). The Environment Protection Agency issues licences for trading in sources of ionizing radiation and radioactive material, for performing radiation activity, for performing temporary radiation activity, licence to manage radioactive waste storage, as well as licences to legal entities providing protection against radiation, all under the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11).

The Ministry of Interior has the Directorate for Emergency Situations which, within its scope of work, establishes a database for dangerous material under provisions of the Act on Transport of Dangerous Material (Official Gazette of Montenegro 33/14), which provides that the Ministry of Interior shall issue permits for transport of radioactive material, which is furnished to the Environment Protection Agency for the purpose of issuing licences.

Administration for Inspection Affairs was established by adopting changes and amendments to the Act on Inspection Supervision (Official Gazette of the Republic of Montenegro 039/03, Official Gazette of Montenegro 076/09, 057/11, 018/14, 011/15), and it gathers all inspections, including ecological inspection, which is the competent inspection for implementing provisions of the Act on Ionizing Radiation Protection and Radiation Safety.
In addition to the above institutions, the regulations concerning trade and control under the Act on Foreign Trade (Official Gazette of the Republic of Montenegro 028/04, 037/07, Official Gazette of Montenegro 073/10, 001/14, 014/14, 057/14), Act on Control of Export of Dual-Use Products (Official Gazette of Montenegro 030/12), Act on Foreign Trade in Weapons and Military Equipment (Official Gazette of Montenegro 040/16) are implemented by the Ministry of Economy, Ministry of Defence, Police Directorate and Customs Administration and competent inspection services.

The four competent institutions (Ministry of Sustainable Development and Tourism, Ministry of Interior, Environment Protection Agency and Administration for Inspection Affairs) employ eight civil servants in total for activities concerning ionizing radiation protection and radiation safety.

In addition to two employees (B. Sc. in Physics) in the Ministry of Sustainable Development and Tourism, the process of development of the legal framework also involves two lawyers from the Directorate for the Environment, which work on other segments of the environment as well.

All of the above state institutions, which constitute the national regulatory body in the field of radiation and nuclear safety and security and ionizing radiation protection, are funded from the Budget of Montenegro, which has a programme budget, under the Act on Budget and Fiscal Accountability (Official Gazette of Montenegro 020/14, 056/14).

The Advisory Board for ionizing radiation protection and radiation safety, as the expert and advisory body, was formed by the Decision of the Director of the Environment Protection Agency of 24 April 2012. Based on the Rules of Procedure, the Advisory Board provides: recommendations concerning the procedure of issuing licences for conducting activities relating to ionizing radiation protection; opinions regarding laws and regulations; opinion regarding medical exposure to ionizing radiation; recommendations for systematization of positions in the field of protection against radiation; opinion regarding necessary training and development of staff in the field of ionizing radiation protection; opinion for issuing more complex licences which require special safety analysis; opinion regarding the programme of systematic examination of radioactivity in the environment; opinion regarding international conventions in the field of ionizing radiation protection and radiation safety; and advice to the Director of the Environment Protection Agency in case of emergencies. The Advisory Board has five (5) members from different fields of practical activities related to using of sources of ionizing radiation. Five sessions of the Advisory Board have been held since its establishment.

The national regulatory body in the field of radiation and nuclear safety and security and ionizing radiation protection is autonomous in performing its tasks. Tasks of all four competent institutions are divided in accordance with the Decree on State Administration Organisation and Manner of Work, and under main legislation concerning ionizing radiation protection and radiation safety, inspection supervision, transport of dangerous material, and protection and rescue.

As for independence of regulatory bodies, we point out that pursuant to Article 50 of the Decree on State Administration Organisation and Manner of Work, supervision of legality and suitability of work of administration authorities is performed by Ministries (in this case the Ministry of Sustainable Development and Tourism supervises the Environment Protection Agency). In performing supervision, the Ministry: suspends acts adopted outside administrative procedure when they are contrary to the law and other regulations and proposes to the Government to abolish or annul them; gives proposals
for appointing and dismissing heads of independent administration authorities whose work it supervises; requests reports and notifications of particular matters under the competence of administration authorities; gives expert guidelines, clarifications, instructions and advice for application of regulations under the competence of administration authorities; gives assessment of the situation regarding progress reports; defines individual tasks of administration authority; indicates weaknesses and illegalities in the work of administration authority and gives proposals for overcoming them; warns administration authority of observed work irregularities, initiates suspension of the administrative authority whose work it supervises and performs other control of work and actions of administrative authority, in accordance with regulations.

Also, in accordance with Article 50 of the Decree on State Administration Organisation and Manner of Work, supervision of the legality and suitability of work and legality of administrative acts for individual administrative fields under the competence of the Administration for Inspection Affairs is conducted by the Ministries competent for a particular administrative field (supervision of administrative acts of ecological inspection is performed by the Ministry of Sustainable Development and Tourism).

Supervision of coordinated work of inspections of the Administration for Inspection Affairs is performed by the Government, through the Ministry of Economy.

Regarding influence of, for example, budget control, mechanisms have been put in place to control spending of approved annual budget, primarily through the Act on Budget and Fiscal Accountability, Act on Public Procurement, and through the system of inspections of the State Audit Institution, which controls all spending units. Also, control mechanisms have been put in place separately within each institution in which internal audit control is in place.

Within the Montenegro’s Programme of Accession to the European Union 2016 – 2018, which was adopted by the Government of Montenegro at the session of 21 January 2016, strengthening of administrative capacities is planned for all competent institutions in this field, with the Negotiating Chapter 15 - Energy. In addition to quantitative strengthening of administrative capacities, continuous efforts are in place towards qualitative strengthening and permanent improvement of administrative capacities in Montenegro, and towards improvement of capacities of professionally exposed persons.

Regarding reporting obligation, competent institutions report to the Government of Montenegro once a year about the progress achieved in all fields they are responsible for, and all document are publicly available.

4.3 Article 15 Radiation protection

“Each Contracting Party shall take the appropriate steps to ensure that in all operational states, the radiation exposure to the workers and the public caused by a nuclear installation shall be kept as low as reasonably achievable and that no individual shall be exposed to radiation doses which exceed prescribed national dose limits.”

Primary responsibility for performing radiation activity, including radioactive waste management rests with the holder of the licence for performing radiation activity and holder of the licence to manage radioactive waste storage, in accordance with provisions
of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11).

Article 4 of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) regulates basic principles which are applied in performing radiation activities. The basic principle justifiability of application provides that each radiation activity should be planned and implemented in such manner that the use of ionizing radiation sources provides more benefit than the overall damage. The principle optimization of ionizing radiation protection provides that each radiation activity must be performed in such manner that the exposure to ionizing radiation shall be as low as objectively possible, considering economical and social factors, while the principle concerning limitation of individual exposure provides that radiation activity must be planned in such manner that the individual exposures shall always be under prescribed limits. Article 8 of the Act defines measures of ionizing radiation protection for the purpose of human life and health protection and environmental protection against harmful effect of ionizing radiation, while Articles 11 and 12 of the same Act regulate measurements for the purpose of ionizing radiation exposure level estimation and exposure limits, for professionally exposed persons, persons attending schools and performing scientific research, and population.

Limits in terms of exposure of professionally exposed persons and the population are set in more detail by several regulations, the most important being: Rulebook on the limits of exposure to ionizing radiation (Official Gazette of the Federal Republic of Yugoslavia 32/98) and the Rulebook on the limits of radioactive contamination of the environment and decontamination procedures (Official Gazette of the Federal Republic of Yugoslavia 9/99). These Rulebooks are harmonized with ICRP 60 recommendation of the International Commission on Ionizing Radiation Protection in terms that the maximum effective dose for member of the population is 1 mSv/year, and 20 mSv/year for professionally exposed persons. Additional protection mechanisms are internal operational levels which may be established by the holder of the licence to manage radioactive waste storage, which will ensure, for example, that the maximum effective dose for professionally exposed persons, for employees of the radioactive waste storage is below the prescribed 20 mSv/year. Similar situation is for the limits applicable to members of the population, and this ensures that no person in normal circumstances is exposed to radiation doses exceeding national limits which are in line with internationally accepted norms for radiation protection.

Holders of licences for performing radiation activities, who own radioactive sources or radioactive waste in a storage, perform these activities on the basis of issued licence and are obliged to comply with provisions of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11), regulations and findings of regular inspection controls (supervision). This includes keeping sources in safe and secure conditions, thereby ensuring that doses for workers and population are below prescribed limits (which is in line with recommendations of the International Commission on Ionizing Radiation Protection - ICRP and EU Directives).

Emission limits for the purpose of maintaining radiation exposure to the lowest reasonably possible level are set by 2011 rulebooks, which regulate matters of radioactive waste management.

Regarding radioactive waste storage, it is important to point out that according to provisions of the Rulebook on closer conditions for obtaining a licence to manage radioactive waste storage, the Centre for Ecotoxicological Research Ltd. - CETI was under obligation to provide, inter alia, the Report on results of radioactivity monitoring.
prior to commissioning of the storage, with a requirement that radioactivity monitoring should be performed by a firm outside Montenegro. This requirement of the Environment Protection Agency is based on the fact that only CETI is licenced in Montenegro to perform radioactivity monitoring.

Pursuant to Article 9 of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11), the Environment Protection Agency prepares proposal of annual programme of systematic examination of radioactivity in the environment, which is adopted by the Government of Montenegro on the proposal from the Ministry of Sustainable Development and Tourism. The programme of systematic examination of radioactivity in the environment, which has been performed since 1999, is performed to establish presence of radionuclide in the environment and assess the level of exposure of the population to ionizing radiation in normal conditions, and in case of suspected radiation accident and during radiation accident.

The programme is prepared in accordance with the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11), Decision on systematic examination of the radionuclide contents in the environment (Official Gazette of the Federal Republic of Yugoslavia 45/97), Rulebook on the limits of radioactive contamination of the environment and decontamination procedures (Official Gazette of the Federal Republic of Yugoslavia 9/99), Rulebook on the limits of exposure to ionizing radiation (Official Gazette of the Federal Republic of Yugoslavia 32/98), Rulebook on conditions to be fulfilled by legal entities for performing systematic examination of radionuclide in the environment (Official Gazette of the Federal Republic of Yugoslavia 32/98) and the Rulebook on intervention and derived intervention levels and measures of protection of the population, domestic animals and agriculture (veterinary medicine, crop production and water management) in case of emergency (Official Gazette of the Federal Republic of Yugoslavia 18/92 and Official Gazette of Serbia and Montenegro 1/2003 - Constitutional Charter). The systematic examination of radionuclide is performed in: the air, soil, rivers, lakes and the sea, solid and liquid precipitation, construction material, drinking water, provisions and feed, general use products. In addition, measuring includes intensity of absorbed dose of gamma (γ) radiation in the air and the level of radon exposure in residential areas is examined. The methods of measuring specific activities of radionuclide in samples from the environment include: gamma (γ) spectrometry, measuring total alpha (α) and beta (β) by gas proportional counter and measuring of Sr-90 by radiochemical separation by liquid scintillation counter, which are compliant with applicable methods and recommendations of the International Atomic Energy Agency. The programme of systematic examination of radioactivity in the environment establishes places, time intervals, types and methods of systematic examination of radioactivity in the environment. Since it is impossible to plan places, time intervals, types and methods of systematic examination of radioactivity in the environment in case of suspected radiation accident and during radiation accident, certain funds are planned in this case for extraordinary radioactivity monitoring.

Costs of radioactivity monitoring (regular and extraordinary) and assessment of the level of exposure of the population to ionizing radiation are covered from the budget of Montenegro. A legal entity that the Environment Protection Agency selects through public tender launched under the Act on Public Procurement (Official Gazette of Montenegro 042/11, 057/14, 028/15) implements the programme of systematic examination of radioactivity in the environment and is obliged to submit to the Agency the Report on monitoring radioactivity in the environment until 1 March of the current...
year for the previous year. In case of radiation accident, the legal entity is obliged to immediately notify the Agency. After that, the Environment Protection Agency prepares a consolidated Information about the environment condition with Proposal of measures for mitigating negative environmental impact with the Action Plan, which includes other segments of the environment, which is adopted by the Government of Montenegro on the proposal from the Ministry of Sustainable Development and Tourism. On the basis of the Conclusion of the Government of Montenegro, the Ministry of Sustainable Development and Tourism informs the Government about implemented activities from this Plan.

Concentration of analyzed radionuclide in all segments of the environment, and in food and drinking water in the reporting period was within the prescribed limits. In addition, in the territory of Montenegro, or outside its borders, there have been no nuclear/radiological accidents/incidents which could have threatened the population of Montenegro and the conclusion is that the population of Montenegro has not been under excessive radiological pressure.

One of important proposed measures and conclusions of annual Report on monitoring radioactivity in the environment relates to the problem of increased concentration of radon in residential and working rooms and the prominent importance of development of a comprehensive radon map of Montenegro. In relation to this, Montenegro is implementing in cooperation with the International Atomic Energy Agency two national projects aimed at finalization of the radon map, assessment of effective radon dose and upgrading of the horizontal radon protection system (development of new and improvement of existing regulations, drafting of the Radon Protection Strategy, establishing Radon Mitigation Team, licencing legal entities which can perform measurement of radon concentration, strengthening of competent institutions, equipping institutions, establishing calibration laboratory for devices used to measures radon concentration, etc.

4.4 Article 16 Emergency preparedness

"1. Each Contracting Party shall take the appropriate steps to ensure that there are on-site and off-site emergency plans that are routinely tested for nuclear installations and cover activities to be carried out in the event of an emergency. For any new nuclear installation, such plans shall be prepared and tested before it commences operation above a low power level agreed by the regulatory body.

2. Each Contracting Party shall take the appropriate steps to ensure that, in so far as they are likely to be affected by a radiological emergency, its own population and the competent authorities of the states in the vicinity of the nuclear installation are provided with appropriate information for emergency planning and response.

3. Contracting Parties which do not have a nuclear installation on their territory, in so far as they are likely to be affected in the event of a radiological emergency at a nuclear installation in the vicinity, shall take the appropriate steps for the preparation and testing of emergency plans for their territory that cover the activities to be carried out in the event of such an emergency."
4.4.1 Article 16 (1) Emergency plans and programmes

When it come to an event of radiation accident which may lead to state of emergency, the Government of Montenegro has adopted the National Strategy for Emergency Situations in 2006, and then the Parliament of Montenegro passed the Protection and Rescue Act (Official Gazette of Montenegro 13/07, 05/08, 86/09 and 32/11). On the basis of the Protection and Rescue Act, Protection and Rescue Plans are prepared at three levels: national, municipal and action. In accordance with provisions of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) (Article 22), holders of licences to perform radiation activities and licence to manage radioactive waste storage must have appropriate plans of action in the event of emergency situation at a location and, if necessary, outside the location. Plan of Action in case of radiation accident which may lead to state of emergency, harmonized with the protection and rescue methodology and the National Plan of Action in case of radiation accident is prepared by applicant for obtaining the licence to manage radioactive waste storage on the basis of regulations governing protection and rescue (Art. 34 and 35 of the Protection and Rescue Act). Approval for the plans is issued by the Directorate for Emergency Situations of the Ministry of Interior, which is presented to the Environment Protection Agency for issuing the licence. The National Plan of Action in case of radiation accident was adopted by the Ministry of Interior in March 2010, and the drafting process was coordinated by the Directorate for Emergency Situations of the Ministry of Interior in cooperation with all relevant institutions. This Plan was adopted in accordance with the methodology and recommendations of the IAEA. The National Plan was revised in 2012 with support from experts of the International Atomic Energy Agency - IAEA. The objective of the expert mission was to assess, integrate and improve the National Plan into existing national infrastructure. IAEA standards series GS-G-2 were integrated as well, and both local and national arrangements of preparedness for response in case of a radiation accident were reviewed. The National Plan of Action in case of radiation accident provides a good insight into preparedness and response concerning all aspects caused by emergency situations due to excessive radiation. This Plan, together will other protection and rescue plans, is updated once a year with the most recent events and knowledge. The National Plan of Action in case of radiation accident is aimed at reviewing existing and future radiation and nuclear risks, establishing a concept for organized response of state and other institutions in case of radiation and nuclear accident, precluding accident by preventive actions, mitigating consequences, and development of preparedness of adequate state capacities and the entire social community in cases they happen in near or distant future. Responses at national and local level in the state must be fully coordinated and must be in line with international standards. The National Plan addresses obvious and potential radiation risks. The Plan covers the following categories of threats:

- **Threats of category III** are the events within facilities (i.e. the facilities in which the situation requires urgent preventive action in the facility itself, but such event cannot cause significant negative effects outside the facility, and these are the facilities (devices) where, in case of losing protection, external dose exceeds 100 mGy/h at the distance of 1m);

- **Threats of category IV** (for example, external dose exceeding 10 mGy/h at the distance of 1m, events which may require implementation of protection measures and activities at an unpredictable location, particularly during transport and relocating dangerous sources, such as radiographic sources,
satellite with dangerous sources, facilities for processing of waste iron, border crossings, sources used in measurement and process technique);

- **Threats of category V** (for example, widespread contamination derived from category I or II, facilities from abroad.

The National Plan also includes provisions offering a possibility of expert assistance to threatened institutions-organisation. The events of special interest, which are described in the National Plan are also all such events relating to nuclear-powered vessels or detonation of radiological dispersal devices - dirty bombs (RDD).

It is important to point out that Montenegro has established operation-communication centre 112 (number for emergency interventions), whose officers use prescribed standard operating procedures (SOP).

Provision of Article 35 of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09, 58/09, 40/11) defines obligation of establishing early notification system for radiation accident which may lead to the state of emergency, which threatens or may threaten the territory of Montenegro on the basis of the National Plan (Article 36 paragraph 1). Until 2016 Montenegro did not have an adequate early notification system. In relation to that, Montenegro applied a national project within IPA funds of the European Union, and it is in the final phase of implementation of the national project "Strengthening radiation protection and nuclear safety in Montenegro by improving capacities of the PE Centre for Ecotoxicological Research of Montenegro relating to establishing a network of six stations for 24-hour measuring of ambiental dose of gamma radiation in the air (GDR). Namely, a network of six GDR stations were installed in the period 4-8 July 2016 in the territory of municipalities of: Pljevlja, Nikšić, Berane, Herceg Novi, Bar and in the territory of the Capital Podgorica, for which the Environment Protection Agency had selected appropriate locations, in cooperation with representatives of municipalities, Capital Podgorica and the Institute of Hydrometeorology and Seismology.

The Ministry of Interior, Directorate for Emergency Situations, signed the agreement to access ARGOS Consortium and became its 11\textsuperscript{th} member. ARGOS users are national organisations in charge of management in case of emergency situations. ARGOS represents, *inter alia*, early radiation hazard warning system, and it is used to support deciding in case of response to accidents. ARGOS mission is to support organisations for emergency situations in order to contribute to the best decisions in case of CBRN (chemical, biological, radiological/nuclear) accident. This means that on the basis of basic meteorological data and the data on chemical, biological, radiological/nuclear (CBRN) accident ARGOS may prognosticate and show the picture of areas likely to be contaminated, and pollution and concentration of relevant elements in the air.

Ministry of Interior, Environment Protection Agency, Administration for Inspection Affairs and the Centre for Ecotoxicological Research Ltd, - CETI participate in numerous projects of the International Atomic Energy Agency. Representatives of the Directorate for Emergency Situations participate in the European initiative "Centre for Excellence in CBRN Disaster Management - Centre of Excellence - CoE under the auspices of the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the European Commission. CBRN concept, threats, risks and goals; biological, chemical, radiological and nuclear agents and weapons, properties, effects, production and distribution, as well as containment of and combating against CBRN risks were presented within this cooperation. Staff exercise at national level, risk assessment,
identification of risks and risk mitigation measures were performed, as well as response to an accident.

At the session held on 12 May 2016 the Government of Montenegro reviewed and adopted the National Action Plan for the protection against chemical, biological, radiological and nuclear threats and risks (CBRN) for the period 2016-2020, whose drafting was coordinated by the Ministry of Interior. Within the coordinated efforts towards minimizing CBRN risks, this National Action Plan attempts to ensure that capacity building in the country constitutes a part of a coordinated and sustainable strategy, which consolidates existing efforts and ensures a uniform national vision for mitigating CBRN risks. In this respect, the National Action Plan provides the basis for development of projects for strengthening abilities to mitigate CBRN risks and helps integrate activities of different national donors through a single coherent plan.

It is important to point out that the Negotiating Chapter 31 - Foreign, security and defence policy was opened during the negotiating process of Montenegro with the European Union, which contains the sub-area weapons of mass destruction. Also, in quarter III of 2016, the Government of Montenegro will discuss the Proposal of the National Strategy to Combat Proliferation of Weapons for Mass Destruction, and the Ministry of Foreign Affairs and European Integration coordinated its drafting with competent institutions.

The commitment of Montenegro to non-proliferation of weapons for mass destruction has been reaffirmed by participation in the main international treaties in this field, and by actions at multilateral, regional and bilateral levels. Legal and strategic frameworks of Montenegro recognize this matter, and any attempt to proliferate this type of weapons is prohibited and sanctioned.

The National Security Strategy of Montenegro defines and classifies: national (security) interests and goals; security challenges, risks and threats, as well as missions of the security system of Montenegro (defence, maintenance and improvement of interior security, emergency management, participation in international peace and humanitarian operations led by UN, NATO and EU), as well as the security system structure. Classification of challenges, risks and threats including illegal trade in narcotics, weapons, chemical, biological and nuclear-radiological means, terrorism, illegal trafficking and proliferation of weapons of mass destruction is also performed in accordance with this document. Also, according to the Defence Strategy, Montenegro is determined to confront terrorism and not to own and not to develop weapons of mass destruction and to participate actively in preventing its proliferation.

Montenegro is a member of all major international treaties regarding non-proliferation of weapons of mass destruction: Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Comprehensive Nuclear Test Ban Treaty (CTBT), Chemical Weapons Convention (CWC), Biological Weapons Convention (BWC).

The National Team for implementation of the Convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction was formed in accordance with the Conclusion of the Government of Montenegro 03-7056/6 and the Decision of the Government of Montenegro of 28 July 2011, which the Government of Montenegro tasked with, inter alia, with the development of the National Action Plan for implementation of the resolution of the Security Council 1540. The Action Plan for implementation of the resolution of the United Nations Security Council 1540 (2014-2018) and the Report on the implementation of the resolution of the United Nations Security Council 1540 were
adopted at the session of the Government of Montenegro on 8 May 2014. By adopting the UN Security Council Resolution 1540 Montenegro fully supports international efforts towards non-proliferation of weapons of mass destruction and recognizes importance of strengthening legal framework, institutions and technical capacities necessary for protection against CBRN risks.

**Guide for actions in case of an accidents with dangerous material**¹ has been prepared for members of services who respond first to accidents. The instructions provided in the Guide include lists of dangerous material of the most recent recommendations of the United Nations, and of other national and international regulations. The Guide is primarily intended as assistance to those arriving first to the place of accident to be able to identify quickly specific threats imposed by particular substances and protect themselves and other citizens in the initial phase of such incident. Also, Instructions provide general information about public security measures in a particular situation, as well as information concerning emergency isolation at the place of incident. They also list special precautionary measures in case of an incident involving fire, leakage of or exposure to chemical or radioactive material. The agreements signed in the field of protection and rescue against natural and other disasters contribute to and facilitate substantially the cooperation with countries in the region and beyond in case of a disaster.

In March 2015, the Parliament of Montenegro passed the Act on Ratification of the Agreement between Montenegro and the European Union concerning Montenegro’s membership in the European Union Civil Protection Mechanism (Official Gazette of Montenegro - International Treaties, No. 003/15 of 26 March 2015). The General Director of the Directorate for Emergency Situations signed the Agreement on Accession of Montenegro to the Civil Protection Mechanism on 20 September 2014 in Rome, whereby Montenegro became 32nd member of the Civil Protection Mechanism. The main goal of this agreement is to facilitate cooperation in the field of civil protection in case of occurrence of natural, technical-technological and other risks leading to large-scale emergency situations. Cooperation enables: easier exchange of information between competent authorities of Montenegro and the European Union; simplification of procedures of requesting and receiving assistance in case of occurrence of various hazards; logistical support in receiving information about human and material resources, including mobilisation of additional transportation means needed to ensure rapid response in large-scale emergency situations, etc.

One of the most important activities of the Ministry of Interior - Directorate for Emergency Situations in the reporting period was the establishment of the National Platform for Disaster Risk Reduction, as a standing forum for exchange of opinions, expressing views, giving proposals and presenting achievements that contribute to minimizing risks of disasters in all areas of human activity. The Government of Montenegro adopted the Decision on establishment of the Committee for Disaster Risk Reduction at the session held on 9 October 2014 (Official Gazette of Montenegro 49/14 of 20 November 2014). The Committee for Disaster Risk Reduction consists of 17 members from all relevant fields. Task of the Committee is to:

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¹ According to Article 37 of the Protection and Rescue Act, the Directorate for Emergency Situations of the Ministry of Interior establishes programmes for equipment and development of the protection and rescue system in Montenegro, gives instructions for management in protection and rescue and proposes measures to those participating in protection and rescue.
monitor, study and identify achievements and give recommendations as to contribute to minimizing risks of disasters;

- prepare professional background for a dialogue between all parties for the purpose of achieving the highest quality response to threats and risks of disasters;

- encourage and develop cooperation with scientific institutions and other parties involved in actions aimed at minimizing risks of disasters.

The first conference for the establishment of the National Platform was held on 16 December 2014 in the organization of the Disaster Preparedness and Prevention Initiative for South Eastern Europe (DPPI SEE). A Catalogue of Works was presented at the conference and it constitutes an expert basis for realistic overview of matters concerning minimizing risks of disasters, that is to say a guide for planned and continuous action in the next period, both at national and at local level. Works of representatives of the Centre for Ecotoxicological Research Ltd. and the Environment Protection Agency "Problems of control of sources of ionizing radiation, high risk - potentially contaminated goods and preventing prohibited transport of radioactive and nuclear material in Montenegro" and "Radiation Risk Reduction" of the representatives of the Ministry of Interior - Directorate for Emergency Situations were presented in the field of radiation and nuclear safety. The conclusion was that borders and the territory of Montenegro should be secured further from the standpoint of trade and illicit trafficking in various forms of radioactive and nuclear material. Also, while officers of border police and customs have substantial technical means, the conclusion was that those need to be used systematically, that portal detectors should be installed for freight and passenger traffic and that it is necessary to initiate the process of training and equipping the first response team, following the example of countries which have adequate response system in place for chemical, biological, radiation and nuclear hazard (CBRN). The Second Conference of the National Platform for Disaster Risk Reduction was held on 26 November 2015, and the Third Conference of the National Platform for Disaster Risk Reduction was held on 23 June 2016.

4.4.2 Article 16 (2) Information of the public and neighbouring States

Although Montenegro does not have nuclear installations, there is a system in place for informing the public and neighbouring countries in the case of a nuclear accident. A detailed description of responsibilities and manner of management is provided in the National Plan of Action in the Case of a Radiation Accident.

Also, as a contracting party to the Convention on Environmental Impact Assessment in a Transboundary Context (ESPOO Convention) and the Protocol on Strategic Environmental Impact Assessment in a Transboundary Context (SEA Protocol) and the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Issues (Aarhus Convention), Montenegro is exchanging information with neighbouring countries whose installations might have environmental impact in a transboundary context.

Regarding international legal instruments in this field, it is important to point that Montenegro is a contracting party to the Convention on Early Notification of a Nuclear Accident (Official Gazette of the Federal Republic of Yugoslavia - International Treaties 015/89-3) and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Official Gazette of the Federal Republic of Yugoslavia - International Treaties 004/91-29). Also, Montenegro participates with its
representatives in platforms of the International Nuclear Events Scale (INES) and the Unified System for Information Exchange in Accidents and Emergencies for early notification of incidents including radioactive sources with potential transboundary effects (USIE).

Since 2006, Montenegro has been a member of the Incident and Trafficking Database for illicit trafficking of nuclear and radioactive material (ITDB).

In 2015, initiatives were sent for concluding Bilateral Cooperation Agreements with the Republic of Bulgaria, Turkey, France and Draft Agreement has been prepared between the Government of Montenegro and the Government of the Republic of Romania regarding cooperation in the field of emergency situations. We remind that agreements on cooperation and assistance in case of natural and other disasters have been developed between Montenegro and the Republic of Albania, and between the Government of Montenegro and the Government of the Republic of Azerbaijan concerning cooperation in the field of protection against natural and induced disasters. Memorandum of Understanding is also signed with the Russian Federation, Italy and Armenia. Also, Montenegro signed bilateral cooperation agreements in the field of protection against natural disasters and technical-technological risks with: the Council of Ministers of Bosnia and Herzegovina, Government of the Republic of Croatia, Government of the Republic of Greece, Government of the Republic of Macedonia, Government of the Republic of Slovenia, Government of the Republic of Serbia, Government of the Slovak Republic and the Cabinet of Ministers of Ukraine.

Montenegro is still not a contracting party to the European Atomic Energy Community (EURATOM) and a non-member of the European Community Urgent Radiological Information Exchange (ECURIE). Preparatory activities are ongoing on drafting of the Proposal Act on Ratification of the Agreement between the European Atomic Energy Community (EURATOM) and non-member state of the European Union concerning participation of the latter in the European Community Urgent Radiological Information Exchange (ECURIE) system, whose review and adoption by the Government of Montenegro is planned for quarter IV of 2016.

Montenegro also intends to join the European Radiological Data Exchange Platform - EURDEP in the next period.

**Monitoring the situation in Montenegro after the accident in Japan**

Having in mind that the Convention on Early Notification of a Nuclear Accident has been in force in Montenegro since 21 March 2007, the International Atomic Energy Agency provided Montenegro on daily basis with information about the situation in Japan, and during the accident which happened in the nuclear power plant Fukushima Daiichi.

On 16 March 2011, the Environment Protection Agency referred to the Centre for Ecotoxicological Research Ltd., the institution authorized for control and ionizing radiation protection, dosimetric control, examination of natural and artificial radioactivity in all segments of the environment, decontamination of the environment and work environment, and examination of radon in dwellings, work environment, with a request to organize additional everyday measurements primarily of the intensity of absorbed dose of gamma radiation in the air. The measurements followed the frequency proposed by the Agency. CETI is a member of the ALMERA network of the International Atomic Energy Agency. Also, pursuant to Article 7 of the Act on Ionizing Radiation Protection and Radiation Safety (Official Gazette of Montenegro 56/09 and 58/09, 40/11), the Environment Protection Agency informed daily via their website (www.epa.org.me) the public about the situation in Montenegro after the nuclear
accident in Japan. The information on the website included results of measurements and their analysis. In addition to everyday information via website, the Environment Protection Agency was available to the media (television, radio, press), and to the citizens who requested additional information about consequences of the nuclear accident and their potential impact on humans and the environment in Montenegro.

4.4.3 Article 16 (3) Emergency preparedness for Contracting Parties without nuclear installation

Based on the Decree on State Administration Organisation and Manner of Work (Official Gazette of Montenegro 005/12, 025/12, 044/12, 061/12, 020/13, 017/14, 006/15, 080/15, 035/16), Protection and Rescue Act (Official Gazette of Montenegro 013/07, 005/08, 086/09, 032/11), the Ministry of Interior is the institution responsible, inter alia, for preparing, adopting, implementation and updating of national plans for all types of hazards (including nuclear-radiological hazard), as defined by the National Strategy for Emergency Situations adopted by the Government of Montenegro in 2006, and its implementation is coordinated by the National Coordination Team chaired by the President of the Government of Montenegro.

Plans at local level (municipal and operational) must be harmonized with the national plan, which is verified by issuing of approval by the Ministry of Interior (Directorate for Emergency Situations). The National Plan of Action in Case of a Radiation Accident was prepared and adopted by the Ministry of Interior in March 2010 in accordance with the IAEA methodology and recommendations, and the development process involved experts of all competent institutions of Montenegro. The Ministry of Interior coordinates implementation of the National Plan of Action in Case of a Radiation Accident through the Coordination Team. For emergency situations not defined by the national scale of value, coordination for preparation of response to a radiation and nuclear accident is performed in coordination between the Ministry of Interior - Directorate for Emergency Situations and the Environment Protection Agency, and members of the team are also representative of:

- the Ministry of Defence – General Staff,
- the Ministry of Health (Clinical Centre of Montenegro, Primary Healthcare institutions, Emergency Room, Institute of Public Health); and
- the Centre for Ecotoxicological Research Ltd.

The Directorate for Emergency Situations participates every year in exercises which test the capacities for preparation and response to emergencies in the country and in the region. Annual programme contains types of exercises, goals and participants. This Directorate organized an exercise which included, inter alia, an incident with radioactive lighting rod, which was held in Budva in 2009 and had international character. This exercise also involved other representatives of relevant institutions.

The simulation exercise SEESIM 14 was held in Montenegro in the period 23-26 September 2014 in the military barrack "Milovan Šaranović" in Danilovgrad, which is the largest computer simulated exercise. Montenegro participated in this exercise for the second time. Similar exercise was held in 2012 (SEESIM 12). In addition to representatives of the Directorate for Emergency Situations and the Ministry of Defence - Army of Montenegro, these exercises involved representatives of the following institutions: Ministry of Health, Ministry of Foreign Affairs and European Integration, Police Directorate, Institute of Public Health, Elektroprivreda (Electricity Company) of Montenegro, Transport Directorate, Institute of Hydrometeorology and Seismology,
The aim was to practice procedures and cooperation between countries of the region in terms of readiness, response and management in emergency situation, as well as to improve national capacities for actions, and the fight against terrorism, cyber terrorism and other contemporary threats. During four days of work, responses were provided to 140 inputs from the Coordination Centre from Zagreb. Simulated accidents included: earthquake, floods, technical-technological risks, radiation accident, traffic accident and cyber terrorism.

Field-staff exercise "Nuclear Accident Risk Reduction" was held in the Clinical Centre of Montenegro, Oncology Clinic, in the period 17-19 September 2014, under sponsorship of the Department of Energy of the United States of America and "Sandia" American National Laboratory. An incident with radioactive source Ir 192 was simulated during the exercise. Participants of the exercise were representatives of security service of the Clinic and staff operating brachytherapy machines, as well as representatives of national institutions: Directorate for Emergency Situations, Police Directorate, Special Unit Podgorica, Special Anti-Terrorist Unit, Environment Protection Agency, Centre for Ecotoxicological Research Ltd, Administration for Inspection Affairs and Protection Service of Podgorica. The aim of the exercise was: protection of the Oncology Clinic against stealing of radioactive material and potential unplanned exposure to radiation, identification and improvement of physical protection of material and interinstitutional coordination of responses. The exercise tested three elements: detection, delay-detection of opponent and responding. The general conclusion of the exercise is that all competent institutions in Montenegro have recognized their place and role in making decision concerning responding to a radiation accident, and it also indicated the need for improvement of physical protection of the Clinic.

Preparations for staff exercise (TTX Table-top exercises) are ongoing within the project "Strengthening CBRN first response capabilities and regional cooperation in South East Europe, Southern Caucasus, Moldova and Ukraine" (Ref: Europe Aid/IFS/2014/347634), within which a CBRN incident/accident will be simulated. The project is financed by the European Union and implemented by the Consortium consisted of: Belgian Nuclear Research Centre (CSK-CEN), First Response Institute of Slovakia (ISEMI), Dutch National Institute for Public Health and the Environment (RIVM), Polish Institute of Organic Chemistry (IPO) and the Belgian Institute for Radioelements (IRE). The project beneficiary countries are: Albania, Federation of Bosnia and Herzegovina, Montenegro, Serbia, Macedonia, Armenia, Moldova and Ukraine. This exercise will include national institutions which are responsible to respond in case of CBRN incidents/accidents, and this will be an opportunity to test standard operating procedures (SOP), that is to say manner of communication, coordination and making decisions at national and international level in case of CBRN threats and risks. The exercise is planned to take place in quarter IV of 2016.

The field NATO exercise "Montenegro 2016" will be organized in Montenegro between 31 October and 4 November 2016, with a scenario for response to floods and chemical, biological, radiological and nuclear (CBRN) incident.
5. Section D: Activities envisaged to improve safety

In order to improve the situation in the next period, competent institutions in the field of nuclear safety and security and ionizing radiation protection will continue dedicated implementation of commitments defined by the Convention on Nuclear Safety, strategic and legal frameworks of Montenegro.

In that respect, the existing Strategy for Ionizing Radiation Protection, Radiation Safety and Radioactive Waste Management will be revised and the new one adopted together with the Action Plan for its implementation (2017-2021).

Also, in the next period, Montenegro will develop and adopt the Act on Ratification of the Agreement between the European Atomic Energy Community (EURATOM) and non-member state of the European Union concerning participation of the latter in the European Community Urgent Radiological Information Exchange (ECURIE).

Additionally, for the purpose of exchange of information, Montenegro will join in the next period the European Radiological Data Exchange Platform - EURDEP.

We will work intensively in the next period on drafting of the new Act on Radiation and Nuclear Safety and Security and Ionizing Radiation Protection, which will replace the existing Act on Ionizing Radiation Protection and Radiation Safety. The new act and a set of regulations to be adopted thereunder will transpose international standards and all existing Directives of the European Union, including provisions of the new Directive 2013/59/EURATOM of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/EURATOM, 90/641/EURATOM, 96/29/EURATOM, 97/43/EURATOM and 2003/122/EURATOM.

Activities will continue regarding management of disused radioactive sources and radioactive waste.

Activities will continue towards raising awareness of holders of licences regarding their responsibilities, and raising awareness of citizens, by organizing round tables, workshops and training on safety culture.

For the purpose of success of these activities, we will continue to strengthen institutional, administrative, implementation and technical capacities in Montenegro.