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Authors: Rasa Ptasekaite

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The Euratom Treaty v. Treaties of the European Union: limits of competence and interaction

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Abstract
Generally regulation under the Euratom Treaty could be divided into two main groups: areas explicitly regulated by the Euratom Treaty (promotion of research and dissemination of knowledge; health and safety; encouragement of investment; supplies; safeguards; the nuclear common market) and areas which are in the competence of the Euratom Community, but are not laid out in the Euratom Treaty (nuclear safety; management of spent fuel and radioactive waste.

The Euratom Treaty in comparison with other international treaties and the EU Treaties (TEU and TFEU) has some special features, distinguishing it from all others: special enforcement procedure, stagnant material law and new areas of competence. Perception of their existence is essential in order to understand the secondary legal system based on the Euratom Treaty and to implement Euratom Treaty provisions correctly on the national level.

After the Lisbon Treaty amendments, implementation of new provisions in the Euratom Treaty on ordinary legislative procedure and role of national parliaments is considered to be quite problematic. The interaction between the Euratom Treaty and the TFEU in the specific fields is presented in the table below.

No.	Field	Relation between treaties
1.	Environmental nuclear liability	Compensation and remediation of damage to the environment in case of nuclear incident is not regulated by any of these treaties. If would be in the future, the Euratom Treaty should be the legal ground and the TFEU would not be applied here.
2.	Transport of radioactive substances	The Euratom Treaty and its secondary legal acts mostly regulate the authorising, notification and other similar processes that build grounds for the physical transportation and control the movement of radioactive substances in Europe to be possible, while the TFEU and its secondary legislation focus on the safety of the actual transfer of the radioactive substances from place A to place B.
3.	Free movement of radioactive goods	The nuclear common market and "nuclear" goods is exceptional competence of the Euratom Treaty and provisions of the TFEU are not applicable here. Applicability of the TFEU rules to movement of "non-nuclear" radioactive goods under the Euratom Treaty depends on the purpose of usage of the latter goods. If the objective purpose of activity that includes "non-nuclear" radioactive goods is *related to the market*, then the TFEU rules should be applied. However, if goods are used in other activities *not related to the market*, the TFEU rules and secondary legal acts cannot be applied.

No.	Field	Relation between treaties
4.	Competition law	In the field of competition law the provisions of the Euratom Treaty always prevail over the parallel provisions of the TFEU. The EU competition rules can be applied in cases when the Euratom Treaty does not regulate the question and such application does not contravene with the objectives of the Euratom Treaty.
5.	State aid in nuclear sector	General rules on state aid in the TFEU and Community Framework for State Aid for R&D&I are not applied for research and investment in the nuclear energy sector. Other fields of nuclear energy sector that are not regulated by the Euratom Treaty fall under the general EU state aid rules.
6.	Common energy policy	Nuclear energy belongs to the EU common energy policy, which means that it has to follow the goals and comply with obligations set by the EU.

Background

In the field of nuclear energy the Treaty establishing the European Atomic Energy Community (Euratom Treaty) is binding primary law for all Member States of the European Union. However, the European Union itself is based on to primary laws – the Treaty on European Union (the TEU) and the Treaty on Functioning of the European Union (the TFEU). From the first sight it might seem that the Euratom Treaty and the EU treaties are completely autonomous and regulate different areas, however the reality dictates differently.

The substantive law and legislative procedures of these treaties differ and that implies the necessity to understand the interaction between the treaties. I addition to this, national regulatory authorities in nuclear energy sector work under both primary legal acts – the Euratom Treaty and the TFEU – which means that the borders and application field of each of them is important in order to implement the national legal acts effectively.

Objectives of the project

The main aim of this research was to analyse the interaction between the Euratom Treaty and the TFEU in certain specific fields – environmental nuclear liability, transport of radioactive substances and common market (free movement of goods, competition law and state aid).

Results

Results presented in the table provided above.

Conclusions

In areas regulated by and under the Euratom Treaty the latter provisions always prevail before the treaties of the EU. Application of the TFEU in the nuclear energy sector is only possible if it does not infringe the objectives and main principles of the Euratom Treaty. There is no tendency of interaction between the Euratom Treaty and the TFEU – specific relation between them depends upon the area.

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This report concerns a study which has been conducted for the Swedish Radiation Safety Authority, SSM. The conclusions and viewpoints presented in the report are those of the author/authors and do not necessarily coincide with those of the SSM.

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Preface

In the field of nuclear energy the Treaty establishing the European Atomic Energy Community (Euratom Treaty) is binding primary law for all Member States of the European Union. However, the European Union itself is based on to primary laws – the Treaty on European Union (the TEU) and the Treaty on Functioning of the European Union (the TFEU). From the first sight it might seem that the Euratom Treaty and the EU treaties are completely autonomous and regulate different areas, however the reality dictates differently. The substantive law of the Euratom Treaty has not been changed since its adoption in 1957 which means that it has not been adjusted to changing circumstances as the EU treaties did and the nuclear energy sector has matured during that time which means that the treaty which had a purpose of establishing this sector might not be sufficient in all areas any more. At the same time the substantive law and legislative procedures of these treaties differ and that implies the necessity to understand the interaction between the treaties. I addition to this, national regulatory authorities in nuclear energy sector work under both primary legal acts – the Euratom Treaty and the TFEU – which means that the borders and application field of each of them is important in order to implement the national legal acts effectively.
Due to all that, discussions on if, how and where the EU treaties could be applied in nuclear energy sector has become a relevant question demanding for deeper analysis.

The main aim of this research was to analyse the interaction between the Euratom Treaty and the TFEU in certain specific fields – environmental nuclear liability, transport of radioactive substances and common market (free movement of goods, competition law and state aid). However, before doing that, certain introduction to regulation of the Euratom Treaty, its special features and the changes made by the Lisbon Treaty seemed beneficial. Therefore, the research consists of two parts – the introduction to the Euratom Treaty and the assessment of the relation between the Euratom Treaty and the TFEU in the areas mentioned above. The conclusions related to each of the areas are presented in the end of each chapter while the general conclusions of the research are provided in the end.
The literature used in the research include legislative and non-legislative acts of the Euratom Community and the European Union, Judgements of the Court of Justice of the European Union, publications of various researchers and internet resources.

1 Introduction to the Euratom Treaty

The aim of the first part of this research is to scan the legal system of the Euratom Community and to analyse how the Euratom Treaty is influenced by the EU Treaties – Treaty on European Union (TEU) and Treaty on the Functioning of the European Union (TFEU) after the Lisbon amendments. In the first chapter of this part the areas of regulation of the Euratom Treaty will be studied providing some aspects of their practical implementation. The second chapter is for presenting the distinguishing features of the Euratom Treaty in order to show how specific it is and the third one has two main purposes – to analyse what amendments were brought to EU by the Treaty of Lisbon and how these amendments influence the legal system of the Euratom Community.
The first and second chapter of this part is mainly for depiction of the existing legal system and due to that they do not have concluding statements. However, in the third part the aim is to provide actual research and the outcomes of it are presented in the conclusions of that chapter.

1.1 Areas of regulation of the Euratom Treaty

Generally all fields of competence of the Euratom Treaty could be divided into two main groups: areas explicitly regulated by the Euratom Treaty and areas which are in the competence of the Euratom Community, but are not laid out in the Euratom Treaty.

1. Areas explicitly regulated by the Euratom Treaty could be assorted in:
   a) Areas for the functioning and development of the nuclear energy sector:
      i) Research and dissemination of information (Chapters 1 and 2);
      ii) Encouragement of investment (Chapters 4 and 5);

   b) Areas for protection from the negative impacts of the nuclear energy:
      i) Health and safety, in the form of protection of workers and the population against the dangers of ionizing radiation (Chapter 3);
      ii) Nuclear safeguards (Chapter 7);

   c) Areas for the establishment of the nuclear common market:
      i) Supply of the basic raw materials (Chapter 6);
      ii) Free movement of goods and persons – the nuclear common market (Chapter 9);

This is the veritable core of the Treaty[1]. Pillar of nuclear common market can be worth a small discussion. The Commission does not mention it as the Euratom Treaty's field of competence and indicates international relations as the area of competence instead.[2] The Commission's position in this case could be questionable as Article 93, 96 and 97 of the Euratom Treaty clearly establishes prohibition of duties on imports and exports, free movement of skilled employment in the field of nuclear energy and free movement of services. Due to that, nuclear common market should be considered as the area of the Euratom competence. On the other hand, the possibility to implement the Euratom provision on nuclear common market problematic and will be analysed in separate chapter.

2. Areas which are in the competence of the Euratom, but are not laid out in the Euratom Treaty:

Although nuclear safety is not literately mentioned in the Euratom Treaty at all, hereunder the Judgement C-29/99 of the European Court of Justice (ECJ)[3], it is commonly interpreted[4] that Euratom Community has competence in this field. The aspects of this interpretation will be analysed in a separate chapter on the specific features of the Euratom Treaty.

Another area which will belong to this group in the near future is management of spent fuel and radioactive waste. The proposal for Directive[5] is already issued and due to that it is only a matter of time when the latter legal acts will be in force. The legal grounds for this directive are Articles 2(b), 30 and 37 of the Euratom Treaty.
Due to the fact that only proposal to the directive is available now and the content of it might slightly change during the legislation procedures, management of spent fuel and radioactive waste will not be discussed deeper in this research.

In order to understand the breadth and limits of the Euratom competence each of the areas mentioned above should be analysed a slightly deeper.

1.1.1 The promotion of research and dissemination of knowledge

The Commission is promoting and facilitating the research within the specific fields listed in the Euratom Treaty (Article 4 and 6). Research and training programmes (framework programmes) are determined by Council on a Commissions proposal (Article 7) and are up till 5 years.

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[1] Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", pp. 121, *Common Market Law Review 40: 117-142, 2003.*
[2] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007.
[3] Judgement of the ECJ of 10 December 2002, *Commission v. Council* (C-29/99), ECR (2002) I-11221. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61999J0029:EN:PDF>.
[4] Stanič, A. "EU Law on Nuclear Safety" (a version of this article was presented at the International Conference on Nuclear Energy for New Europe 2009 held in Slovenia from 14 to 17 September 2009); Sousa Ferro, M. (2008) "The future of the regulation of nuclear safety in the EU", Int. J. Nuclear Law, Vol. 2, No. 2, p.155.
[5] Proposal for a Council Directive on the management of spent fuel and radioactive waste COM(2010) 618 final of 3 November 2010.

For this function the Joint Nuclear Research Centre (Article 8) must be established, which:

1. Implements research programs and other tasks assigned by the Commission;
2. Ensures uniform nuclear terminology and measurements.

The essence of dissemination of information – to set specific rules managing information and knowledge related to scientific inventions in order to ensure equal and as common as possible progress and development of the nuclear energy sector in the whole Euratom Community.

The now running Seventh Research Framework Programme[6] (2007-2011) has a budget of around 2 750 million and just one-third of it is earmarked for the research in the field of nuclear fission, to be carried out either by means of a programme of indirect actions or by the Joint Research Centre (JRC), focusing on the safe exploitation and development of fission reactor systems, the management of radioactive waste, radiation protection and safety and security related to non-proliferation. Nearly two-thirds will go towards research in the field of energy fusion. The importance attached to fusion can be explained by the fact that the European Union, through the Community, is taking part in the International Thermonuclear Experimental Reactor (ITER) project developed with China, South Korea, the United States, Japan, India and Russia. This follows from the research which has been carried out by the Community in this field since the First Community Research Programme and which enabled the Joint European Torus (JET, Culham) to be set up in 1978, the results of which have been an essential step forward in the advances in fusion energy.
Besides that, it could be noticed that promotion of research and dissemination of information is regulated in great detail and takes twenty-six (26) Articles of the Euratom Treaty, while for example Health and Safety of the workers is regulated by ten Articles, Nuclear Common Market – by six (there were eight, but two were repealed by the amendments of the Lisbon Treaty). Reasons for this, in my point of view, are mostly historical. The authors of the Euratom Treaty were the founders of the civil nuclear energy sector creating the provisions which will determine the "game rules" in this sector. Due to that, it was crucially important to secure the development and progress of the nuclear energy and in consequence the first two Chapters of the Treaty became very detailed.

1.1.2 Health and Safety

The essence of Chapter 3 on Health and Safety is to create **basic standards** for the protection of health of workers and the general public (Article 30) and the environment: air, water and soil (Article 37, 38) against the dangers arising from ionizing radiation.

[6] Council Decision 2006/970/Euratom of 18 December 2006 Concerning the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities, O.J. L 54, 22 February 2007, pp. 21-29; and Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 3.

These basic standards cover all situations which might lead to exposure of the general public and workers to ionizing radiation and deal not only with the main field of the production of nuclear power, but also with other applications of ionizing radiation in industry and medicine. Interesting enough, exposure for medical purposes is being the main source of exposure of the general public to artificial radioactivity.[7]

This could be the illustration of process of protection:

Creating standards → Member State (MS) implementing → MS informing on practical levels → Commission's recommendations or directives (in cases of urgency).

Secondary legislation according to the Articles 30 – 39 of the Euratom Treaty can be divided into[8]:

1. Post-Chernobyl law:
   a) 1987 ECURIE Decision[9]
   b) 1987 Foodstuffs Regulation[10]
   c) 1989 Public Information Directive[11]
   d) Outside Workers Directive[12]

After the catastrophe in Chernobyl, new legal acts were essential for coping with imminent dangers. Hence, the urgent need for a Europe-wide warning system, how to deal with potentially contaminated food, the way to warn the general public and questions on the protection of professional lead to the adoption of the acts mentioned above.

2. Basic Safety Standards:
   a) 1996 Basic Standards Directive[13];

   Being the foundation of a number of complementary directives[14] on radiation protection, it applies to all practices which involve a risk from ionising radiation, either from an artificial or from natural source.

[7] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 3-4.
[8] Classification and description are taken from: Kilb W. "The European Atomic Energy Community and its Primary and Secondary Law", *International Nuclear Law: History, Evolution and Outlook, 10th Anniversary of the International School of Nuclear Law,* pp. 59-60. Available on internet: http://www.oecd-nea.org/law/isnl/10th/isnl-10th-anniversary.pdf.
[9] Council Decision 87/600/Euratom of 14 December 1987 on Community arrangements for the early exchange of information in the event of radiological emergency, O.J. L 371, 30 December 1987, pp. 76-78.
[10] Council Regulation (Euratom) No. 3954/87 of 22 December 1987 lying down maximum permitted levels laying down maximum permitted levels of radioactive contamination of foodstuffs and of feeding stuffs following a nuclear accident or any other case of radiological emergency, O.J. L 371, 30 December 1987, pp. 11-13.
[11] Council Directive 89/618/Euratom of 27 November on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency, O.J. L 357, 7 December 1989, pp. 31-34; and Commission Communication 91/C103/03 on the implementation of the Council Directive 89/618/Euratom, O.J. C 103 of 19 April 1991, p. 12.
[12] Council Directive 90/641/Euratom of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas, O.J. L 349, of 13 December 1990, pp. 21-25.
[13] Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation, O.J. L 159, of 29 June 1996, pp. 1–114.
[14] Such as: Council Directive 2003/122/Euratom of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources, O.J. L 346, of 31 December 2003, pp. 57-64; and Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent nuclear fuel, O.J. L 337 of 5 December 2006, pp. 21-32.

b) Commission Communication concerning the Basic Standards Directive[15];

This Communication was issued for correct implementation of the Basic Standards Directive after consultation with the group of scientific experts referred to in Article 31 of the Euratom Treaty.

3. Other legal acts on specific questions:
   a) 1997 Medical Exposures Directive[16]

The Commission's main legal activities in the field of Health and Safety, are:[17]

- To propose and to implement Community legislation in respect of radiation protection issues and to co-ordinate this work through meetings of independent experts;
- To check legal and operational implementation of the Community legislation;
- To draw up Basic legal Safety Standards for the protection of workers and the general public;
- To verify that member states perform their statutory duties in respect of obligatory monitoring of environmental radioactivity;
- To provide a system of rapid information exchange in case of nuclear incidents;
- To ensure implementation of maximum permitted levels of radioactivity in foodstuffs, laid down after the Chernobyl accident and the introduction to similar levels in case of a future accident.

Article 37 states that Member States have an **obligation to provide the Commission with general data** relating to any plan for the disposal of radioactive waste to determine whether the implementation of such plan is liable to result in the radioactive contamination of water, soil or airspace of another Member State. This provision might require certain explication.
Firstly, the Commission must be provided with data before such disposal is authorized and the Commission's opinion must be brought to the notice of that Member State before the issue of any such authorization.[18]
Secondly, certain terms should be explained. "General data" should be understood, in the context of the operation of the nuclear reactor, as including data on the site and surroundings of the planned installation and in particular data on geographical, topographical, geological, seismological, hydrological, meteorological features of the site and region, on the natural resources and

[15] Communication from the Commission 98/C133/03 concerning the implementation of Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation, O.J. C 133 of 30 April 1998, page 3.
[16] Council Directive 97/43/Euratom 30 of June 1997 on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure, O.J. L 180 of 9 July 1997.
[17] Overview at: http://ec.europa.eu/energy/nuclear/radiation_protection/radiation_protection_en.htm
[18] Judgement of the ECJ of 22 September 1988, *Saarland v Minister for Industry*, Case 187/87. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61987J0187:EN:PDF&bcsi_scan_921B58821B3E7C8C=ZAev3EcuQuhGwkuxUR/rLwQAAAB5f3QA&bcsi_scan_filename=LexUriServ.do>.

foodstuffs of the region and on other activities in the vicinity of the site.[19] "Disposal of radioactive waste" covers any planned of accidental release of radioactive substances into the environment, associated with these operations:

- operation of nuclear reactors,
- reprocessing of irradiated fuel,
- mining, milling and conversion of the uranium,
- enrichment of the uranium,
- fabrication of nuclear fuel,
- storage of irradiated nuclear fuel,
- dismantling of nuclear reactors,
- "all other relevant options", as it is formulated in the Recommendation 2010/635/Euratom.

And thirdly, after the submission of information, the Commission gives opinion on a disposal plan. The Member State concerned has to inform the Commission how its recommendations are being followed. Although Commission possesses competence to draw up opinions on the disposal plans from radiation point of view, this right is a non-binding measure for the Member State.[20]

The protection of the **environment** being the underlying aspect in the Health and Safety Chapter and makes the Euratom Treaty in some way a pioneer in this field[21]. Article 35 and 36 oblige Member States to regularly monitor level of radioactivity in the air, water and soil and send the data to the Commission in order to ensure the compliance with the established basic standards and protection of the environment. Article 37, as mentioned above, requires the Member State to provide general information on any plans for disposal of radioactive waste in order to determine its effect on air, water and soil. The Commission also issued certain Recommendations on the questions of the environmental protection:

1. Commission Recommendation 2004/2/Euratom of 18 December 2003 on standardised information on radioactive airborne and liquid discharges into the environment from nuclear power reactors and reprocessing plants in normal operation;[22]
2. Commission Recommendation 2000/473/Euratom of 8 June 2000 on the application of Article 36 of the Euratom Treaty concerning the monitoring of levels of radioactivity in the environment for the purpose of assessing the exposure of the population as a whole.[23]

Due to all that, it can be said that a substantial body of Community rules has been developed with regard to health protection enabling a high level of

[19] Commission Recommendation 11 of October 2010 on the application of the Article 37 of the Euratom Treaty, 2010/635/Euratom, O.J. L 279 of 23 October 2010, pp. 36-67.
[20] Opinion of Advocate General Jacobs delivered on 13 December 2001, in the Judgement of the ECJ of 10 December 2002, *Commission v. Council* (C-29/99), ECR (2002) I-11278. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61999C0029:EN:PDF.
[21] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 3-4.
[22] O.J. L 2 of 6 January 2004, p. 36.
[23] O.J. L 191 of 27 July 2000, p. 37.

protection to be established based on present scientific knowledge, as reflected internationally in the work of the International Commission on Radiological Protection, the International Atomic Energy Agency, the Scientific Committee on the Effects of Ionising Radiation, the World Health Organisation, the International Labour Organisation and the Nuclear Energy Agency of the OECD.[24]

1.1.3 Encouragement of investment

Investments are essential condition in order to secure developments of the nuclear field. To stimulate that, the Commission has an obligation to periodically publish illustrative nuclear programmes (PINC) indicating particular nuclear energy production targets and all type of investment required for the attainment of those targets (Article 40). In other words, the illustrative programme provides guidance in terms of the objectives of nuclear power production and the investment involved in achieving them. Since 1958, the Commission has published five PINCs as the last one was adopted on 10 January 2007.

Under Article 41 of the Euratom Treaty, investment projects related to the nuclear fuel cycle in the EU must be notified to the Commission prior to conclusion of contracts with suppliers or, if the work is to be carried out by the undertaking with its own resources, three months before the work begins. More than 200 in total and 19 projects since 1997 have been notified to the Commission. The most recent of them concern the replacement of equipment in existing installations and the construction of new reactors in Finland and France.[25]
The Euratom Treaty also introduced the "joint undertakings" concept regulated by Articles 45-51 of the Euratom Treaty. Having their own legal personality, these undertakings are designed to carry out specific projects which are of prime importance for the development of nuclear industry and support innovation.[26] Nine joint undertakings were set up in total, the latest being for the ITER and development of fusion energy.[27]

1.1.4 Supplies

The concept of a centralized public authority supply and ownership monopoly for nuclear materials was in fact based on the United States legal model, which provided that only a public authority can own nuclear material. The United States provisions on ownership were repealed in 1964 and private

[24] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 3.
[25] Information based on Communication from the Commission to the Council and the European Parliament "Illustrative Nuclear Programme", Brussels, 4.10.2007, COM(2007) 565 final. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0565:FIN:EN:PDF and Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 3-4.
[26] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, pp. 4-5.
[27] Council Decision of 27 March 2007 establishing the Joint European Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it, 2007/198/Euratom, O.J. L 90, 30 of March 2007, pp. 58-72. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:090:0058:0072:EN:PDF.

ownership became possible, but the ownership provisions of the Euratom Treaty remained unchanged.[28]
The supply of the basic raw materials is regulated by the Chapter 6 and 8 of the Euratom Treaty. In order to ensure regular and equitable supply of ores and nuclear fuels, Article 52(2)(b) of the Euratom Treaty provides for a specialized agency – the Euratom Supply Agency.[29]

Task of the Agency

The Court of First Instance of the European Communities[30] clearly stated that it is clear from the scheme of the Treaty that the task of the Agency is to guarantee one of the essential aims which the Treaty assigns to the Community – to ensure supplies, in accordance with the principle of equal access to resources laid down in Article 52(1).

Main rights of the Agency

In order to be able to ensure the supplies of ores, source materials and special fissile materials, the Agency has two exclusive rights (Article 52(2)(b)):

1. The right of option on ores, source materials and special fissile materials produced in the Member States;
2. The exclusive right to conclude contracts for the supply of those products coming from inside the Community or from outside.

Common supply policy

The general concept of a "common policy" normally refers to a comprehensive set of rules under which the European Union has exclusive powers and conduct its policy in a certain field. It is considered, that albeit on a different scale, the Euratom Treaty's supply rules, taken together with other provisions, correspond to the concept of common policy.[31]

The Euratom common supply policy means:

1. As mentioned above, the Euratom Supply Agency has a monopolistic right to conclude contracts relating to the supply of ores, source materials and special fissile materials coming from inside or outside of the Community (Article 52.2 (b));
2. The Community has the right of option and ownership on the nuclear supplies (Article 52.2(b) and Article 86).
3. The right to conclude contracts and the right of option are closely connected – according to Article 57(2) the agency shall exercise its right of

[28] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 9.
[29] Latest Statutes of the Euratom Supply Agency in: Council Decision 2008/144/EC, Euratom of 12 February 2008 establishing Statutes for the Euratom Supply Agency, O.J. L 14 of 15 February 2008, pp. 15-20.
[30] Judgement of the Court of First Instance of 15 September 1995 in Joined Cases T-458/93 and T-523/93, II-2462 – II-2500, point 57. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61993A0458:EN:PDF>; Appeal rejected by the European Court of Justice, Judgement of 11 March 1997, Case C-337/95P. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61995J0357:EN:PDF>.
[31] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 11.

option by concluding contracts with producers of ores, source materials and special fissile materials. Due to that, it might be considered that concluding contracts is the only way the Agency is exercising its right of option.

4. On a proposal from the Commission, the Council can intervene in pricing (Article 69);
5. The Euratom Supply Agency has a right to create necessary commercial stocks to facilitate supplies to and the Commission can decide to build up emergency stocks, where needed (Article 72).

Practical implementation of the supply policy

In the early 1990's massive natural uranium supplies from Soviet Union (and later from the New Independent States of the former Soviet Union) entered into the western markets at very low prices. Following several formal and informal complaints both in the United States and in Europe, restrictions or policies have been introduced to limit the authorized levels of supply from those cheap sources. The Euratom Community policy was announced in 1992 and was implemented through the exercise of the mentioned above Agency's right to conclude/refuse contracts. The essence of the policy was the requirement that individual users do not depend upon the New Independent States for natural uranium for more the approx. one quarter of their needs, and for more than approx. one fifth for enrichment. This policy has not been enacted in formal legislation, but was applied on case-by-case basis by deciding for each contract on an individual basis whether to conclude the contract, impose conditions or refuse. It was not a quantitative import restriction or quota. The implementation of the policy has now been set out in the Annual Report of the Agency.[32]

The main principles governing nuclear supplies[33]:

1. Security of supply

   One of the main objectives of the Euratom Treaty itself is regular and equitable supply of ores and nuclear fuels (Article 2(d)). Due to that securing the supply is essential accomplishing this task. This principle is quite efficiently implemented through non-binding actions of the Supply Agency. To secure the supply, the Agency has recommended:

   a) For users to cover most of their needs in advance through long term contracts with primary producers;
   b) The prices in the contracts should allow the recovery of the cost of production and sustain producing activity;
   c) To maintain a sufficient level of strategic stockpiles to face any unforeseen difficulty and to allow optimal use of contract flexibilities;
   d) To keep diversification of sources and to avoid excessive dependence on any single source of supply to ensure the political or other

[32] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* pp. 23-25.
[33] About the supply principles more detailed in: Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* pp. 20-23.

problems in a given country or area would not disrupt the supply situation. [34]

Nowadays most of the supply is actually accomplished under long term contracts and spot-market activities play far more limited role. According to the Supply Agency, the supply is secured due to the diverse distribution of uranium resources and fuel fabrication facilities. This eases the maintenance of the strategic stockpiles of the fuel.[35] Due to that, it can be said, that Agency's recommendations have been taken into consideration and fulfilled.

2. Obligation to supply, except obstacles

According to Article 61.1 of the Euratom Treaty, the Agency has an obligation to satisfy all orders, unless there is a material or legal obstacle preventing from doing so. The Court confirmed this general requirement of supplying for the Agency, but qualified it by adding that Agency had a broad margin of appreciation in the evaluation of such legal or material obstacles. Therefore the Agency can weigh up the different, possibly conflicting, objectives in order to adopt a position on a given contract.[36]

3. Equal access and non-discrimination (Article 52)

Whole common supply policy has to be based on equal access to source of supply and all practices designed to secure a privileged position for certain users are prohibited. It is also prohibited to discriminate in any way between users on the grounds of which they intend to use the supplies requested, unless such use is unlawful or contrary to conditions imposed on suppliers outside the Community on the consignment in question. Non-discrimination principle was practically implemented in the individual Commission's Decision[37] stating that the Agency is not obliged to meet the orders of supply when there are legal obstacles and creating a privileged position to certain users is a legal obstacle. Due to that in this case the Agency has a right to refuse a contract.

4. No Community preference for domestic production

There was a point of view that the general principle of Community preference for domestic production applies in the nuclear supplies sector – that principle of preference for domestic production applies even if prices of imports are more favourable than domestic natural uranium prices.[38] The Court[39] stated that the system of supplies does not allow pref-

[34] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 20.
[35] Euratom Supply Agency Annual Report 2009, pp. 14-15. Available on internet: http://ec.europa.eu/euratom/ar/last.pdf.
[36] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 20.
[37] Commission Decision 94/285/Euratom of 21 February 1994 relating to a procedure in application of the second paragraph of Article 53 of the Euratom Treaty (Only the German text is authentic), O.J. L 122 of 17 May 1994, p.30, point 14. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994D0285:EN:HTML>.
[38] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 22.
[39] Judgement of the Court of First Instance of 15 September 1995 in Joined Cases T-458/93 and T-523/93, II-2462 – II-2500, point 64, 66. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61993A0458:EN:PDF>; Appeal rejected by the Europe-

erential treatment to be given to ores and other nuclear fuels coming from within the Community when they are offered at prices higher than those prevailing on the world market. Due to that, the Agency has no power to exercise its right to option when the price sought by the Community producer is too high to secure outlets on the market.

5. Market pricing

   According to the Article 67 of the Euratom Treaty, prices result from balancing of supply against demand. This provision imposes that not all prices can be accepted as long as they are freely agreed by parties – the prices should be "market related"[40]. The Court[41] stated that the Agency has a right to refuse the contract if prices are incompatible with this provision.

The gap between letter of law and practice

The nuclear fuels supply system was created for the scarcity of uranium, but in practice by 1960s this perception had to be replaced by recognition that the situation was now one of over-supply: excess over demand.[42] As a consequence of that, provisions on common supply policy and the Commissions right of option became obsolete.[43] Certain actions in the Euratom Community were taken – Regulation of the Supply Agency[44] was issued stating that users can freely – without involvement of the Supply Agency – negotiate supply contracts directly with the producers and inform the Supply Agency about the terms. Considering the strict supply policy stated in the Euratom Treaty, the practical implementation of it became quite far from letter of law.

1.1.5 Safeguards

The materials apprehended by the Euratom Treaty can be used for two very different purposes:

1. Military (and very destructive);
2. Generation of electricity (which is predominant)

The basic material for both of these purposes is the naturally occurring metallic element – uranium. Natural and low-enriched (3-6%) it is the base of nuclear fuel, but enriched to about 93% of the total mix, it is suitable for

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an Court of Justice, Judgement of 11 March 1997, Case C-337/95P. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61995J0357:EN:PDF>.

[40] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 22.

[41] Court of First Instance Judgement of 25 February 1997 in Joined Cases T-149/94 and T-181/94, ECR 1997, p. II-161, points 96-101.

[42] Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", pp. 123, *Common Market Law Review 40: 117-142, 2003.*

[43] Erhag T., "Är kärnavfall ett bekymmer för EU eller medlemsstaterna? – om kärnavfallsfrågan och principen om nationellt ansvar I EG-fördraget och Euratom-fördraget", *CERGU Working Papers Series Nr 07:01*, p.4. Available on internet: < http://www.cergu.gu.se/digitalAssets/966/966392_Thomas_Erhag_07.01__A4-format.pdf>.

[44] Regulation of the Supply Agency of the European Atomic Energy Community amending the rules of the Supply Agency of 5 May 1960 determining the manner in which demand is to be balanced against the supply of ores, source materials and special fissile materials, O.J. L 193 of 25 July 1975, pp. 37-38.

making a nuclear warhead. Due to this main reason, strict control had to be exercised on the, transport and trade of this material.[45]

It should be noticed that safeguards should not be confused with nuclear safety or physical protection, even though they might slightly overlap. Generally speaking, these are the differences:

1. Nuclear safety mainly aims to minimise the risks of accident in the nuclear facility;
2. Physical protection aims on protecting nuclear material and facilities from the risk of theft or other unauthorized diversion and of sabotage;
3. Safeguards represent a key means of verifying the compliance by States with commitments not to use nuclear material or technology to develop nuclear weapons or other nuclear explosive devices. It is a part of non-proliferation regime – if to follow the structure of the IAEA Handbook of Nuclear Law[46], non-proliferation is considered to be consisting of: 1) safeguards; 2) export and import control; 3) physical protection of nuclear material and facilities.

As mentioned above, the main **purpose** of the safeguards – to ensure that ores, source materials and special fissile materials are not diverted from the intended use as declared by the users (Article 77). Safeguards are applied to all nuclear materials within the territory of the Community form the moment they are extracted or imported.[47]

According to the IAEA, safeguards comprise three main **functions**[48], which are equally consolidated in the Euratom Treaty:

1. Accountancy

   IAEA requires a Member State to report to it the types and quantities of fissionable material under its control. Article 79 of the Euratom Treaty states the Member State's obligation to keep periodic operating records in order to permit accounting for ores, source materials and special fissile materials used, produced and/or transported.

2. Containment and surveillance

   Through the use of seals on nuclear material containers and filmed recordings of key areas at nuclear facilities, the IAEA controls whether unauthorized movements of fissile materials have occurred. The Euratom Treaty does not have the special provision for the surveillance details, but systematic interpretation of Articles 79 and 82 allows coming to conclusion that inspectors have a right and obligation to obtain operating records for accounting for nuclear fuels. After obtaining them in-

[45] Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", pp. 125-126, *Common Market Law Review 40: 117-142, 2003.*
[46] Handbook of Nuclear Law, International Atomic Energy Agency, Vienna 2003, p. 121. Available on internet: < http://www-pub.iaea.org/MTCD/publications/PDF/Pub1160_web.pdf>.
[47] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, p. 5.
[48] Functions and the IAEA implementation, in: Handbook of Nuclear Law, International Atomic Energy Agency, Vienna 2003, p. 121. Available on internet: < http://www-pub.iaea.org/MTCD/publications/PDF/Pub1160_web.pdf>.

spectors have to verify these records and for that purpose different practical methods could be applied, including control of seals on nuclear material containers and filmed recordings.

3. Inspection

   It is conducted by IAEA inspectors to verify that the declared quantities of nuclear material are where they are declared to be, and that there is no undeclared material in the State. Articles 81 and 82 of the Euratom Treaty define inspection process and the status of the inspectors. They are sent by the Commission to the Member States and their work is the main control mechanism over the use of nuclear fuels. The Euratom Treaty provisions guarantees them access at all times to all places, data and persons, who, by reason of their occupation, deal with materials, equipment and installations subject to the safeguards.

Besides the principles deriving from the international level, the Euratom Treaty sets additional requirements ensuring the fulfilment of the safeguards main purpose:

1. Obligation for the Member States to supply Basic Technical Characteristics (BTCs) of the installation, used for production, separation or other use of source materials or special fissile materials or reprocessing irradiated nuclear fuels (Article 78);
2. The Commission must approve the techniques to be used in chemical processing of irradiated materials (Article 78);
3. If the Member State has an excess of the fissile materials which are not being used, the Commission has a right to require to deposit them with the Agency or in other stores were supervision of the Commission would be possible (Article 80);
4. In order to assure the implementation of the safeguard provisions, the system of sanctions may be imposed in the event of infringement – from warning to total or partial withdrawal of source materials or special fissile materials (Article 83). This ability to apply enforcement action on the operator or the member state is unique amongst the safeguard treaties[49].

While primary law spells out the main rights and duties of the Commissions safeguards inspectors on the one hand and nuclear operators and member states on the other, secondary law deals with technical aspects of the Euratom safeguards inspections. [50] There are three main secondary legal acts:

[49] Patel B., Chare P., "Fifty Years of Safeguards under Euratom Treaty – A Regulatory Review", *ESARDA Bulletin, No 36, 2007*, p. 7. Available on internet: < http://esarda2.jrc.it/db_proceeding/mfile/B_2007_036_02.pdf>.
[50] Kilb W. "The European Atomic Energy Community and its Primary and Secondary Law", *International Nuclear Law: History, Evolution and Outlook, 10th Anniversary of the International School of Nuclear Law,* pp. 65-66. Available on internet: http://www.oecd-nea.org/law/isnl/10th/isnl-10th-anniversary.pdf.

1. Council Regulation No 302/2005 on the application of Euratom safeguards[51] – it sets out in detail requirements placed on holders of nuclear materials.
2. Commission Recommendation 2009/120/Euratom on the implementation of a nuclear material accountancy system[52] - it describes the reference characteristics of operators nuclear material accountancy and control (NMAC) system – it has to be credible, effective and conforming the latest international standards.
3. Commission Recommendation on guidelines of application of Regulation No 302/2005 on the application of Euratom safeguards[53] – it sets out in great technical detail rights and obligations of the inspector, the operator and the member state.

In practise, IAEA and Euratom functions on nuclear safeguards were duplicated and it caused slight tension between organisations. To withdraw the unnecessary friction and to increase the effectiveness and efficiency of the safeguards enforcement, "New Partnership Approach" (NPA) was agreed in 1993 to improve the working arrangements for the application of safeguards within the European Union. The new approach is based on optimization of the necessary practical arrangements and the use of commonly agreed safeguards approaches and inspection planning, procedures, activities, instruments, methods and techniques.[54]

With regard to experience, the Euratom system of safeguards has a very good track record. The system has existed since 1957, which gives experience hardly matched. Not only safeguards functioned on the European level, they have contributed to a wider international system of control under auspices of the IAEA since 1970. [55]

1.1.6 The Nuclear Common Market

Definition of the nuclear common market

Systematic analysis of the Article 92, Annex IV and Article 93 of the Euratom Treaty leads to the conclusion that free movement of good and products is assured to:

1. Nuclear fuels and materials;
2. Nuclear reactors and other equipment;
3. Radiation protection related equipment and materials.

[51] Commission Regulation (Euratom) No 302/2005 of 8 February 2005 on the application of Euratom safeguards, O.J. L 54 of 28 February 2005, pp. 1-70.
[52] Commission Recommendation 2009/120/Euratom of 11 February 2009 on the implementation of a nuclear material accountancy and control system by operators of nuclear installations, O.J. L 41 of 12 February 2009, pp. 17-23.
[53] Commission Recommendation 2006/40/Euratom of 5 December 2005 on guidelines of application of Regulation (Euratom) No 302/2005 on the application of Euratom safeguards, O.J. L 28 of 1 February 2006, pp. 1-85.
[54] Thorstensen S., Chitumbo K., "Safeguards in the European Union: The New Partnership Approach", *IAEA Bulletin, Vol. 37, No. 1,* pp. 25-28. Available on internet: http://www.iaea.org/Publications/Magazines/Bulletin/Bull371/37102382528.pdf.
[55] Kobia R., "The EU and Non-Proliferation: Need for a Quantum Leap", *Nuclear Law Bulletin No. 81(2008/1),* p. 43.

The fact that there are these three very different groups of goods in nuclear market, allows to state that nuclear common market is not limited to nuclear supplies, defined in Article 197 of the Euratom Treaty. Besides that, Articles 96 and 97 indicate that no restrictions based on nationality can be applied by Member States employing skilled personnel in the field of nuclear energy and in participation of natural or legal persons in construction of nuclear installations of a scientific or natural nature. Due to that, it can be said that these provisions secures the free movement of people and services in the field of nuclear energy within the Member States of the Euratom Community. Customs duties or charges of equivalent effect between Member States are prohibited (Article 93) and the Commission by issuing recommendations can even facilitate movement of capital, intended to finance main nuclear-industry activities (Article 99). Therefore, it can be said that the Euratom Treaty ensures free movement of capital as well.
As all four main rights of movement – goods, services, capital and people – are regulated by the Euratom Treaty, the basics of the common nuclear market are created.

However, the Euratom Treaty only declares these general rights of movement and only secondary legal act implementing these rights, was Council Directive on freedom to take skilled employment in the field of nuclear energy[56] in 1962. According to the European legal data base, this Directive is still valid. However, it does not state much more than Member State's obligation to ensure free movement of skilled workers and gives the list of what is considered to be a skilled employment in the nuclear energy sector. It also has one worth attention provision – Article 5 of the latter directive states that "with regard to any matter not covered by this Directive, Member States shall apply the measures taken in pursue of the Treaty establishing European Economic Community which relate to freedom of movement of workers". As it is, it clearly indicates the possibility (or even an obligation) to apply nowadays called – EU legal acts implementing the freedom of movement of skilled workers. But this particular aspect will be analysed in detail in the Part 2 of this research.

[56] EAEC Council: Directive on freedom to take skilled employment in the field of nuclear energy, Official Journal 057, 09/07/1962, pp. 1650-1652. English special edition 1959-1962, p. 245.

1.2 Special features of the Euratom Treaty

The Euratom Treaty in comparison with other international treaties and the EU Treaties (TEU and TFEU) has some special features, distinguishing it from all others. Perception of their existence is essential in order to understand the secondary legal system based on the Euratom Treaty and to implement Euratom provisions correctly on the national level.

1.2.1 Special enforcement procedure

Article 144 of the Euratom Treaty states that CJEU has unlimited jurisdiction in:

1. Proceedings to have appropriate terms fixed for granting of licences and sub licences under Article 12;
2. Sanctions imposed by the Commission for the infringement of the safeguards provisions under Article 83.

Article 145 states that all other infringements of the Treaty that are not connected to the safeguards shall be handled on national level – which means that authorities of the Member State will implement sanctions to their persons and undertakings according to the national law. And only if the Member State does not comply with such obligation, the Commission might bring the action before the CJEU under the Articles 258 and 259 of the TFEU.

This feature is common to the European Union and the Euratom Community legal systems and cannot found in any other international treaties. The Court of Justice of the European Union (CJEU), as it is called after the Lisbon amendments, apart from other functions makes the final decision on whether the Member States implement the Euratom Treaty right.

1.2.2 Stagnant material law

The Euratom Treaty has never been substantially amended. It was only revised in the margins to take account of institutional changes in the EU, notable accession rounds and internal institutions, but its substantive provisions have never been changed.[57] The Concern on the stagnation of the Euratom Treaty was expressed by some Member States in the Declaration No. 54 of the Lisbon Treaty[58]. It was noted that the Treaty establishing the European Atomic Energy Community need to be brought up to date. Therefore Germany, Ireland, Hungary, Austria and Sweden support the idea of a Conference of the Representatives of the Governments of the Member States, which should be convened as soon as possible. However, it was sharply no-

[57] Kobia R., "The EU and Non-Proliferation: Need for a Quantum Leap", *Nuclear Law Bulletin No. 81(2008/1),* p. 37; and Kilb W. "The European Atomic Energy Community and its Primary and Secondary Law", International Nuclear Law: History, Evolution and Outlook, 10th Anniversary of the International School of Nuclear Law, p. 44;

[58] Declaration No. 54 by the Federal Republic of Germany, Ireland, the Republic of Hungary, the Republic of Austria and the Kingdom of Sweden, Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, O.J. C 83 of 30 March 2010, p. 356.

ticed that this means that 22 member states, at least for the moment, prefer not to address the politically sensitive substantial issues which divide the European Union into pro and con nuclear energy member states. It thus appears unlikely that substantial parts of the Euratom Treaty will be subject to a major reform in the short or mid-term.[59]

This feature of the Euratom Treaty determined certain specifications of its provisions as well:

1. Certain provisions of the Treaty became obsolete

   As mentioned before, the Treaty was constructed to cope with the scarcity of the supplies, but in practise it was overload. Due to that, regulation concerning equal access to source of supply, stockpiles and right of option became obsolete.[60] They are legally valid, but not implemented in practice. This is a special phenomenon – the Euratom Community institutions and member states do not comply with the Euratom Treaty and no sanctions for infringement are being implemented. In some way it shows that all treaties in general are some sort of practical agreement – if both parties perceive that some rules become irrelevant, they just stop implementing them. On the other hand, the Commission still legally holds the right to start implement the obsolete provisions any time – in sudden scarcity of uranium, for example.

2. Other provisions became wider than it was originally planned

   Protection from ionising radiation is the most obvious example of this kind. The Euratom "was created to establish the conditions for the development of nuclear energy in Europe by sharing resources 8funds, knowledge, materials, experts, etc.), protecting the general public and associating other countries and international organisations with this work"[61]. Due to that, it can be said that one of the goals of the established Euratom Community was to protect people and nature from the radiation emerging from the nuclear installations. It is hard to be convinced that ionising radiation from the medical usage of radioactive materials was thoughtful aim of the founders of the Euratom Treaty. Despite that, the basic standards referred to in Article 30 have been interpreted broadly as covering every source of ionising radiation and solid legal base was created for radiation protection in general.

[59] Kilb W. "The European Atomic Energy Community and its Primary and Secondary Law", International Nuclear Law: History, Evolution and Outlook, 10th Anniversary of the International School of Nuclear Law, p. 85;

[60] Bouquet A., "How current are Euratom provisions on nuclear supply and ownership in view of the European Union's enlargement?", *Nuclear Law Bulletin No. 68(2001),* p. 11; and Erhag T., "Är kärnavfall ett bekymmer för EU eller medlemsstaterna? – om kärnavfallsfrågan och principen om nationellt ansvar I EG-fördraget och Euratom-fördraget", *CERGU Working Papers Series Nr 07:01*. Available on internet: < http://www.cergu.gu.se/digitalAssets/966/966392_Thomas_Erhag_07.01__A4-format.pdf>.

[61] Communication from the Commission to the Council and the European Parliament, "50 Years of the Euratom Treaty", Brussels, 20.3.2007, p. 2.

1.2.3 New areas of competence

As it was mentioned before, the Euratom Treaty does not explicitly regulate the question of nuclear safety. In the judgement C-29/99 in 2002[62] the European Court of Justice has interpreted the basic safety standards of Article 30 broadly and determined that nuclear safety is a field of shared competence between the Euratom Community and the Member States.

This judgement led to certain consequences, that is:

1. Nuclear safety became a field for mandatory dispute settlement mechanism – ECJ;
2. The Euratom Community has a right to adopt obligatory legal acts in the field of nuclear safety.

On the ground of the ECJ judgement analysed above, on the 25th of June, 2009, the first Directive[63] was adopted in the field of nuclear safety. It should be noticed that the final Directive has few substantial differences from the first Commission's proposal[64] as Commission and Council had slightly different visions of the new Safety Directive. Some of the researchers highly criticise[65] the Safety Directive for not making the big step forward in deepening collaboration among the EU Member States as it was expected. Never the less, the Directive should not be considered as "the step back" either. While it did not make drastic changes it also brought few adjustments which make the difference from the existing international nuclear law.

New aspects in the Directive comparing it with the International Convention on Nuclear Safety (CNS)[66]:

1. The transparency – the competent regulatory authority has an obligation to ensure that information in relation to the regulation of nuclear safety is made available to the workers and the general public (Article 8).
2. The obligation for Member State to arrange periodic self-assessments of their national framework and competent regulatory authorities and invite an international peer review. Even though self-assessment and peer review are not new to international nuclear law, they are only optional in international level.

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[62] Judgement of the ECJ of 10 December 2002, *Commission v. Council* (C-29/99), ECR (2002) I-11221. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61999J0029:EN:PDF>

[63] Council Directive 2009/71/Euratom of 25 June 2009, establishing a Community framework for the nuclear safety of nuclear installations, Official Journal of the European Union L172/18-22.

[64] The comparison of the first proposal and the Directive 2009/71/Euratom is analysed in detail by Sousa Ferro, M. "Directive 2009/71/Euratom: the losing battle against discrimination and protection of sovereignty", *Int. J. Nuclear Law, 2009, Vol. 2, No. 4*. The main changes are:

1. Prime responsibility of the licence holder was not mentioned in the proposal but clearly stated in the Directive;
2. The aspect of informing the public of nuclear safety was not in the proposal, but is in the Directive;
3. The first proposal included the supranational monitoring by carrying out verification of national safety authorities, but it was totally omitted in the final Directive;
4. As the consequence of the previous change the self-assessment and peer review took the place of the supranational monitoring in the final version of the Directive.

[65] Sousa Ferro, M. (2009) "Directive 2009/71/Euratom: the losing battle against discrimination and protection of sovereignty", Int. J. Nuclear Law, Vol. 2, No. 4.

[66] The Convention on Nuclear Safety was adopted on 17 June, 1994 by a Diplomatic Conference convened by the International Atomic Energy Agency at its Headquarters. Available on internet: <http://www.iaea.org/Publications/Documents/Infcircs/Others/inf449.shtml>.

Due to the tragic and dangerous events in nuclear power plant in Japan in March 2011, the High level conference[67] was convened at the Commission´s initiative, with participation of political representatives, regulators and industry. The Commission representative stated that, due to the current events in Japan, the European approach on safety should include stress-tests with certain criteria, such as:

1. The seismic characteristics of the sites
2. The possibility of flooding
3. The technical design and features of the cooling systems
4. The technical design and arrangements of the backup systems
5. The age of the power plants
6. The type of reactor
7. Resistance to man-induced events [e.g. terrorist acts]

Accordingly, it was suggested that consideration should be given to possible revision of the Directive on Nuclear Safety. In order to develop the technical details for the implementation of the criteria, the Commission will rely upon ENSREG's advice, without excluding other relevant expertise.
In conclusion it can be said, that nuclear safety not only became the part of competence in the Euratom Community, but current waves also show the possible deepening of the regulation in this field.

[67] All following information is based on the working document 7859/11 of the Council of the European Union, 16 March 2011, Brussels.

1.3 The changes in the Euratom Treaty after the amendments of the Lisbon Treaty

There are two main purposes of this chapter – to analyse what amendments were brought to the EU by the Treaty of Lisbon and how these amendments influence the legal system of the Euratom Community. Due to that, the first part of this chapter is devoted to briefly present the main changes of the Lisbon treaty and in the second part I would like to analyse some of the more problematic aspects that can emerge applying these changes to the Euratom Treaty.

1.3.1 Objectives of the "new Treaty"

The genesis of what is now the Lisbon Treaty started already in 2001 in Nice, during the conference on amendment the Treaty on European Union, the Treaties establishing the European Communities and certain related acts. Declaration on the future of the Union[68] was submitted as a part of the Treaty of Nice, stating that future accession of new Member States will require certain changes in the European Union. As a result, four main objectives for the future treaty were adopted:

1. To establish and monitor delimitation of powers between the European Union and the Member States;
2. To clear the status of the Charter of Fundamental Rights of the European Union;
3. To simplify the Treaties making them clearer and better understood without changing their meaning;
4. To identify the role of national parliaments on the European Union level.

The Lisbon Treaty in its final version was signed on the 13th of December 2007 and entered into force 1st of December 2009. As there were certain goals this treaty had to accomplish, it is worth analysing if the Treaty of Lisbon was a success.

Delimitation of powers between EU and Member States

According to the Article 2 (12) of the Lisbon Treaty and Articles 2-6 of the Treaty on Functioning of the European Union (TFEU), there are clear distinctions between three different types of competence: exclusive competence, shared competence and EU right to provide support and coordination. In addition to that, the TFEU provides separate lists of areas of exclusive accordingly shared competence, which is a big step forward comparing with the ancestor – the Treaty Establishing European Community[69]. The latter one regulated the question of shared competence very limited – stating that in areas were Community has no exclusive competence it can still act by following the principle of subsidiarity (Article 5). This means that actual shared competence was decided according to case-by-case principle and that was

[68] Treaty of Nice Amending the Treaty on European Union, the Treaties Establishing the European Communities and certain related acts, O.J. C 80 of 10 March 2001, pp. 85-86.
[69] O.J. C 321E of 29 December 2006.

causing various discussions on how far the Community can intervene just following the principle of subsidiarity. Besides that, additional Protocol (No 25) On the Exercise of Shared Competence was annexed to the TEU, TFEU and Euratom Treaty which clarifies the exercising of the shared competence – if EU takes action in the area of shared competence and issues a legal act, the scope of EU competence covers only questions regulated by that specific legal act and does not cover the whole area. The rules of exercising shared competence in addition to the lists of exclusive and shared competence allows the conclusion that delimitation of competence between EU and member States became easier.

The status of the Charter of Fundamental Rights of the European Union

Before the amendments of the Treaty of Lisbon the Charter of Fundamental Rights was not a legally binding instrument, however, the Community legislature was acknowledging its importance to the Community[70]. Now Article 6(1) of the TEU clearly states that the European Union recognises the rights, freedoms and principles set out in the Charter of Fundamental Rights, which shall have the same legal value as the Treaties. Same legal value actually means that certain legal acts have the same enforcement and protection mechanism. It is worth mentioning, that even before the Treaty of Lisbon, the ECJ conferred an indirect legal status upon the Charter by referring to it as another valid source of inspiration for the Court's own case law: if the right contained in the Charter, this acts as irrebuttable presumption that it is already protected under the general principles.[71] However, the Charter is not incorporated in the Treaties by text, only by reference – it was an outcome of the European Council's decision to abandon the "constitutional concept" in the Treaty of Lisbon.[72] Despite that, it is clear that objective to clarify the status of the Charter of Fundamental Rights was achieved.

Simplification of the Treaties

The objective of simplification concentrates on clarifying what EU already does and how EU already functions. Nevertheless, it is not an easy task as clarifying one problematic aspect can raise new questions, for example, simplifying legislative procedure can affect and complicate the decision making process. The main simplifying changes are[73]:

1. Clear structure of the EU legal base.

   After the Lisbon amendments there are two Treaties of the EU which are closely connected, but have different functions. The Treaty on EU is a concise legal base of the EU legal system which even has some constitutional characteristics, while the Treaty on the Functioning of the EU is a detailed legal act regulating functioning processes in the European Un-

[70] Judgement of the ECJ of 27 June 2006, *Parliament v. Council* (C-540/03), ECR (2006) I-5769, point 38. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62003J0540:EN:PDF.
[71] Judgement of the ECJ of 13 March 2007, *Unibet* (C-432/05), ECR (2007) I-2271, point 37. Available on internet: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62005J0432:EN:PDF>.
[72] Dougan M., "The Treaty of Lisbon 2007: Winning Minds not Hearts", p.662. *Common Market Law Review 45: 617-703, 2008*.
[73] The list of simplifying changes is based on: Bergström C. F., Hettne J., "Lissabonfördraget: Hur ändras EU", Available on internet: <http://www.lissabonfordraget.se/docs/ERT_2008_1_Lissabonfordraget_Hur_andras_EU.pdf>.

ion. This structure of EU Treaties eliminated problematic and sometimes unclear relation between the Treaty of the European Community and Treaty on European Union.

2. Changes in the legislation procedure.

   Firstly, Articles 289 and 290 of the TFEU distinguishes two different types of legal acts – legislative legal acts and non-legislative legal acts. Legislative legal acts are the regulations, directives or decisions adopted by the European Parliament and the Council by ordinary or special legislative procedure, while non-legislative acts are issued by the Commission when the legislative acts delegates this right. The purpose of non-legislative acts is to supplement or amend certain non-essential elements of the legislative act.
   Secondly, Article 289 of the TFEU much clearer regulates the implementation of ordinary and special legislative procedure. Ordinary becomes the one were legal acts are adopted by the European Parliament and the Council on a common agreement (co-decision) and special is when one of these EU institution adopts legal act only with participation and consultation of the other. The difference from the previous Treaty of the Community is that the Council had a constant right to adopt legal acts either together with the European Parliament or just asking its opinion. However now, the Parliament can also adopt legal acts with just participation of the Council. This is cogent proof of strengthening powers of the European Parliament.

3. Withdrawal from the EU

   Although it never was a practical problem, theoretically the question on if and how Member State can withdraw from EU was being asked as none of the treaties in the EU regulated that. To eliminate possible speculation in this field and to clarify the situation, new Article 50 of the TEU was adopted. It states that any Member State may decide to withdraw from the Union in accordance with its own constitutional requirements. First Member State must notify the Council about its intentions, and then according to the guidelines provided by the European Council, the Union shall negotiate and conclude an agreement with that State, setting out the arrangements for its withdrawal.

Other simplifying changes of the EU legal system could be named[74], but, in my opinion, these ones were clearest step forward into completing this objective and, due to that, have been the most worth mentioning.

Role of national parliaments on the European Union level

The role and functions of national parliaments in the EU arena are regulated by Article 12 of the TEU, Protocol (No 1) On the Role of national Parlia-

[74] Detailed analysis of all the simplifying changes in: Bergström C. F., Hettne J., Södersten A., ”Lissabonfördraget”, Sieps 2008:11, pp. 31-44. Available on internet: < http://www.sieps.se/sites/default/files/2008_11_nytryck_0.pdf>.

ments in the European Union and Protocol (No 2) On the Application of the Principles of Subsidiarity and Proportionality.[75]
The main rights of the national parliaments are to receive information on draft legislative acts and to give reasoned opinion of whether those drafts comply with the principle of subsidiarity. Preceding right is not new and was implemented already by the Treaty of the Community, while the latter one is purely a change of the Treaty of Lisbon.
National parliaments have to give reasoned opinions on a draft legislative act's non-compliance with the principle of subsidiarity in eight-week period after receiving the draft. Where this reasoned opinions represents at least one third of all votes allocated to the national parliaments (each national parliament has two votes), the draft must be reviewed. In case of ordinary legislative procedure, special rules are applied – the Commission is responsible for reviewing its draft legislative act if majority of national parliaments' votes are "against". If Commissions chooses to maintain the proposal, it will have, in a reasoned opinion, to justify why it considers that the proposal complies with the principle of subsidiarity. The European Parliament and the Council shall vote on the draft's compliance with subsidiarity and if, by a majority of 55 % of the members of the Council or a majority of the votes cast in the European Parliament, the legislator thinks that the proposal is not compatible with the principle of subsidiarity, the legislative proposal shall not be given further consideration.[76] Another important aspect – national parliaments can also take a case to the Court of Justice of the EU if they consider that a legislative act is contrary to the principle of subsidiarity (Article 8). These specific rights not only clarify the role of national parliaments, but give them certain power to influence legislative process of the EU.

Due to grounds analysed above, there are no reasons to disagree with the conclusion made by SIEPS research[77] in 2008: "in light of these objectives, the Lisbon Treaty is a success. It describes more clearly than before how to establish and maintain a more precise distribution of powers and clarifies the legal status of the Charter of Fundamental Rights. In addition to that, a simplification of the treaties is achieved, without changing their meaning, and the question of a position of the national parliaments in the European structure is given an answer."

1.3.2 Main amendments of the Treaty of Lisbon

The Lisbon Treaty brought quite a lot of changes into the legal, institutional and even political system of the EU. However, given the purpose of this research I would like to only mention the most important changes leaving aside their advantages and limitations.[78]

Substantive changes made by the Treaty of Lisbon are:[79]

[75] These Protocols are annexed to the EU Treaties (TEU and TFEU).
[76] Protocol (No 2), Article 7.
[77] Bergström C. F., Hettne J., Södersten A., "Lissabonfördraget", Sieps 2008:11, p. 94. Available on internet: < http://www.sieps.se/sites/default/files/2008_11_nytryck_0.pdf>.
[78] The changes are analysed in detail in: Dougan M., "The Treaty of Lisbon 2007: Winning Minds not Hearts", p.662. *Common Market Law Review 45: 617-703, 2008*.
[79] These changes are presented by: General Secretariat of the Council of the EU, *Information Note. Treaty of Lisbon*, December 2009. Available on internet: < http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/111652.pdf>.

1. A single legal personality

   On 1 December 2009 the European Community was replaced by the European Union which took over all rights and obligations of the prior. As the result of this change, "pillars" of the Community are merged, "the Court of Justice of the European Communities" changes name to "the Court of Justice of the European Union" and "EC law" turns into "EU law".[80]

2. the European Council and its President

   Under the Treaty of Lisbon, the European Council becomes an institution. It provides the Union with the necessary impetus for its development and defines the general political directions and priorities thereof. It will not exercise legislative functions. The European Council consists of the Heads of State or government of the Member States, together with its President and the President of the Commission. The High Representative of the Union for Foreign Affairs and Security takes part in its work. The fixed full-time President of the European Council ensures the preparation and continuity of the work of the European Council and the external representation of the Union on issues concerning its common foreign and security policy. The role of President of the European Council is not compatible with other national offices.

3. A new European External Action Service

   The Treaty of Lisbon sets up a European External Action Service (EEAS). It will work in cooperation with diplomatic services of the member States and will comprise officials from relevant departments of the General Secretariat of the Council and of the Commission as well as staff seconded from national diplomatic services. The Treaty stipulates that the organisation and functioning of the EEAS will be established by a decision of the Council. The Council will act on a proposal from the High Representative after consulting the European Parliament and obtaining the consent of the Commission.

4. A High Representative of the Union for Foreign Affairs and Security Policy

   The High representative combines tree different functions: she/he will be at once the Council's representative for the Common Foreign and Security Policy (CFSP), the President of the Foreign Affairs Council and a Vice-President of the Commission. The High Representative is responsible for steering foreign policy and common defence policy and also represents the Union on the international stage in the field of CFSP. In fulfilling the mandate, the High Representative will be assisted by the European External Action Service and will have authority over some

[80] Bergström C. F., Hettne J., Södersten A., "Lissabonfördraget", Sieps 2008:11, p. 94. Available on internet: < http://www.sieps.se/sites/default/files/2008_11_nytryck_0.pdf>.

130 delegations of the Union in third world countries and to international organisations.

5. Double majority (qualified majority) in the Council

   Up to now, when the Council voted on the basis of a qualified majority, the number of votes attributed to each Member State was predetermined by the Treaty itself (applying a scale of ranking from 29 votes for four largest Member States to 3 votes for the smallest). That system will continue until 2014. From then on, the definition of qualified majority by which the Council will adopt a large number of its acts (except were the TFEU expressly requires unanimity or a simple majority) will be different: it will then be double majority so that, in order to be adopted, an act must have support of at least 55% of the EU Member States (i.e. 15 out of 27 Member States) and at least 65% of the population of the EU. A blocking minority must include at least four Member States. However, between November 2014 and March 2017, any Member State may request for the current voting system to be applied instead of the new double majority system.

6. Codecision extended

   As it was mentioned earlier, the ordinary legislative procedure will be codecision with the European Parliament, with a qualified majority in the Council. This procedure has been extended to around forty fields, the most important of which relate to justice and home affairs. Areas such as tax matters, foreign policy, defence, etc. will still require unanimity in the Council.

7. Setting the number of Members of European Parliament (MEPs)

   The number of MEPs cannot exceed 751 and the breakdown of parliamentary seats between Member States will be degressively proportional keeping in mind that no Member State can have fewer than 6 or more than 96 seats.

8. A new role of national parliaments

   As was analysed earlier national parliaments of the Member States were endued by Treaty of Lisbon with two new rights – to object drafts legislative acts if they do not comply with the principle of subsidiarity and to take a case to the Court of Justice for the same reason.

9. Citizens' right of initiative

   A million of citizens may sign a petition inviting the Commission to submit a proposal on any area of the EU competence.

10. The Charter of fundamental rights

    As stated before, the Charter has the same legal value as the Treaties of the EU.

Even though amendments introduced by the Lisbon Treaty constitute significant changes, they did not require any new transfer of competence from the Member States and affected only the EU's capacity and ability to make use of already existing competence.[81] This could be considered as the one of the most significant aspect of the entire reform. Better use of the existing competence and simplification of the EU legal system should improve the functionality of the EU.

1.3.3 Lisbon amendments of the Euratom Treaty

The purpose stated in the preamble of the Protocol No 2 Amending the Treaty Establishing the European Atomic Energy Community[82] is to adapt the Euratom Treaty to the new rules laid down by the Treaty on European Union and by the Treaty on the Functioning of the European Union, in particular in the institutional and financial fields. This provision of the preamble leads to the presumption that changes made by the Treaty of Lisbon did not affect the substantive law of the Euratom. Nevertheless, the most important changes brought by the Treaty of Lisbon will be analysed here in order to confirm or deny this presumption.

The main base of the changes is Article 106a of the Euratom Treaty which was brought by the Lisbon amendments. Before the reform Article 305 of the old EC Treaty solely regulated the relation between the EC Treaty and the Euratom Treaty, stating that provisions of the EC Treaty shall not derogate from those of the Euratom Treaty. Although Article 305 of the EC Treaty was repealed the provision did not disappear – it became the third paragraph of the Article 106a of the Euratom Treaty whereby all three paragraphs have a significant role.

Strangely enough, I would like to start the analysis from the second paragraph of Article 106a. The reason is simple – the paragraph provides a rule that is important to have in mind before proceeding to discuss actual provisions to which it is applied. It states that in provisions of the TEU, TFEU and protocols annexed to them that are applied to the Euratom Treaty, the reference to "the Union", "Treaty on European Union", "Treaty on the Functioning of the European Union" or to the "Treaties" must be taken respectively as a reference to the Euratom Community and Euratom Treaty. This transformational interpretation of references is an obligatory condition for a proper application of the EU provisions.

[81] Bergström C. F., Hettne J., Södersten A., "Lissabonfördraget", Sieps 2008:11, p. 96. Available on internet: < http://www.sieps.se/sites/default/files/2008_11_nytryck_0.pdf>.
[82] Annexed to the Lisbon Treaty, O.J. C 306, of 17 December 2007, pp. 199-201.

In the first paragraph of the Article 106a there are listed articles from the TEU and TFEU which have to be applied to the Euratom Treaty. In this case, there are certain aspects I would to point out.
Firstly, the fact that the list of EU Treaties articles applied to Euratom Treaty are enumerated in Article 106a of the Euratom Treaty, the old repealed articles of the Euratom Treaty are listed in Article 5 of the Protocol No 2 annexed to Lisbon Treaty and in the places of the repealed articles of the Euratom Treaty blank spaces were left without notifying what articles are implied instead of the repealed ones show that the provisions applied to the Euratom Treaty are scattered among various legal acts and that might slightly impede the effective implementation of the Euratom Treaty.
Secondly, due to the fact that provisions applied to Euratom relations are spread out among three treaties – Euratom, TEU and TFEU, and the content of the Euratom Treaty itself has already been analysed, it is relevant to sort out and define those "external" provisions brought to the Euratom Treaty by the Treaty of Lisbon.

1.3.3.1 The main provisions of the TEU applied to the Euratom Treaty

Suspension of rights of a Member State

If European Council by unanimous decisions determines the existence of a serious and persistent breach of values referred to in Article 2 of the TEU (human dignity, freedom, democracy, equality, rule of law and respect of human rights etc.,) by Member State, it may by qualified majority[83] decide to suspend certain rights of the Member State deriving from the application of the Euratom Treaty and the EU Treaties, including the right to vote in the Council. According to Article 7 of the TEU, which regulates this suspension, the obligations of the Member State in any case continue to be binding to that State and the suspension is not perpetual as the Council can subsequently vary or revoke this sanction.

It should be noticed that Article 2 of the TEU itself is not in the list of articles applied to the Euratom Treaty, but a breach of its values is applied to Euratom Treaty. This situation should be analysed in more detail. The legal regulation when mechanism of protection of certain values is implemented without consolidating the values themselves definitely has some flaws. The main question probably is how severe these flaws can be. On one hand, as the listing principle was chosen to regulate articles applied to the Euratom Treaty, expansive interpretation of the latter list should not be possible. It means that if article is not on the list, it cannot be applied. On the other hand, the values of the Article 2 of the TEU – human dignity, freedom, equality, rule of law, respect of human rights, etc. – are basic ones, common not only to the EU but whole democratic world, which confirms that they are not alien to sectorial Euratom Community either. Due to that, in my opinion, the regulation is merely inconsistent and could be corrected my adding Article 2

[83] According to Article 3(3), (4) of the Protocol (No 36) on Transitional provisions, until 31 October 2014 qualified majority is at least 255 votes in favour representing at least two thirds of the members, plus check can be made to ensure that the Member States comprising the qualified majority represent at least 62 % of the total population of the Union. From 1 November 2014 qualified majority is at least 72 % of the members of the Council representing the participating Member States, comprising at least 65 % of the population of these States.

of the TEU to the list of articles applied to the Euratom Treaty under Article 106a(1) of the Euratom Treaty.

Considering suspension of rights, it should be emphasised that such suspension only possible when breach of values mentioned above occurs, which means that noncompliance with other obligations deriving from the Euratom Treaty is handled by already analysed enforcement mechanism – ECJ, and due to that cannot result in suspension of rights of Member State in question.

Withdrawal from the Euratom Community

As it was mentioned before, withdrawal from the EU (Article 50 TEU) was a new change made by the Treaty of Lisbon and it is equally applied to the Euratom Treaty. However, it does not mean that a Member State can withdraw from the Euratom Community, but stay in the EU or vice a verse. As the European Communities consist of EU and the Euratom Community, all three treaties (TEU, TFEU and Euratom) are the fundamental legal base, which means that every Member State has to be a member of both Communities.

Other provisions of the TEU applied to the Euratom Treaty state that Euratom has the same Institutions as the EU and that in order to amend the Euratom Treaty only ordinary revision procedure can be applied.

1.3.3.2 The most important provisions of the TFEU applied to the Euratom Treaty

There are beyond the comparison more articles of the TFEU that are applied to the Euratom Treaty. This probably is not that surprising as TFEU is the Treaty regulating functioning processes in the EU and the Euratom Treaty had to be adapted to new rules in order for it to have full legal effect. The aim at this point is to analyse problematic aspects of certain provision of the TFEU applied to the Euratom Treaty and to disclose the influence that they make on Euratom's legislative system.

Application of ordinary legislative procedure in the field of the Euratom Treaty

The possibility to apply ordinary legislative procedure from the TFEU to the field of Euratom is a significant and slightly problematic question. Due to that, I would like to analyse it in detail. In some point I might pass the descriptive function of the Part 1 and start analysing the relations between the EU and Euratom Treaties (which is an area of the Part 2 of this research), but as the list of articles is in Article 106a(1), it is worth to discuss this question here.

The Euratom Treaty literally consolidates specific legislative procedures, applied in in the sector of nuclear energy. Articles 31 and 96(2) state that the basic standards are established and directives on free movement of workers in common nuclear market can be issued by the Council acting by a qualified

majority on proposal from the Commission and after consulting the European Parliament. According to Article 85, the procedures for applying safeguards may be adapted by the Council acting unanimously on a proposal of the Commission and after consulting the European Parliament while Articles 76 and 90 allow changing the provisions of the Supply Chapter and provisions relating to the Community's right of ownership under the same procedure. Other articles of the Euratom Treaty, namely 4(2), 24(1), 54 do not even involve European Parliament as the Council decides alone on the Commission's proposal. Nevertheless, under Article 106a(1), Articles 288 – 299 of the TFEU on acts of the EU and their adoption procedures are applied to the Euratom Treaty. This means that Article 294 on the ordinary legislative procedure is also applied. Due to that, it is unclear where exactly ordinary procedure can be applied in the Euratom field. At first sight, it seems that following the rule set in Article 106a(3), all other areas were legislative functions are possible and no special rules are set, in distinction from the articles mentioned above, the ordinary legislative procedure of the TFEU should be applied.

Unfortunately, systematic analysis of the Euratom Treaty shows that all possible legislative areas are regulated by either the special legislative procedure where the European Parliament has only consultation function, or eliminating the European Parliament at all. In addition to that, Article 294 clearly states that in order to apply ordinary legislative procedure, there must be a reference to it in the provisions of the Treaties, which in this case includes the Euratom Treaty as well. As such references do not exist in the Euratom Treaty, it leads to general implication that ordinary legislative procedure cannot be applied in the field of Euratom. If that is the case, the question is, due to what reasons the latter legislative procedure is in the list of Article 106a(1) of the Euratom Treaty and if there is any practical value of it being there. In pursuance of answering this question the systematic view of EU Treaties and the Euratom Treaty is obligatory. Some of the articles of the TFEU applied to the Euratom treaty have reference to ordinary legislative procedure, for example Articles 15, 322, and 336. As the Euratom Treaty does not consolidate ordinary legislative procedure at all, in order to implement those articles in the Euratom field, Articles 288 and 294 which regulate this procedure have to be applied. Furthermore, Article 207 of the Euratom Treaty states that annexed protocols shall form an integral part of the Treaty and some of the articles in the annexed protocols[84] actually make reference to the ordinary procedure which, means that such must be applied. Consequently, even though ordinary legislative procedure is not in the literal text of the Euratom Treaty, implementing the TFEU provisions applied to the Euratom Treaty and protocols annexed to the Euratom Treaty might require an application of the ordinary legislative procedure. Hence, ordinary legislative procedure is in the list of Article 106a(1) to ensure the appropriate implementation of provisions other than those in the Euratom Treaty.

Another aspect worth to discuss here is the legal grounds of the secondary legislative act issued under Article 106a(1) of the Euratom Treaty when applying articles of the EU Treaties (TEU or TFEU). The question is which of

[84] Article 13 of Protocol on the Statute of the Court of Justice of the European Union; Articles 12, 14 and 15 of Protocol on the privileges and immunities of the European Union.

the Treaties (TEU/TFEU or Euratom) would be the legal ground of such secondary legislative act. The answer would probably be – both. As the combination of two articles (Article 106a(1) and certain article of the TEU/TFEU) determine that relation in the Euratom field is regulated in a certain way under the EU rules, the both of them are equally important as a legal ground. This theoretical assumption is can be based on actual practise. For example, Regulation (EU, Euratom) No 1081/2010[85] according to its Preamble is based on Article 322 of the TFEU and Article 106a of the Euratom Treaty.

Transparency

Article 15 of the TFEU which is applied to the Euratom Treaty, requires that all Euratom institutions and agencies would work as openly as possible, citizens and natural/legal person of the EU would have a right access to documents of the Euratom institutions and agencies as well as transparent proceeding should be ensured. Of course, the right of access to documents is not unlimited and the European Parliament and the Council will determine its limits and grounds by regulations according to ordinary legislative procedure. As it was analysed before, this is one of those cases when ordinary procedure will be used under the Euratom Treaty in order to implement the provision of the TFEU. However, such regulation has not been issued yet.

Role of national parliaments

The new role of national parliaments in the EU have already been analysed before. Due to that, the main purpose here is to discuss the legal grounds and reasons of application of Protocol on national Parliaments in the EU[86] in the field of the Euratom Treaty.
Firstly, Article 207 of the Euratom Treaty clearly states that every annexed protocol forms an integral part of the Euratom Treaty, but this does not deny the necessity to have legal grounds to annexe these protocols. Due to that, it is slightly unclear why the Protocol on national Parliaments is not even mentioned in Protocol No 2[87] of the Lisbon Treaty which was issued in order to adapt the Euratom Treaty to new rules of the EU Treaties. As such grounds are not found in the Protocol No 2 of the Lisbon Treaty the only legal ground that actually exists is preamble of Protocol on national parliaments itself simply stating that this protocol will be annexed to the Euratom Treaty. Secondly, the preamble only states a fact of annexation without submitting the motives and knowing them might be important in order to understand the scope of rights of the national parliaments in the field of the Euratom Treaty. The question is whether national parliaments of the EU have both rights in the Euratom field – to receive the draft legislative acts of the EU and to deliver reasoned opinions on whether those drafts comply with the principle of subsidiarity. To receive information seems quite reasonable as it is passive right that does not influence the legislative process itself, but national parliament's right to submit opinions on subsidiarity under the Euratom Treaty

[85] Regulation (EU, Euratom) No 1081/2010 of the European Parliament and of the Council of 24 November 2010 amending Council Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities, as regards the European External Action Service, O.J. L 311 of 26 November 2010, pp. 9-14.
[86] O.J. C 83 of 30 March 2010, pp. 203-205.
[87] O.J. C 306 of 17 December 2007, pp. 199-201.

seems overpowering, keeping in mind the specifics of nuclear sector. Nevertheless even if this is the case, it is unclear then due to what reasons Protocol on the Application of the Principles of Subsidiarity and Proportionality[88] which elaborates the right to submit such opinions was not annexed to the Euratom Treaty. In addition to that, as it was mentioned when analysing ordinary procedure, European Parliament does not have strong powers in specific legislative procedures under the Euratom Treaty and acknowledging the active right to submit opinions to national parliaments put them in much more influential position in the Euratom legislative system comparing to the European Parliament. Whether it is a positive or negative thing in the nuclear energy sector depends on the point of view. On one hand, the legislative process could be considered as being more democratic, lack of which is nowadays considered to be one of the main demerits[89] of the Euratom Treaty. On the other hand, it might transform the system of institutions in the Euratom Community. As the Council and the Commission was two main institutions responsible for legislating, implementing and enforcement of provisions of the Euratom Treaty, the involvement of national parliaments might reduce the operative work of these institutions, which in extreme cases can be essential in nuclear field.

Thirdly, continuing discussing the relation of European Parliament with national parliaments in the Euratom field, another aspect should be analysed. The question is whether national parliaments can participate in legislation process by exercising one or both of their rights when European Parliament has no powers, for example, adopting security regulations under Article 24(1) of the Euratom Treaty. Should the Commission send the draft of such regulation to the national parliaments under the Euratom Treaty after Lisbon amendments? Even more important – can the national parliament deliver opinion of such regulation not complying with the principle of subsidiarity? Unfortunately, the legal ground to repudiate these rights of national parliaments could not be found. Even though a speculation could be made that, in parallel to ordinary legislative procedure, rights of national parliaments are only applied when implementing the provisions of TFEU and do not affect specific legislative functions of the Euratom, unfortunately, legal grounds justifying this speculation could not be found and it has to be eliminated. Contrarily, systematic interpretation of provisions shows that as Article 207 of the Euratom Treaty states that protocols are the integral part of the Treaty, and Protocol on the role of national parliaments in the European Union is annexed to the Euratom Treaty, this Protocol has to be applied in its entirety.

Conclusions

After analysing potentially problematic aspects of selected provisions of the TEU and TFEU, the final question could be asked if the changes in the Euratom Treaty made by the Treaty of Lisbon are as unsubstantial and institutional as they regarded to be.[90] Of course, it is undeniable that most of the

[88] O.J. C 83 of 30 March 2010, pp. 206-209.
[89] Conclusions of Ilina Cenevska in: "The European Parliament and the European Atomic Energy Community: a Legitimacy Crisis?", *European Law Review 35: 415-424, 2010.*
[90] Such entitlement of Lisbon amendments to the Euratom Treaty was made by: Erhag T., "On regulation of environmental responsibility in the final stage of the nuclear fuel cycle. Parallel regulation within the framework of Euratom and the Lisbon-treaty", p.2. Available on internet:

changes brought by the Treaty of Lisbon are of institutional nature and due to that reason were not analysed here. However, that should also be perfectly understandable as stating that both Euratom Community and EU have the same institutions naturally lead to the adoption and application of all (or mostly all) provisions regulating to legal status, functions and work of those institutions. Provisions of the EU Treaties which I analysed, on the other hand, show that some of the changes might have significant effect on the Euratom Treaty – ordinary legislative procedure and role of national parliaments are those which raise most of the questions on how they will reflect on the Euratom Treaty. Therefore, the importance of these provisions is undeniable and the entitlement of these changes as just institutional and unsubstantial might be considered as slightly precipitate.

The third paragraph of Article 106a, as it was mentioned before, was transferred from the old EC Treaty and states general rule of relation between the EU treaties and the Euratom Treaty. Briefly said, despite the long list of articles from the EU treaties that are applied to the Euratom Treaty, the preference is till given to the provisions of the Euratom Treaty. What does such preference mean and how does it work in practise are the main questions of the second part of this research where the relation between EU treaties and the Euratom Treaty will be analysed.

Colligating all that has been said, certain conclusions could be drawn:

1. The Treaty of Lisbon successfully fulfilled all four objectives that were established in order to functionally adapt the EU to accession of new Member States. The powers between EU and Member States were delimitated by the listing principle, the Charter of Fundamental Rights of the European Union has the same legal value as the EU Treaties, the legal structure of the EU Treaties and EU legislation procedure became clearer and national parliaments of the Member States have two main rights – to receive a draft legislative act and to submit an opinion on its compliance with the principle of subsidiarity.

2. This dispersal of the provisions applied in the Euratom field can reduce the effectiveness of their implementation.

3. In order to apply suspension of rights of a Member State to the Euratom Treaty completely, Article 2 of the TEU should be added to the list of articles in Article 106a(1) of the Euratom Treaty.

4. Ordinary legislative procedure is not applied to the Euratom Treaty directly. It is in the list of Article 106a(1) of the Euratom Treaty in order to ensure the appropriate implementation of other provisions of TEU/TFEU which are applied to the Euratom Treaty.

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http://www.cefos.gu.se/digitalAssets/1292/1292430_Erhag__paper_.pdf; SIEPS "Euratom och Lissabonfördraget" p.2 , 2008. Available on internet: http://www.lissabonfordraget.se/docs/kort-om-euratom.pdf; Kilb W. "The European Atomic Energy Community and its Primary and Secondary Law", *International Nuclear Law: History, Evolution and Outlook, 10th Anniversary of the International School of Nuclear Law,* p. 49. Available on internet: http://www.oecd-nea.org/law/isnl/10th/isnl-10th-anniversary.pdf.

5. Theoretically role of national parliaments in the Euratom Community is the same as in the EU. Unfortunately, considering the specifics of nuclear energy sector these rights seem to be too wide and transform the system of institutions in the Euratom Community.

2 The assessment of the interaction between the Euratom Treaty and the Treaties of the European Union

As the Euratom Treaty, the EU treaties and their specifics have already been presented, the second part of this research is devoted to analyse the interaction between the EU Treaties (TEU/TFEU)[91] and the Euratom Treaty in four different areas[92]:

1. Environmental law;
2. Transport of radioactive substances;
3. EU common market and competition rules;
4. EU common energy policy.

The "area-typed" analysis of the relation was based on the main presumption of this research – that the interaction between the Euratom Treaty and the EU treaties is different depending on the area, that there is no universal formula of their relation as it varies from one field to another. Due to that, the second part of this research will consist of four chapters. In every chapter I will, firstly, present the existing regulation under the Euratom Treaty and the TFEU and that will be followed by the analysis of interaction between treaties itself.

2.1 Environmental Law

The main aim of this chapter is to clarify the borders between the TFEU and the Euratom Treaty in the field of environmental law. However, systematic analysis of the Euratom Treaty and shows that the border itself is quite clear – the Euratom Treaty does not regulate environmental protection at all. Articles 35, 37 and 38 of the Euratom Treaty mentioning the particular elements of the environment (air, water and soil) are directed not to protect those specific elements, but to ensure the collection of information on radioactivity levels in these elements of the environment in order to ensure sufficient protection of workers and the general public. That also is confirmed by Article 30 which states that the purpose of the Chapter 3 "Health and Safety" is to protect workers and the general public against the dangers arising from ionizing radiation. However, in new initiative[93] on revision of the Directive 96/29/Euratom suggests completing the latter Directive with specific consideration of the exposure of the biota in the environment as a whole. Nevertheless, as this is not yet in force, protection of the environment should not be

[91] Although it is referred to both EU treaties, the TFEU is more relevant for analysis of the interaction in the chosen areas.
[92] These areas are considered to be the most common ones and, due to that, were chosen for this research. The relation might exist in other areas as well.
[93] The initiative is available on internet: http://ec.europa.eu/governance/impact/planned_ia/docs/156_ener_ionizing_radiation_en.pdf.

considered a direct goal or purpose of the Euratom Treaty and its secondary legislation accordingly. Although it is clear that most of the environmental aspects in this case are covered by the TFEU and its secondary legislation, there is one "grey zone" that I would like to analyse in this chapter – environmental nuclear liability or, in other words, compensation and remediation of nuclear damage to the environment.

2.1.1 Regulation of Environmental Nuclear Liability

One of the areas where relation of the EU treaties and the Euratom Treaty might be unclear and quite problematic is environmental nuclear liability. Due to that, firstly, I would like to present main international conventions on nuclear liability, then problematic aspects of environmental nuclear liability in EU will be examined and, finally, the main question on which treaty is the most suitable legal ground to regulate this area on the European level (EU or Euratom) will be analysed.

To begin with, it should be mentioned that European nuclear liability regime (including nuclear environmental liability) as such does not exist. Member States have separately adopted international conventions on civil liability for nuclear damage:

- 1960 The Paris Convention of Third Party Liability in the Field of Nuclear Energy. Its supplementary legal acts are:
  - 1963 The Brussels Convention Supplementary to the Paris Convention;
  - 2004 The Protocols to Amend the Paris Convention and the Brussels Supplementary Convention.[94]

- 1963 The Vienna Convention on Civil Liability for Nuclear Damage. Its supplementary legal act - 1997 The Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage.[95]

- 1988 The Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention.

Thirteen EU Member States have signed and ratified Paris Convention and the 2004 Protocol amending it[96], nine Member States are parties to the Vienna Convention[97], but only three have ratified the 1997 Protocol to Amend the Vienna Convention[98], and there are five EU Member States which have not entered into any international nuclear liability convention[99]. This implies that

[94] Unofficial Consolidated Text of the 1960 Paris Convention incorporating the provisions of the 1964, 1982 and 2004 Amending Protocols, available on internet: http://www.oecd-nea.org/law/Unofficial%20consolidated%20Paris%20Convention.pdf.
[95] Consolidated Text of the Vienna Convention on Civil Liability for Nuclear Damage of 21 May 1963 as Amended by the Protocol of 12 September 1997, available on internet: http://www.iaea.org/About/Policy/GC/GC41/GC41InfDocuments/English/gc41inf-13-add1_en.pdf.
[96] Namely: Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Portugal, Slovenia, Spain, Sweden, and the United Kingdom. Available on internet: <http://www.oecd-nea.org/law/paris-convention-ratification.html>.
[97] They are: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.
[98] That is: Latvia, Poland and Romania. Latest status is available on internet: http://www.iaea.org/Publications/Documents/Conventions/protamend_status.pdf.
[99] Austria, Cyprus, Ireland, Luxembourg, and Malta.

not only there is no integral legal system of nuclear liability in Europe, the existing regimes in Member States are diverse creating so called "nuclear liability patchwork"[100]. There are several problematic aspects of the nuclear liability patchwork in general[101], but some limitations related to environmental liability are worth more detailed analysis. That is:

1. Coverage of environmental damage;
2. Liability limits of environmental damages.

Coverage of environmental damage

Even though both – 2004 Paris Protocol and 1997 Vienna Protocol – have quite similarly expanded the definitions of nuclear damage in order to cover certain environmental damage, different progress in ratification process can create a situation where some Member States will have to compensate and remediate certain environmental damages under its nuclear liability regime, while others will still not have such obligation. Due to that, the environmental nuclear liability patchwork will be established in addition to the existing differences.[102]

The even bigger issue here is that protection of the environment is one of the main objectives of the EU[103] which means that it is not enough just to state the existence of patchwork, as it can be done on wider nuclear liability question, as it is not an area of common policy. Environmental protection is well known area of shared competence[104] and that implies the EU obligation to ensure the uniform regulation in all Member States. Of course, small differences between national laws are inevitable, but the fact that nuclear damage to the environment would be compensated only in some of the Member States is hard to call a minor disparity.

Another problematic question here is the definition of environmental nuclear damage to be covered. As I mentioned earlier, the definition itself in both conventions is quite similar. Due to that, the problematic aspects come not from the differences between the conventions, but from indetermination of the definition.

Article I(k) of the 1997 Vienna Convention states that, "nuclear damage" means –

i. Loss of life or personal injury;

[100] The "patchwork" has been analysed by: Reyners P. "Liability Problems Associated with the Current Patchwork Nuclear Liability Regime within the EU States", in Pelzer N. (Ed.) "European Nuclear Liability Law in Process of Change", Nomos Verlagsgesellschaft, Baden-Baden 2010, p. 93; Handrlica J. "Euratom powers in the field of nuclear liability revised", *Int. J. Nuclear Law, Vol. 3, No. 1, 2010*; Legal Study for the Accession of Euratom to the Paris Convention on Third Party Liability in the Field of Nuclear Energy, European Commission, Final Report TREN/CC/01-2005. Available on internet: http://ec.europa.eu/energy/nuclear/studies/doc/2009_12_accession_euratom.pdf;

[101] Such as different prescription periods, different positions of the operator of a nuclear power plant, different position of nuclear victims as regards the damages covered and the payable amounts, etc. More about the differences in: Handrlica J. "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009),* pp. 37-60.

[102] Handrlica J. "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009)*, p. 52.

[103] Articles 11 and 191of the TFEU.

[104] Article 4.2(e) of the TFEU.

ii. Loss of or damage to property;

and each of the following to the extent determined by the law of the competent court –

iii. Economic loss arising from loss or damage referred to in sub-paragraph (i) or (ii) and not included in those sub-paragraphs if incurred by a person entitled to claim in respect of such loss or damage;
iv. The costs of measures of reinstatement of impaired environment, unless such impairment is insignificant, if such measures are actually taken or to be taken, and insofar as not included in sub-paragraph (ii);
v. Loss of income deriving from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment, and insofar as not included to sub-paragraph (ii);
vi. The costs of preventive measures, and further loss of damage caused by such measures;
vii. Any other economic loss, other than any caused by the impairment of the environment, if permitted by general law on civil liability of the competent court.

According to this regulation, it is obvious that nuclear damage is divided it two groups. The first one consists of two first sub-paragraphs and is covered by liability regime in all cases. The second group consists of all other sub-paragraphs and is distinctly separated in the Conventions text. The provision separating these two groups plays an important role in describing actual objective of nuclear damage under 1997 Vienna Convention. In the Explanatory Texts of 1997 Vienna Convention[105] several aspects on given regulation are stated. Firstly, the fact that other kinds of damages are only included "to the extent that the law of the competent court so provides", implies that damage to the general environment (water, air, the soil, etc.) is, per se, outside the scope of the regime of civil liability and can only be compensated if the applicable substantive law provides that. Secondly, as the applicable national law determines the precise meaning of loss of and damage to, property, and the extent to which environmental damage can be compensated under those heads, it gives substantial discretion to the national legislation of the Contracting Parties. Due to that, some uncertainties might occur as to what extent exactly the damage would be compensated in case of a nuclear incident.
In addition to that, another question here is what exactly the "extent" provision means – does it implement the courts obligation to compensate the environmental damage and leaves a discretion to decide upon the extent of compensation and remediation or does it give the national court a freedom to decide in certain cases not to cover environmental damages at all. In order to fall under the definition of nuclear damage, the regulation of the 1997 Vienna Convention indicates that impairment of environment must be significant.

[105] The 1997 Vienna Convention on Civil liability for Nuclear Damages and the 1997 Convention on Supplementary Compensation for Nuclear Damage – Explanatory Texts, International Atomic Energy Agency, Vienna 2007, pp. 33-34. Available on internet: < http://www-pub.iaea.org/MTCD/publications/PDF/Pub1279_web.pdf>.

The Explanatory Text[106] states that the question on what is a significant impairment is left to the appreciation of the competent court. Therefore, the conclusion would be that national court has a freedom to decide upon the factum of compensation and on the actual extent. This clearly shows that given the wide discretion of national courts to decide upon the compensation and remediation of nuclear damage to the environment, there is no obligation to compensate environmental damage *per se* which means that it is only subsidiary damage under nuclear liability. While such regulation is perfectly acceptable on international level, it unfortunately also applies in the EU which implies that national courts of EU Member States have a discretion to decide whether they want to protect environment – a common objective of the EU.
2004 Paris Convention almost identically regulates the definition of the nuclear damage due to the fact that 1997 Vienna Convention served as a model for Paris text[107]. The only difference is that in 2004 Paris Convention the last (vii) sub-paragraph was not included. The reasoning for that was that the actual object of that last subsidiary provision was never clear and the main whish of promoters of Vienna Convention was to have a "catch-all" type of clause, but unfortunately they were unable to put forward any convincing examples on the provisions implementation. Due to that, it can be said that this omission does not make any significant differences between the regulations in these two conventions.

One more problematic aspect on coverage of nuclear damage to environment is limitation of the insurance possibility. Adding environmental damage to the scope of nuclear liability is certainly laudable, but it leaves nuclear site operators and their insurers with greater uncertainty, in particular where the reference is made to environmental reinstatement.[108] After consulting the stakeholders during the Legal Study on the Nuclear Third Party Liability, the vast majority of them held that increased liability limits and amounts of compensation *are not* the main problem faced by the nuclear (re-)insurers. The main problem is the extended scope of the coverage that their insurances are required to provide under the revised conventions, e.g. environmental damages.[109] Global insurance market adopted a position that almost all forms of environmental liability are currently uninsurable, and the provided reasons are:[110]

1. Environmental liability does not pass the test of providing an "insurable interest";

   Under the regulation of the conventions it is arguable that because remedying environmental damage has a cost, that this aspect of nuclear dam-

[106] The 1997 Vienna Convention on Civil liability for Nuclear Damages and the 1997 Convention on Supplementary Compensation for Nuclear Damage – Explanatory Texts, International Atomic Energy Agency, Vienna 2007, p. 41. Available on internet: < http://www-pub.iaea.org/MTCD/publications/PDF/Pub1279_web.pdf>.
[107] Dussart Desart R. "The reform of the Paris Convention on Third Party Liability in the Field of Nuclear Energy and of the Brussels Supplementary Convention. An overview of the main features of the modernisation of the two Conventions", *Nuclear Law Bulletin, No. 75(2005)*, p. 14.
[108] Tetley M. "Revised Paris and Vienna Nuclear Liability Conventions – Challenges for Nuclear Insurers", *Nuclear Law Bulletin, No. 77(2006)*, pp. 27-39.
[109] Ameye E. "Legal Study on Nuclear Third Party Liability for DG TREN of the European Commission", in Pelzer N. (Ed.) "European Nuclear Liability Law in Process of Change", Nomos Verlagsgesellschaft, Baden-Baden 2010, p. 153.
[110] Tetley M. "Revised Paris and Vienna Nuclear Liability Conventions – Challenges for Nuclear Insurers", *Nuclear Law Bulletin, No. 77(2006)*, p. 36.

age can be imposed upon the operator. Unfortunately, this is not sufficient for insurers: the time taken to remedy environmental damages could be years or decades, standard and quality of any remedy of damage would be a subject of lengthy debate providing a large range to the potential costs. All factors render environmental damage unquantifiable and uninsurable.

2. As there is no direct interest in the environment, it is, once again, impossible to provide and "insurable interest";

3. It is difficult to establish what environmental damage occurred at what stage, so making a polluter pay for his own pollution is not always possible; this discrepancy prevents the introduction of any insurance;

4. Diminution of land and property value by environmental damages is difficult to pin down to a particular source, making insurance evaluation impossible.

5. As it was mentioned before, the definition of "insignificant" is left for the national courts interpretation and this too adds a further element of uncertainty to this particular aspect of nuclear damage.

To summarise with, the insurers need to be able to assess financially the probability and severity of any claim before reaching a premium – such analysis is not possible on reinstatement of impaired because of its unquantifiable nature. Due to that, the nuclear insurance market will be unwilling to provide any capital to support this type of risk.[111] As it was notified before, *almost* all forms of environmental liability are uninsurable. The sub-paragraph (v) contains insurable aspect – the insurance is possible in the event of direct economic loss as a result of nuclear damage to a direct and protected interest to the environment and only for the value of the protected interest. Sub-paragraph (vi) also provides an aspect of insurability insofar as it covers the direct economic cost of any preventive measures which means that measures relating to evacuation and other immediately measurable costs following nuclear damage is insurable. However any speculative measures relating to the environment or indirect economic activity are uninsurable.[112] In conclusion, it should be said that unfortunately there are clear signs of a gap formation between legal regulation and practise – the conventions state that environmental damage is a part of concept of nuclear damage, but nuclear insurers do not go any further in insuring environmental nuclear damage. Certain position exists that "it is doubtful whether environmental protection can be affectively achieved through civil liability regimes which have originally been structured for addressing damages to persons and property"[113]. However, the insurer in the UK indicated[114] that it could provide some

[111] Tetley M. "Revised Paris and Vienna Nuclear Liability Conventions – Challenges for Nuclear Insurers", *Nuclear Law Bulletin, No. 77(2006)*, pp. 36-37.
[112] Tetley M. "Revised Paris and Vienna Nuclear Liability Conventions – Challenges for Nuclear Insurers", *Nuclear Law Bulletin, No. 77(2006)*, p. 37.
[113] Danzi E. "Some Reflections on the Exclusion of Nuclear Damage from the Scope of Application of the Environmental Liability Directive", in Pelzer N. (Ed.) "European Nuclear Liability Law in Process of Change", Nomos Verlagsgesellschaft, Baden-Baden 2010, p. 199.
[114] Hathlia R. "The 2004 Paris Convention – the Issue of Third Party Nuclear Liability Insurance and a Methodology for Calculating the Premium for Environmental Heads of Damages: A UK Perspectice", in Pelzer N.

element of cover for: costs of measures of reinstatement of the environment where the damage is not insignificant and loss of income derived from direct use or enjoyment of the environment. Due to that, the position on possibility to cover at least certain damages to the environment should not be peremptory as certain minimal protection of the environment can be assured by existing nuclear liability system. Although in order to provide an efficient and all-covering protection, a specific – not insurance based – environmental nuclear liability regime might be more suitable.

Liability limits for environmental damages

Different liability limits is another problem of the EU liability patchwork. The 1997 Vienna Convention raised the operator's financial obligation from 5 million US dollars to SDR[115] 300 million (equivalent to EUR 360 million[116]) and the 2004 Paris Convention raised its obligation from SDR 15 million to EUR 700 million. It is not hard to notice that even though both conventions raised the base amounts, the Parties of the 2004 Paris Convention are liable double as much as the Parties of the 1997 Vienna Convention. It implies that, even in those cases when environmental damages could be insured and covered, the amount of compensation would depend from the place of the nuclear incident. This means that if such incident occurs in the EU different amounts would be available for the coverage of environmental nuclear damage. This brings the problem back to different remedies for protection of the common goal of environmental protection. As it was stated earlier, this diverse regulation on the identical question cannot be considered as proper within the EU.

These two problematic aspects of the environmental nuclear liability demand certain changes. The aims, among other, to eliminate the patchwork from the environmental nuclear liability regime and mitigate its diverse regulation indicate the necessity to harmonise the EU liability regime and thus its environmental aspects.

In the Legal Study on Nuclear Third Party Liability[117] viability analysis and impact assessment have been done on five different options for harmonisation of the whole nuclear liability regime.[118] In the boarders of this research

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(Ed.) "European Nuclear Liability Law in Process of Change", Nomos Verlagsgesellschaft, Baden-Baden 2010, p. 76.

[115] Special Drawing Rights (SDR) – the unit of account defined by the International Monetary Fund and used by it for its own operations and transactions (Art. I(p) 1997 Vienna Convention).

[116] This equivalent is taken from: Dussart Desart R. "The reform of the Paris Convention on Third Party Liability in the Field of Nuclear Energy and of the Brussels Supplementary Convention. An overview of the main features of the modernisation of the two Conventions", *Nuclear Law Bulletin, No. 75(2005)*, p. 18.

[117] Legal Study for the Accession of Euratom to the Paris Convention on Third Party Liability in the Field of Nuclear Energy, European Commission, Final Report TREN/CC/01-2005. Available on internet: http://ec.europa.eu/energy/nuclear/studies/doc/2009_12_accession_euratom.pdf.

[118] TREN/CC/01-2005, pp. 61-70. The options are:

- Option A: Non-action. The current situation will persist, no unity of Community law;
- Option B: Accession of all 27 Member States to the Paris Convention including all its Protocols: Unity assured but feasibility is questionable – many Member States would object;
- Option C: All Member States who are currently in the Vienna Convention accede to the Paris Convention, others not belonging to any convention stay out like before;
- Option D: The European Atomic Energy Community itself becomes a Party of the Paris Convention and its Protocols;
- Option E: The Euratom Community, with a view to harmonisation and better protection of its citizens, sets its own minimum compensation requirements via a Directive based on Article 98 of Euratom Treaty. The levels would be oriented according to those of the Paris Convention and its Protocols.

it is important to analyse the environmental nuclear liability aspects if Option E is chosen. In addition to the presented option, I would also like to analyse a possibility to regulate environmental nuclear liability under the EU treaties. In other words, as environment is protected under Article 191 of the TFEU and Article 98 of the Euratom Treaty regulates the nuclear insurance question, relation between these two treaties will be analysed in the field of environmental nuclear liability.

2.1.2 The Euratom Treaty and the TFEU interaction in the field of environmental nuclear liability

The question of interaction of the Euratom Treaty and the TFEU has been touched in some cases while analysing the problematic aspect of third part nuclear liability in Europe. Analysing the specific example of J. Handrlica[119], he is presuming that the relation between treaties is *lex generalis – lex specialis*, meaning that provisions of the TFEU must be applied even on matters governed by the Euratom Treaty. This presumption on the relation in this case was based on A. Bouquet and L. Garzaniti[120] researches which had nothing to do with nuclear liability and were devoted for analysing application of Competition law rules in the sector of nuclear energy. By emphasising this I do not mean that the latter presumption on the relation itself is incorrect, but the source of it might be slightly different. As it was mentioned in the beginning of the Part 2, I assume that the relation between two latter treaties might be different depending on the area. Therefore, in my opinion, the fact that relation between the Euratom Treaty and EU Competition law is suggested to be *lex generalis – lex specialis* does not build the ground for presumption that the relation is the same in the field of environmental nuclear liability.

J. Handrlica[121] has in detail analysed legal grounds of both treaties to regulate environmental nuclear liability. His conclusion was that "even if Article 98 of the Euratom Treaty is interpreted in a restrictive way, giving the Community merely the right to release a directive facilitating the conclusion of insurance contracts (taking into account the objectives of the Euratom Treaty, Article 2 (c), (g) and (f) in particular) Article 203 of the Euratom Treaty could serve as an authorisation of the Community's jurisdiction in the area of nuclear liability." This implies that Articles 98[122] and 203[123] of the Euratom Treaty provide a legal ground on regulation of environmental nuclear liability as well. Concerning environmental policy, it was also stated that "the jurisdiction outlined in Articles 174(1) and 175(1) of the EC Trea-

[119] Handrlica J. "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009)*, pp. 59-60.
[120] Reference No. 102 in Handrlica J. "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009)*, pp. 35-64.
[121] Handrlica J. "Euratom powers in the field of nuclear liability revisited", *International Journal of Nuclear Law, Vol. 3, No. 1, 2010*; and "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009), pp. 37-60*.
[122] Article 98 of the Euratom Treaty states: "Member States shall take all measures necessary to facilitate the *conclusion of insurance contracts covering nuclear risks* (emphasis added). The Council, acting by a qualified majority on a proposal from the Commission, which shall first request the opinion of the Economic and Social Committee, shall, after consulting the European Parliament, issue directives for the application of this Article."
[123] Article 203 of the Euratom Treaty: "If action by the Community should prove necessary to attain one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, take the appropriate measures."

ty[124] could be used to create minimum liability standards for environmental damages occurring as a result of a nuclear incident." There is no reason to disagree with such conclusions as Article 98 of the Euratom Treaty is about the insurance contracts covering nuclear risks and environmental policy is stated to be one of the EU common policy areas which also means that EU has shared competence in this field[125]. Although it seems obvious that both treaties provide articles which could serve as legal ground for European environmental nuclear liability, European Commissioner in Charge of Energy A. Piebalgs presented clear position that "third party liability for nuclear damage does also fall within the scope of the Euratom Treaty"[126]. The presented situation shows that as environmental nuclear liability is not regulated on the European level yet at all, the opinions on legal grounds for such regulation are diverse. Due to that, the aim here is to analyse the relation between the latter treaties in order to determine which of them should have a priority here and serve as a legal ground for regulation of environmental nuclear liability. It should be noticed, however, that if it would be decided to regulate nuclear liability (covering environmental nuclear liability as well) on the European level, the final decision on legal grounds would still be political.

This research will be based on application of specific rules and principles to the relation between the treaties. The analysis of the outcomes of this application will be the core for determining the type and specifics of relation between the treaties in this area. The rules/principles are:

1. The rule of dominant objective;
2. The rule of consequences;
3. The *lex generalis/lex specialis* rule;
4. The legal loophole solving principle.

The rule of dominant objective

The rule of dominant objective states that when two legal acts having different objectives collide, the one having dominant or more important (?) objective should be applied. In this case the two objectives are nuclear liability and environmental protection. The most proper way to decide which of them is dominant in the environmental nuclear liability is by using a scope identification method. The objective having a wider scope should be considered the dominant one. As it was mentioned before, Articles 98 and 203 of the Euratom Treaty provide the legal grounds for regulation of the nuclear liability in Europe. As environmental nuclear liability is a part of the wider general regime of nuclear liability, it means that the latter articles of the Euratom Treaty also provide legal grounds for the environmental nuclear liability regulation. Another question is whether nuclear liability is a part of environmental protection. On 21st of April 2004 Directive 2004/35/EC was issued on environmental liability with regard to the prevention and remedying

[124] After Lisbon amendments – Articles 191 and 192 of the TFEU.
[125] This is explicitly stated in Article 4(2)(e) of the TFEU.
[126] Piebalgs A. (European Commissioner in Charge of Energy) "Keynote Speech", in INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1073.

of environmental damage[127] (Environmental Liability Directive). The Preamble states that the legal ground of this Directive is Article 175(1) of the EC[128] which means that the Environmental Liability Directive was issued in order to achieve the objective of environmental protection. However, Article 4(4) of the same Directive states that this Directive shall not apply such nuclear risks or environmental damage caused by the activities covered by the Euratom Treaty or caused by incident or activity in respect of which liability or compensation falls within the scope of any international instruments listed in Annex V[129], including any future amendments thereof. The argument on why nuclear liability is not covered by the Environmental Liability Directive was that "international environmental liability […] regime provide for additional guarantees, for example by operating with compensation funds."[130] Therefore, as the Environmental Liability Directive (being the measure achieving objective of environmental protection) excluded nuclear activities out of its scope, nuclear liability could not be considered a part of environmental protection.
In conclusion, as nuclear liability covers at least some of the aspects environmental protection and EU environmental protection regulation does not cover nuclear liability, the scope of nuclear liability is wider which makes it a dominant objective in the field of environmental nuclear liability. Due to that, according to the rule of dominant objective, environmental nuclear liability should be regulated under the Euratom Treaty.

The rule of consequences

The rule of consequences is based upon the analysis of how presumptive secondary legal act on environmental nuclear liability would interact with both treaties. In other words, what consequences it would face under the Euratom Treaty or under the TFEU alternatively.

Firstly, legislative procedure of that secondary legislative act would differ depending on the treaty. Under Article 192(1) of the TFEU for achieving objectives of environmental protection ordinary legislative procedure is applied which, under Article 289 of the TFEU, means the joint adoption by the European Parliament and the Council of a regulation, directive or decision on a proposal from the Commission. Meanwhile Article 98(2) of the Euratom Treaty states that directives considering insurance contracts covering nuclear risks shall be issued according to the consultation legislative procedure, that is, by the Council after consulting the European Parliament. The legislative procedure would be different, but the question is which one would be more suitable for the environmental nuclear liability. Unfortunately, it is hard to find the right answer. On one hand, co-decision procedure provides more competence to the European Parliament which fulfils the current aim of strengthening powers of the European Parliament. On the other hand, application of co-decision procedure would fall out of the contexts of

[127] Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, O.J. L 143 of 30 April 2004.
[128] After Lisbon amendments – Article 192(1) of the TFEU.
[129] Annex V includes all existing nuclear liability conventions, that is: the 1960 Paris Convention, the 1963 Brussels Supplementary Convention, the 1963 Vienna Convention, the 1997 Convention on Supplementary Compensation for Nuclear Damage, the 1988 Joint Protocol and the 1971 Brussels Convention relating to Civil Liability in the Field of maritime Carriage of Nuclear Material.
[130] Questions and Answers Environmental Liability Directive, MEMO/07/157, Brussels, 27 April 2007.

European nuclear regulation due to the fact that, as it was mentioned in the Part 1 of this research, the Euratom Treaty does not have any "inside" provisions which would be implemented under co-decision procedure. Although strengthening the role of the European Parliament is important, in my opinion, compensation and remediation of environmental damage in case of nuclear incident is still a part of nuclear energy sector and due to that, secondary legislative acts should be issued under the prevailing legislative procedure of the Euratom Treaty.
Secondly, according to Article 191(2) and the Environmental Liability Directive, a framework of environmental liability based on "polluter pays" principle is created in the EU. It has been stated that Article 8 of the Environmental Liability Directive requires the operator to bear all costs for the preventive and remedial actions and no limitation in terms of payable damage are available[131], consequently it can be stated that latter directive implements unlimited liability to the operator. The corresponding articles of the Euratom Treaty does not regulate the level of liability, nevertheless, general principles of nuclear liability would still stand stating that liability of the operator can be limited in amount and time. If the EU legal acts would be chosen as a legal ground for regulation of environmental nuclear liability, that would imply that operators liability would be unlimited at least in amount. As in general nuclear liability operators liability can be limited, there might occur a situation when, in case of nuclear incident, operator would be liable for full costs for environmental damage, but limited liable in all other damage compensation and remediation, such as loss of or damage to property. In addition to that, if liability is unlimited it makes it complicated to insure coverage and remediation for such damages. As such regulation could be considered as inconsistent comparing to international nuclear regime, in my opinion, the Euratom Treaty would be more proper legal ground for environmental nuclear liability.

Another consequence worth analysing is type of liability. Under Article 8(3)(a) of the EU Environmental Liability Directive, an operator shall not be required to bear costs of preventive or remedial actions when he can prove that damage was caused by a third part and occurred despite the fact that appropriate safety measures were in place. This shows that operator is not liable when he proofs that his fault in occurrence of damage does not exist. This means that, according to EU environmental liability regime, operator's liability is not strict. One of the main principles of the international nuclear liability regime is principle of strict nuclear liability which means that "the operator of a nuclear installation is held liable, regardless of fault"[132]. This again shows significant differences between EU environmental liability regime and the international conception of nuclear liability. In this case, if the TFEU would be chosen as the legal ground for environmental nuclear liability and the existing EU environmental liability regime established on the grounds of the TFEU would be applied, this would create inconsistencies with the general regime of nuclear liability. Due to that, presuming that the Euratom Treaty would follow the international conception of nuclear liabil-

[131] Danzi E. "Some Reflections on the Exclusion of Nuclear Damage from the Scope of Application of the Environmental Liability Directive", in Pelzer N. (Ed.) "European Nuclear Liability Law in Process of Change", Nomos Verlagsgesellschaft, Baden-Baden 2010, p. 209.
[132] Handbook of Nuclear Law, International Atomic Energy Agency, Vienna 2003, p. 111. Available on internet: < http://www-pub.iaea.org/MTCD/publications/PDF/Pub1160_web.pdf>; Article II(1) of the 1997 Vienna Convention; Article 3 a) of the 2004 Paris Convention (not in force yet).

ity, it would be more suitable legal ground for regulation of environmental nuclear liability on the European level.

In conclusion, it should be said that if EU environmental liability regime would be chosen as a legal ground regulating environmental nuclear liability, it would increase the role of the European Parliament in legislative process. However, the liability of operator of nuclear installation would depend on a proof of fault and unlimited in amount and time. These consequential features would estrange environmental nuclear liability from existing nuclear liability regime. Due to the fact that coverage and remediation of environmental damage in case of nuclear incident systematically is still a part of nuclear liability regime and presuming that liability regulation under the Euratom Treaty would follow the common principles of nuclear liability, under the rule of consequences, the Euratom Treaty would be a proper legal ground regulating environmental nuclear liability on the European level.

The lex generalis/lex specialis rule

This is one of the most common rules analysing the interaction between two legal acts. The rule here will not be used directly to determine the relation between the TFEU and the Euratom Treaty, but will work as a tool in order to show the relation between environmental nuclear liability on one side and the Euratom Treaty and the TFEU on the other. Presuming the fact that environmental nuclear liability is regulated by legal act that is *lex specialis*, the question is which of the latter treaties would considered to be the *lex generalis* on European level. Consequently, this will help to determine the legal ground for the latter area.
Article 98 of the Euratom Treaty states the Euratom Communities competence in nuclear insurance, but insurance contracts covering nuclear risks is only a part of nuclear liability. On the other hand, Article 191(2) of the TFEU establishes one of the main principles of the environmental protection – polluter should pay, but its application to the nuclear liability can be doubtful. Which of these provisions should be considered as general rule that environmental nuclear liability derives from?
Rule *lex generalis – lex specialis* generally states that law governing a specific subject matter overrides a law which only governs general matters. In other words, it is a relation of general and specific elaborating regulation. The question here is provision of which treaty – the Euratom of the TFEU – is the general provision for environmental nuclear liability. Analysis of systematic aspects of nuclear liability, in my opinion, could be based on international regulation of nuclear liability as European regulation of such kind does not exist. According to the definition of nuclear damage in both – the 1997 Vienna and the 2004 Paris – conventions, certain damage to the environment is a part of what nuclear damage means. Due to that, compensation and remediation for environmental damage in case of nuclear incident, even though problematic as discussed earlier, is a part of wider nuclear liability regime. Unfortunately, as it was named earlier, Article 98 of the Euratom Treaty only covers the insurance contracts covering nuclear risks and insurance is only one type of possible nuclear liability coverage. Nevertheless, as

it was stated before, academic and political point of view was presented[133] stating that the Euratom Community has a competence in the field of nuclear liability. Due to the fact, that environmental nuclear liability is a part of the wider nuclear liability regime and the Euratom Community has competence in the field of nuclear liability, the conclusion could be made that the Euratom Treaty could be the ground for environmental nuclear liability regulation of the European level.
Possibility to regulate environmental nuclear liability under Article 191(2) of the TFEU stating the "polluter pays" principle should also be analysed. Here is not doubt that this principle in its essence reflects the main idea of the nuclear liability – that polluter should take consequences for harming environment and pay for it. Nevertheless, as it was already said the Environmental Nuclear Directive implementing this principle has slightly different features than traditional nuclear liability regulation, such as non-strict liability. Due to that, regulating environmental nuclear liability under the TFEU either cause that regulation of environmental nuclear liability system substantially differs from other nuclear liability fields or the Environmental Nuclear Liability Directive should be changed in order to be consistent with traditional nuclear liability rules which would also mean untenable application of nuclear liability principles to other activities that are in the scope of the latter Directive. Neither of these options seems reasonable or optimal when such changes are not needed taking the Euratom Treaty for the legal ground. Consequently, according to the rule of *lex generalis/lex specialis*, the Euratom Treaty should be considered as a legal ground for the regulation of the environmental nuclear liability on the European level.

The legal loophole solving principle

The legal loophole solving principle states that if there is no legal act regulating specific area, alternative legal acts can be applied under two conditions:

1. The question or area should, naturally, not be regulated by any legal act;
2. The application of alternative legal acts would not infringe the substance/essence of the whole field that non-regulated area is a part of.

In the case of environmental nuclear liability, the first condition is satisfied as this question is not regulated by any legal act on the European level yet. The second condition is considered to be a more problematic one as in this case it has to be assured that application of the alternative legal act in the field of environmental nuclear liability would not contravene with the whole field of nuclear liability. Accordingly, in should be analysed which treaty – the Euratom of the TFEU – better correspond with the traditional regulation of the environmental nuclear liability. It has already been concluded several times that the TFEU principles of environmental liability are slightly different than the general nuclear liability regulation. That means that application of those principles in some cases might infringe/ collide with the common regime of nuclear liability. Considering the Euratom Treaty, there are no

[133] Academical: Handrlica J. "Harmonisation of Nuclear Liability in the European Union: Challenges, Options and Limits", *Nuclear Law Bulletin, No. 84(2009),* pp. 45. Political: Piebalgs A. (European Commissioner in Charge of Energy) "Keynote Speech", in INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1073.

specific provisions on nuclear liability, but it provides certain grounds for regulation of nuclear liability which most probably would be built on international nuclear liability principles. Due to that, only the Euratom Treaty in this case fulfils both conditions to regulate the legal loophole of the environmental nuclear liability in the EU and this treaty should be chosen as a legal ground.

Conclusions

In summary of the whole analysis, in can be said that, due to the fact that:

1. nuclear liability, not environmental protection, is a dominant objective in the environmental nuclear liability,
2. applying the TFEU to the environmental nuclear liability creates controversial consequences to the whole field of nuclear liability,
3. the Euratom Treaty should be considered the lex generalis in relation with environmental nuclear liability,
4. and application of the Euratom treaty ion the field of environmental nuclear liability would not contravene with the general principals of nuclear liability;

the Euratom Treaty should be chosen as a legal ground for regulation of compensation and remediation of damage to the environment in case of nuclear incident and the TFEU should not be applied here. That indicates the relation of the Euratom Treaty and the TFEU in the field of environmental nuclear liability on the European level.

2.2 Transport

Transport of radioactive material is another area where the relation between the Euratom Treaty and the EU treaties is worth analysing. Contrarily to the environmental nuclear liability, which is not regulated at all, the transport of radioactive material is in detailed regulated by legal acts based either on the Euratom Treaty of on the Treaty of European Community[134]. Thus, instead of absence of regulation there is an overload of legal acts regulating this area and, due to that, the necessity of clearing the relation between the Euratom Treaty and the EU treaties still remains. Firstly, I would like to present, sort out and structure the respective legal acts in this area. Secondly, based on the structure of the legal acts, the actual relation between treaties will be presented, and, finally, I will discuss some still existing problematic aspects in the areas of transport of radioactive material.

Before, starting the analysis of the existing legal regulation of this area, I would like to draw some attention to the fact that there are several terms used in the legal acts to define the transportation process. "Transport" and "shipment" are the most common ones, but there also exist "transfer", "carriage", and some other ones. As each of these terms might have certain distinctive aspects and mean slightly different things, in order to use them correctly, it might be important to analyse their usage and differences in transport regulating legal acts.

Transfer

In the title of Commission Regulation (Euratom) No 66/2006 on transfer of small quantities of ores, source materials and special fissile materials, the term "transfer" is used as a general term covering import, export and transportation within the Community. However, in particular articles this term is used only describing transportation between Member States. The same general definition of "transfer" is used in Chapter IV of Commission Regulation (Euratom) No 302/2005 on safeguards where, according to the structure of the Chapter, this term covers export, shipment and import. Article 22 of the latter Regulation confirms this definition as "loss and delay during transfer" includes shipment, export and import. The Council Directive 2003/122/Euratom on control of high-activity radioactive sources in Article 2(m) gives such definition: "transfer of source means a transfer of source from one holder to another one". Despite the facts that construction of this definition is slightly flawy, due to the fact the definable word was used in the definition itself, it still quite successfully reflects the essence of this term – change of holders. This term can be used to describe transportation process irrespective of its type - within the Community, import or export – as long as the holders of the transported radioactive substance change. Therefore, in my opinion, "transfer" is a general term which describes the process of transportation when the holders of radioactive substances change.

[134] All legal acts regulating transport of radioactive material now are based on the latter treaty which after Lisbon Treaty amendments is called the Treaty on Functioning of the European Union – the TFEU.

Transport

Article 26 of Commission Regulation (Euratom) No 302/2005 on safeguards uses regulates "temporary storing during transport" which shows that term "transport" here defines the process of physical relocation of the radioactive substances. Council Decision 87/600/Euratom on early exchange of information in the event of a radiological emergency and Council Directive 89/618/Euratom on informing the general public about health protection measures to be applied in the event of radiological emergency are implemented if radiological emergency occurs during transport of nuclear fuels, radioactive waste or radioisotopes. Logically such emergency cannot occur under other circumstances than physical transportation of radioactive substances and, due to that, "transport" here means precisely that. Article 2 of Council Directive 96/29/Euratom states that this Directive will be applied to all practices, namely "transport, import to and export from the Community", which makes it not really clear what exactly was meant by using the term "transport" here. Whether it describes physical transportation process or is used as general term. I tend to believe that "transport" plays a role of a general term here describing the whole system of processes related to moving radioactive substances from one place to another, including authorization, physical relocation and change of holders as well. Therefore, it might be said that term "transport" can have two definitions – the physical transportation process, and common term for the whole sector of transport. Due to that, I use this term as a general one in this research.
In addition to this, term "carriage" is also used to define the actual transportation process and in that sense can be used as a synonym to "transport". Systemically analysing the Directive 2008/68/EC on the inland transport of dangerous goods[135] and the international legal acts that latter Directive enforces on the Community level – the European Agreement concerning the International Carriage of Dangerous Goods by Road (the ADR) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (the RID) – "carriage means the change of place of dangerous goods, including stops made necessary by transport conditions and including any period spent by the dangerous goods in vehicles/wagons, tanks and containers made necessary by traffic conditions before, during and after the change of place". As the EU Directive uses the term "transport" and the international conventions that in implies in the EU use the term "carriage", it confirm the assumption that these terms are synonymous.

Shipment

Council Regulation (Euratom) No 1493/93 on shipment of radioactive substances between Member States defines "shipment" as transport operations from place of origin to the place of destination, including loading and unloading of radioactive substances, while Council Directive 2006/117/Euratom on shipment of radioactive waste and spent nuclear fuel gives a similar definition but excluding the "transport" word, stating that it is "the whole operations involved in moving radioactive waste or spent fuel from the country or Member State of origin to the country or Member State

[135] Directive 2008/68/EC of the European Parliament and the Council of 24 September 2008 on the inland transport of dangerous goods, O.J. L 260 of 30 September 2008.

of destination". Due to the fact that a term "transport" might have a slightly different meaning, the usage of it defining shipment should be avoided, and that makes the second definition more precise. Titles of Chapters 2 and 3 are "Intra- and Extra-Community shipment" which means that latter Directive uses the term "shipment" wider, including import and export as well. However, one of the ways to understand the term "shipment" might be to compare it with transport. A difference between these terms is given in the preamble of the Directive 2006/117/Euratom. It states that "operations involved in shipments of radioactive waste or spent fuel are subject to a number of requirements […] regarding in particular the safe transport". This construction implies that safe transport is one of the requirements for shipment and due to that the assumption can be drawn that shipment is a wider definition than transport. However, these two terms can be considered as separate aspects of transportation as well. In my opinion, shipment regulates conditions for physical transportation to be possible, such as licensing, notification about the consignment, etc., while transport covers the actual relocation of the radioactive substances.

As the Euratom Treaty is a legal acts regulating specific and quite narrow area – nuclear sector, it seems reasonable to start the analysis from this treaty and then proceed to the regulation based on the TFEU covering transport of radioactive substances.

2.2.1 Transport regulation under the Euratom Treaty

Analysis of the transport questions under the Euratom Treaty should start from the latter treaty itself. Article 79 of the Euratom Treaty requires that operating records would be kept in order to account to the Commission for ores, source materials and special fissile materials used or produced, and the same requirement applies to transport of source materials and special fissile materials. It should be noticed, according to this article, transport of ores falls out of the requirement to keep operating records. Besides that, it can be stated that Article 79 is the only one in the Euratom Treaty directly establishing any obligations concerning the transport of the radioactive material, which is in this case only limited to obligation to keep records of that transport. Nevertheless, certain base of secondary legal acts was still established on certain aspects of transport of radioactive materials and they are based on different articles of the Euratom Treaty depending from the specificity of the secondary legal acts itself. Due to that, I would like to present certain classifications of the legal acts issued under the Euratom Treaty and regulating transport of radioactive materials.

All secondary legal acts regulating transport of radioactive materials can be classified:

1. According to the type of legal act, to:

    a) General legal acts applied to the transport of radioactive materials, that is:

i) Council Decision 87/600/Euratom for the early exchange of information in the event of a radiological emergency[136];
ii) Council Directive 89/618/Euratom on informing the general public about health protection measures in the event of a radiological emergency[137]
iii) Council Directive 90/641/Euratom on protection of workers exposed to risk of ionizing radiation during their activities in controlled areas[138];
iv) Council Directive 96/29/Euratom laying down basic safety standards for protection of the health of workers and the general public against the dangers of ionizing radiation (the BSS Directive)[139];
v) Commission Regulation (Euratom) No 302/2005 on application of Euratom safeguards[140];
vi) Council Directive 2003/122/Euratom on the control of high-activity sealed radioactive sources and orphan sources[141].

b) Specific legal acts issued to regulate transport questions, that is:
i) Council Regulation (Euratom) No 1493/93 on shipments of radioactive substances[142];
ii) Council Regulation (Euratom) No 66/2006 on transport of small quantities of ores, source materials and special fissile materials[143];
iii) Council Directive 2006/117/Euratom on control of shipments of radioactive waste and spent fuel[144].

2. According to specifics of transported objects, to:
a) Legal acts applied to transportation of specific radioactive materials, that is:
i) Council Regulation (Euratom) No 66/2006 on transport of *small quantities* of ores, source materials and special fissile materials;
ii) Council Directive 2003/122/Euratom on the control of *high-activity* sealed radioactive sources and orphan sources;
iii) Council Directive 2006/117/Euratom on control of shipments of *radioactive waste and spent fuel*.

[136] 87/600/Euratom: Council Decision of 14 December 1987 on Community arrangements for the early exchange of information in the event of radiological emergency, O.J. L 371 of 30 December 1987.
[137] Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency, O.J. L 357 of 7 December 1989.
[138] Council Directive 90/641/Euratom of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas, O.J. L 349 of 13 December 1990.
[139] Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation, O.J. L 159 of 29 June 1996.
[140] Commission Regulation (Euratom) No 302/2005 of 8 February 2005 on application of Euratom safeguards, O.J. L54 of 28 February 2005.
[141] Council Directive 2003/122/Euratom of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources, O.J. L 346 of 31 December 2003.
[142] Council Regulation (Euratom) No 1493/93 of 8 June 1993 on shipments of radioactive substances between Member States, O.J. L 148 of 19 June 1993.
[143] Commission Regulation (EURATOM) No 66/2006 of 16 January 2006 exempting the transfer of small quantities of ores, source materials and special fissile materials from the rules of the chapter on supplies, O.J. L 11 of 17 January 2006.
[144] Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel, O.J. L 337 of 5 December 2006.

b) Legal acts applied to transport of unspecified radioactive materials – all general legal acts from the first classification and Council Regulation (Euratom) No 1493/93 on shipments of radioactive substances.

It is noticeable that some of the acts are repeated in several classifications. However, the reason of presenting it was to give a clearer view of actual system of secondary legal acts under the Euratom Treaty in the area of transport of radioactive materials.

After giving the overview on the system of legal acts, I would like to present the main aspects and **features of regulation on transport of radioactive substances under the Euratom Treaty**:

1. The attention to informing and protection of workers and the general public plays a solid role in regulating transport of radioactive materials.

   The transport under the Euratom Treaty is regulated by nine main legal acts and three of them have a purpose to inform and protect workers and general public from ionising radiation while one more legal act implies the arrangements of exchange of information between Member States and the Commission in case of radiological emergency. These simple numbers show that almost half of the secondary legislation under the Euratom Treaty is dedicated to this specific aspect/question/area and are based on Articles 30-32 of the Euratom Treaty. Nevertheless, all four of them regulate different aspects of the latter question.
   Council Decision 87/600/Euratom and Council Directive 89/618/Euratom are regulating the spread of information in case of radiological emergency. The Decision 87/600/Euratom is applied to the notification and provision of information to other Member States and the Commission whenever a Member State decides to take measures of a wide-spread nature in order to protect the general public in case of a radiological emergency following, inter alia, the transport of nuclear fuels or radioactive wastes and the transport of radioisotopes for agricultural, industrial, medical, and related scientific and research purposes if significant release of radioactive material occurs or likely to occur (Article 1). The Directive 89/618/Euratom also applies to transport or nuclear fuels, radioactive waste and radioisotopes and is defining the measures and procedures for informing the general public for the purpose of improving the operational health protection provided in the event of radiological emergency. Directive 90/641/Euratom regulates the operational protection of outside workers exposed to the risk of ionizing radiation. Although the Directive itself does not state that it applies to the transport of radioactive materials, it still does. Issued in 1990 it had a purpose to supplement the Directive 80/836/Euratom which was laying down the basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation and later on was repealed by the BSS Directive which is valid now. Article 2 to the latter

directive clearly includes the transport to its scope and, due to that, Directive 90/641/Euratom should also be considered applying to the transport of radioactive materials. The last but not the least in this group is the BSS Directive itself. The latter directive is applied to all practises which involve a risk from ionizing radiation, including transport, import and export of radioactive substances. Besides other functions, it states that the exposure must be kept as low as reasonably achievable and, in addition to this, sets the maximum dose limits for exposed workers, apprentices, students and members of the public.
The amount of legal acts in this area and the legal regulation itself show that protection of workers and the general public against the negative impact of the ionizing radiation during the transport of radioactive materials is of a great importance.

2. The transport procedure depends on the specifics of the transported substances.

The transportation procedures and measures vary subject to three specific features of the radioactive substances – quantity, quantity and concentration together, and type.

Firstly, regulation differs depending on *quantity* of the transported material. According to Article 74 of the Euratom Treaty and Commission Regulation (Euratom) No 66/2006, rules of the Supply Chapter of the Euratom Treaty do not apply to transfer within Community, import and exports of *small quantities* of ores, source materials and special fissile materials. For quantities to be considered small, amount of source materials should do not exceed a dosage of one tonne of uranium or thorium per transaction and five tonne per year per user in respect of each of these materials. With regard to special fissile material, quantities should not exceed 200 g in any one transaction and up to annual limit of 1000 g of any special fissile materials per user. Instead of applying the Supply Chapter provisions, the only requirement is to submit a quarterly accordingly monthly statement to the Supply Agency, giving specific information on supply contract, transported substances and use made or to be made from those substances. If transported quantities exceed these limits, not only the Supply Chapter of the Euratom Treaty is applied, but the safeguards provisions of the Commission Regulation (Euratom) 302/2005 have to be followed as well.

Secondly, *quantity and concentration* of the radioactive substances together play a significant role in applying certain transportation procedures and the limits are set here by Article 3(2) of the BSS Directive. Although the Directive itself connects the quantity and activity by the word “or” which shows the relation of alternative choice, Article 1(1) of Council Regulation (Euratom) 1493/93 on shipments of radioactive substances and Article 1(2)(b) of the Directive 2006/117/Euratom on shipments of radioactive waste and spent fuel state[145] that rules of each legal

[145] Even though the Council Regulation (Euratom) 1493/93 on shipments of radioactive materials indicate the Directive 80/836/Euratom as setting quantity and concentration limits, it was repealed by the BSS Directive which is setting these limits now.

act applies only if both, quantity and concentration, exceed the levels set by the BSS Directive. Due to that, quantity and concentration in this case can be considered to be one complex criteria determining/assorting regulation on transport of radioactive materials under the Euratom Treaty. If quantity and concentration levels do not exceed the set limits, under the BSS Directive, no reporting will be required for transport of those radioactive substances. The interesting aspect here is that the BSS Directive sets the limits for specific actions – the reporting of transport of radioactive substances and Member State's right not to apply authorization of import or export of consumer goods with deliberately added radioactive substances if quantity and concentration of these substances is under the set limits. Nevertheless, Council Regulation (Euratom) 1493/93 and Council Directive 2006/117/Euratom state that each legal act will only be applied if the quantities and concentration of the consignment exceed the levels laid down by the BSS Directive. Therefore, these limits can be considered being one of the determining factors on application of these legal acts. Due to that, the conclusion can be made that the limits set by the BSS Directive extended from their original purposes of giving the possibility of exception, to being the ground for application of other legal acts. If quantity and radioactivity of transported radioactive substances falls under the established levels, no regulation is applied on the EU level and is completely left under the discretion of every Member State.

Thirdly, the *type* of transported radioactive substances differentiates the legal transport procedures applied. If quantity and concentration exceed the specific levels, two mentioned above legal acts can be applied for the transport of radioactive substances under the Euratom Treaty – Council Regulation (Euratom) 1493/93 on shipments of radioactive substances and Directive 2006/117/Euratom on shipments of radioactive waste and spent fuel. The question is the relation between these legal acts. On one hand, as the first one applies for all radioactive substances and the second one is for specific radioactive substances – radioactive waste and spent nuclear fuel, it could be quite clear that Directive 2006/117/Euratom is lex specialis in relation to the Council Regulation (Euratom) 1493/93. On the other hand, the latter Directive is applied for transboundary shipment which includes intra-Community shipments as well as import, transit and export from the Community, while Council Regulation (Euratom) 1493/93 regulates only shipment of radioactive substances between Member States, which makes the latter regulation constricted and, therefore, slightly unusual for lex generalis. Due to that, certain assumptions on the actual relation between these two legal acts should not be hasty. In my opinion, although the Directive 2006/117/Euratom has a wider scope in terms of transportation area, the type of the radioactive substance should be considered the determining factor here and, due to that, this Directive could be called lex specialis. Another question is if and how the transportation procedures under these two secondary legal acts differ. According to Article 4 of the Regulation (Euratom) 1493/93, the holder who is tend to carry out a shipment has to obtain a prior written declaration from the consignee that it has complied

with all applicable provisions and relevant national requirements for safe storage, use or disposal of the intended to send radioactive substance. The declaration sent must be confirmed with the stamp by the competent authority of the shipment destination Member State. The declaration may refer to more than one shipment if transported substances have essentially the same physical and chemical characteristics, do not exceed the levels of activity set out in declaration, and shipments are to be made from the same holder to the same consignee and involve same competent authorities. Nevertheless, declaration shall be valid not more than three years from the date of stamping by competent authority of the destination Member State. For intra-Community shipments accordingly, the Directive 2006/117/Euratom states that a holder who is tend to carry out a shipment has to submit an application for authorization to competent authority of the Member State of origin. The latter authority sends the application to competent authorities of transit and destination Member States which in 2 month-time must notify the competent authority of the Member State of origin of their consent or conditions of their consent. If and when all consents necessary for shipment have been given, the competent authority of the Member State of origin shall be entitled to authorise the holder to carry out the shipment. The application may also be sent in respect of more than one shipment if radioactive waste or spent fuel essentially has the same physical, chemical and radioactive characteristics and the shipments are to made from the same holder to the same consignee and involve the same competent authorities. In addition to this, the authorization is valid for not more than three years as well. Comparing these different shipment procedures, it is obvious that they have several similarities, such as authorization validity time and conditions for multiple shipment declaration/authorization. However, the differences are much more distinctive. Under the Regulation (Euratom) 1493/93, the consent of the competent authorities of transit Member States is not required and the competent authorities of the Member State of origin are not involved in the shipment procedure. Strangely enough, there is no obligation even to inform the competent authorities of origin about the shipment. Besides that, the procedure itself is called differently – under Regulation it is a declaration of shipment which implies the fact that a consignee just declares that it complies with all requirements in order to manage the received consignment while the Directive 2006/117/Euratom clearly names it an authorization process which means that holder has to be authorized to carry out an intended shipment. Due to that, the conclusion could be drawn that the Regulation (Euratom) 1493/93 provides “softer” and more simple shipment procedure between Member States then the Directive 2006/117/Euratom.

3. The role of the BSS Directive in the regulation of the transport of radioactive substances under the Euratom Treaty.

The BSS Directive plays a specific role in regulation of the transport of radioactive materials. Firstly, as it was mentioned before, Article 3(2) establishes exemption levels of quantity and concentration of radioactive materials which determines the provisions applied to the transportation.

Even though in the BSS Directive the levels are set for the reporting only, they were taken by other legal acts[146] as a condition of their application apart from the reporting as well. Due to that, these levels became a minimal bar of radiation for transported radioactive substances if special transporting procedures to be applied.
Secondly, the BSS Directive establishes a possibility for the Member States to authorize the transportation of radioactive substances. Article 4(1) of the latter Directive lists the practices were the authorization procedure should be obligatory and, even though the transport is not on that list, the second paragraph of the same article states the Member State's right to expand the authorization procedure to other types of practices. On one hand, this provision should be taken positive as it gives a green light for the Member State to authorize transport of radioactive substances. On the other hand, however, the fact that Member States have a right, not an obligation, to authorize this practice might lead to a situation where procedures for transporting the same radioactive substances might differ from one Member State to another within the Community and this might cause certain disharmony. This would be the case if transported radioactive substances exceed the levels set by the BSS Directive.
Thirdly, the BSS directive demands authorization for certain practises and allows it on other, but it does not implement any specific authorization procedure. Due to that, in cases when Member States decide to establish authorization to transport, they have discretion to determine the exact procedure themselves.
Due to all that, it can be said that the BSS Directive is a ground legal act setting a bar which determines the provisions applied to the transport of specific radioactive substances, but it does not establish neither strict requirement of authorization, nor the authorization procedure in the area of transport of radioactive substances.

4. Specificity of the legal base on the transport of radioactive substances under the Euratom Treaty.

The analysis of the secondary legal acts under the Euratom Treaty shows that latter regulation has two distinctive features.
Firstly, the regulation on transport is selective, which means that only certain specific aspects are regulated under the Euratom Treaty. In other words, there is no general legal act stating the main principles of the transport under the Euratom Treaty. For example, as Council Regulation (Euratom) No 1493/93 applies to all radioactive substances then it just implies on transport within the EU and even though Council Directive 2006/117/Euratom regulates transboundary shipment, than it only applies to specific radioactive substances – radioactive waste and spent nuclear fuel. This shows that legal acts in this area are limited either in objective or in application area.
Secondly, the regulation of secondary legal acts under the Euratom Treaty does not cover the whole transportation process but regulates authori-

[146] Regulation (Euratom) 1493/93 and Council Directive 2006/117/Euratom.

zation, notification processes and protection of workers and general public from dangers of ionizing radiation. In other words, none of the legal acts in this area specify how physically radioactive substances should be transported from one place to another. However, a certain regulation under the Euratom Treaty is an exception. Council Decision 87/600/Euratom on Community arrangements for the early exchange of information in the event of radiological emergency and Council Directive 89/618/Euratom on informing the general public about the health protection measures in the event of radiological emergency are applied when such emergency occurs during transport of radioactive substances, which means that this regulation covers the transportation process itself and is the only one of such type under the Euratom Treaty. Council Directive 2003/122/Euratom on the control of high-activity sealed radioactive sources also implies an obligation to Member States to ensure that each high-activity source would be kept under control. Nevertheless, the latter directive is mainly intended to regulate the transfer of radioactive substances within the Member State and only covers the identification and records keeping of the high-activity radioactive sources. Consequently, this means that, keeping in mind the exception on radiological emergency, legal regulation of actual transportation procedure and its safety is out of implementation field under the Euratom Treaty.

Finally, the table of legal acts issued on transport of radioactive substances presented below reflects the existing regulation under the Euratom Treaty:

NO	TRANSPORTED SUBSTANCES	SPECIFICS OF SUBSTANCES	TRANSPORT DIRECTION	LEGAL ACTS UNDER EURATOM TREATY	REGULATING PROVISIONS
1.	Radioactive waste and spent nuclear fuel	Quantities and concentration **above** the limits of the BBS Directive	• Within the Community • Import • Export	• Council Directive 2006/117/Euratom • Commission Regulation (Euratom) No 302/2005 on safeguards (only for spent nuclear fuel)	• Obligatory authorization procedure under Council Directive • Notification to the Commission under Commission Regulation
2.	Radioactive waste and spent nuclear fuel	Quantities and concentration **below** the limits of the BBS Directive	• Within the Community • Import • Export	-	-
3.	Ores, source materials, special fissile materials	Small quantities	• Within the Community • Import • Export	Commission Regulation (Euratom) No 66/2006	Quarterly/monthly statement of the transactions
4.	Ores, source materials, special fissile materials	Over the limits of "small quantities"	• Within the Community: Non-nuclear MS to/from	• Commission Regulation (Euratom) No 302/2005 on safeguards (excluding	• Notification to the Commission under Commission Regulation

			nuclear weapon MS • Import • Export	ores) • Council Directive 96/29/Euratom (BSS Directive)	• Authorization possibility under BSS Directive
5.	Ores, source materials, special fissile materials	Over the limits of "small quantities"	Within the Community: • Between non-nuclear weapon MSs • Between nuclear weapon MSs	Council Directive 96/29/Euratom (BSS Directive)	Authorization possibility
6.	Other radioactive materials	Quantities and concentration **above** the limits of the BBS Directive	Within the Community	Council Regulation (Euratom) 1493/93	Declaration procedure
7.	Other radioactive materials	Quantities and concentration **above** the limits of the BBS Directive	• Import • Export	Council Directive 96/29/Euratom (BSS Directive)	Authorization possibility
8.	Other radioactive materials	Quantities and concentration **below** the limits of the BBS Directive	• Within the Community • Import • Export	-	-

2.2.2 Transport regulation under the TFEU[147]

Title VI of the TFEU sets general provisions on transport by rail, road or inland waterway and creates a legal ground to set such rules for sea and air transport if necessary. Among other things, it obliges to lay down common rules applicable to international transport to, from or passing across the territory of Member State and to improve transport safety (Article 91). It also prohibits discrimination on transport charges within the EU (Article 95) and allows application of fixed tariffs in order to meet the competition rules (Article 96). In addition to Title VI, Article 207 on EU common export policy is also important here as it is a legal ground for regulation of export of dual-use[148] items. These provisions were the legal ground for elaborating secondary legal acts.

These are the main legal acts under the TFEU applied to the transport of radioactive substances:

1. Directive 2008/68/EC on the inland transport of dangerous goods[149];

[147] To be more precise, all valid legal acts regulating transport of radioactive substances here are issued not under the TFEU, but on the Treaty of the European Community. Nevertheless, as this treaty was amended by the Lisbon Treaty and this research is projected to the future regulation, I will use the TFEU as legal ground.
[148] Dual-use item are items which can be used for both civil and military purposes, and include all goods which can be used for both non-explosive uses and assisting in any way in the manufacture of nuclear weapons or other nuclear explosive devices.
[149] Directive 2008/68/EC of the European Parliament and the Council of 24 September 2008 on the inland transport of dangerous goods, O.J. L 260 of 30 September 2008.

2. Council Directive 95/50/EC on uniform procedures for checks on the transport of dangerous goods by road[150];
3. Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system[151];
4. Directive 98/91/EC relating to motor vehicles and their trailers intended for the transport of dangerous goods by road[152];
5. Council Regulation (EC) No 428/2009 setting up a Community regime for the control of experts, transfer, brokering and transit of dual-use items[153].

Features of the regulation on transport of radioactive substances under the TFEU

1. None of the legal acts under the TFEU are explicitly issued to regulate transport of the radioactive substances. All legal acts applied here are devoted for transport of *dangerous goods*. The reason is simple – all radioactive substances over the limits set by BSS are dangerous goods. Due to that, legal regulation under the TFEU, in contradiction to regulation under the Euratom Treaty, does not sort radioactive substances in any way and treat them all as dangerous goods which means that transportation procedures are the same. However, there can be certain exceptions from this main rule facilitating transportation procedure to less radioactive materials and setting higher requirements for the more radioactive substances.

2. As distinct from regulation under the Euratom Treaty, the focus here is not on the authorization, but on the *safe physical transportation* of radioactive substances. Generally safe transport covers such aspects as containment of the radioactive contents, control of external radiation levels, prevention of criticality, proper packaging of transported radioactive substances, transportation monitoring systems, etc. However, only some of these aspects fall under the regulation of the TFEU secondary legal acts. The reason for that is specificity of the Directive 2008/68/EC on the inland transport of dangerous goods. As it was mentioned earlier, it does not set any provisions on transport but only implies an obligation to Member States to follow the rules set in the international conventions (the ADR, the RID and the AND). Due to that, the main aspects on safe transport of radioactive substances fall under the international regulation. As analysis of international legal acts does not cohere with the scope of this re-

[150] Council Directive 95/50/EC of 6 October 1995 on uniform procedures for checks on the transport of dangerous goods by road, O.J. L 249 of 17 October 1995.
[151] Directive 2002/59/EC of the European Parliament and the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC, O.J. L 208 of 5 August 2002.
[152] Directive 98/91/EC of the European Parliament and the Council of 14 December 1998 relating to motor vehicles and their trailers intended for the transport of dangerous goods by road and amending 70/156/EEC relating to the type approval of motor vehicles and their trailers, O.J. L 11 of 16 January 1999. It should be noticed that this directive is valid until 31 of October 2014 – then it will be repealed by Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor, O.J. L 200 of 31 July 2009.
[153] Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of experts, transfer, brokering and transit of dual-use items, O.J. L 134 of 29 May 2009.

search, the exact requirements for safe transportation of radioactive substances under those legal acts will not be elaborated here.

Aspects of the physical transportation of radioactive substances covered by the EU legal acts are:

- Technical requirements for vehicles intended for the transport of dangerous goods by road;
- Community vessel traffic monitoring and information system;
- Member State's right to checks the vehicles transporting dangerous goods by road.

Due to all that, it can be said that even though transport regulation under the TFEU concentrates on the physical transport of radioactive substances, the main questions in this area are covered by international conventions which essentially harmonise the transport procedures within the EU, but leaves only selective aspects for secondary legal acts under the TFEU.

As the main aspects on regulation on transport of radioactive substances under both treaties have been presented, it is important to analyse the relation between the treaties in this field.

2.2.3 The Euratom Treaty and the TFEU interaction in the field of transport of radioactive substances

The presented regulation under the Euratom Treaty and under the TFEU already gives the general view on the relation between the treaties when transporting radioactive substances. However, this interaction should be examined slightly deeper.

Systematic analysis of the treaties and secondary legal acts in the field of transport of radioactive substances show that this could be the general rule of interaction:

The Euratom Treaty and its secondary legal acts mostly regulate the authorising, notification and other similar processes that **build grounds** for the physical transportation **and control** the movement of radioactive substances in Europe to be possible, while the TFEU and its secondary legislation focus on the **safety of the actual transfer** of the radioactive substances from place A to place B.

This basic principal shows that, in the field of transportation of radioactive substances, the Euratom Treaty and the TFEU do not overlap or collide, but smoothly come into contact distributing the functions in transport of radioactive substances.

However, there are certain exceptions which cannot be covered by the general rule of interaction:

1. Secondary legal acts under the Euratom Treaty regulating information spread and protection of the general public in case of radiological emergency:
    a. Council Decision 87/600/Euratom for the early exchange of information in the event of a radiological emergency[154];
    b. Council Directive 89/618/Euratom on informing the general public about health protection measures in the event of a radiological emergency[155].

These legal acts do not follow the rule presented above due to the fact that the latter regulation is targeted towards the public safety and information exchange if radiological emergency occurs during the actual transporting process. That means that it has more features of the TFEU type of regulation here than of the Euratom Treaty. The legal grounds for the latter secondary legal acts, nevertheless, are certainly the provision of the Euratom Treaty – Article 31. Due to that, this exception is sound and acceptable.

2. Council Regulation (EC) No 428/2009 setting up a Community regime for the control of export, transfer, brokering and transit if dual-use items.

This Regulation was issued on the grounds of the Article 207[156] of the TFEU which states the creation of common export policy as part of the EU common commercial policy. According to the Council Regulation (EC) No 428/2009, dual-use items should be subject to effective control when they are exported from the EU and the responsibility of such authorisations basically lies with national authorities of the Member States. It is obvious in this case, that the obligation *to authorise* transport of dual-use items which also include specific nuclear materials and spent nuclear fuel comes not from the Euratom Treaty but from the TFEU and makes this regulation an exception from the general rule. One of the aims of controlling the export of dual-use items is to ensure that items that can be used in the manufacture of nuclear weapons, would not be exported to the countries where risk of such use exists. To achieve this aim the TFEU has appropriate measures to ensure common actions of the all Member States in export policy. In addition to this, Articles 59 and 62 of the Euratom Treaty only cover the export of ores, source materials and special fissile materials produced in the Community and Article 73 requires the Commission consent on delivering ores, source materials and special fissile materials to the third state, but does not regulate the authorization process within the exporting Member State. Due to all that, it seems reasonable that the TFEU provisions on common export policy were chosen as a legal ground for securing non-proliferation commitments of the Member States.

[154] 87/600/Euratom: Council Decision of 14 December 1987 on Community arrangements for the early exchange of information in the event of radiological emergency, O.J. L 371 of 30 December 1987.
[155] Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency, O.J. L 357 of 7 December 1989.
[156] The original ground of this regulation if Article 133 of the EC Treaty. However, due to the Lisbon amendments, I prefer to refer to article numeration that is valid currently.

Even though, the rule and its exceptions seem to be quite clear, in the last paragraph of this chapter would like to analyse the relation between treaties by comparing the most alike secondary legal acts from different treaties.

Council Regulation (EC) No 428/2009 on dual-use items (EC Regulation) and Commission Regulation (Euratom) No 302/2005 on Euratom safeguards (Euratom Regulation)[157]

As it was mentioned above, one of the aims of the EC Regulation is to control the export of specific nuclear materials for them not be used in creating nuclear weapons in the third countries. The Euratom Regulation, on the other hand, is assuring that ores, source materials and special fissile materials would not be diverted from the intended peaceful use declared by the users. Due to the obvious similarity of goals, the question might rise how these two Regulations, issued under different treaties, interact. Firstly, it should be clarified whether safeguards provisions under the Euratom Treaty are applied to the dual-use items under the TFEU. Secondly, if they are applied, the actual relation between provisions on dual-use and provisions on safeguards should be sorted out.
To begin with, as both Regulations are aiming to protect usage of specific nuclear materials in manufacturing nuclear weapons, it is obvious that they both set the regulation on the same nuclear materials – the ones that can actually be used nuclear weapons, such as source material or special fissile material. However, it would be inaccurate to state that their objectives coincide. Special fissile material is a dual-use item, but dual-use item can be other than special fissile material which means that dual-use item is a wider definition. Therefore, safeguards will be applied only to a certain dual-use items. Nevertheless, having an overlapping objective, these two Regulations do not collide. The EC Regulation sets the main rule that export of dual-use items must be authorised by the national authority of the exporting Member State, while the Euratom Regulation requires giving advance notification to the Commission when exporting source materials and special fissile materials to a third country. Due to that, these two Regulations regulate different aspects of the same export procedure. If special fissile material is to be exported requirements of the both Regulations must be fulfilled. Consequently, even though Regulations under different treaties have the same goals and have similar objectives they do not collide – contrarily, they complement each other securing the non-proliferation commitments by versatile regulation.
Furthermore, according to the structure of the IAEA Handbook of Nuclear Law, safeguards and export control, as well as physical protection of nuclear materials and facilities, are all equal parts of the non-proliferation which additionally motivates the conformity of these two Regulations.

[157] The given contractions are used to make the text in this paragraph easier to understand. The contraction "EC Regulation" will be used in current and the next paragraph wile "Euratom Regulation" will be applied only here.

Council Regulation (EC) No 428/2009 on dual-use items and Council Directive 2006/117/Euratom on shipment of radioactive waste

The question in this case is how these two legal acts interact when the transported substance is spent nuclear fuel which is one of the duel-use items. As it was told before, for export of dual-items, the EC Regulation requires authorization by the national authority of the exporting Member State. Similar authorization requirement for export is set in Article 15 of the latter Directive in order to control the transboundary shipments of radioactive waste and spent fuel. Firstly, as distinct from the previous comparison of legal acts, the goals of the regulation are different here – the EC Regulation aims to prevent the manufacturing of nuclear weapon in third states, while the goal of authorisation system under the Directive 2006/117/Euratom is to control the movement of radioactive waste and spent fuel in order to guarantee an adequate protection of the population, which means that it is not in any way connected to the non-proliferation. In addition to this, authorisation on the transport of radioactive waste and spent fuel is obligatory irrespective of whether the latter substances are to be transported inside the Community, imported of exported which means that its scope is wider than the EC Regulation which only regulates the export. Due to that, it can be stated that these two legal acts have different goals and scope and they only come in contact when exporting spent nuclear fuel. In the latter case, the authorisation under the Directive 2006/117/Euratom will be complemented by the additional authorisation procedure under the EC Regulation which practically mean that authorisation by national authority would only be granted if requirements of both legal acts are fulfilled. This also works vice versa to Article 16 of the Directive 2006/117/Euratom which declares the list of prohibited exports. That is, if the export is prohibited under the latter article of the Directive, the export cannot be performed under the EC Regulation either.
In summary, it can be said that these two legal acts do not collide, but regulate different aspects of the export and if the exported substance is spent nuclear fuel, they are both applied as supplementing each other.

Conclusions

1. Different legal acts use a variety of definitions describing transportation of radioactive substances – transfer, shipment and transport. However, these legal terms have certain distinctive features and not always can be considered synonyms.

2. Procedure applied to transport of radioactive substances under the Euratom Treaty might differ according to quantity, quantity and concentration, and type of transported radioactive substances.

3. The BSS Directive is a ground legal act setting a bar which determines the provisions applied to the transport of specific radioactive substances and establishes a possibility for the Member States to create authorization procedure for transporting radioactive substances.

4. Regulation under the TFEU in general does not differentiate radioactive substances and concentrates mainly on process of physical transportation.

5. With certain exceptions, the relation between the Euratom Treaty and the TFEU is that regulation under the Euratom Treaty concentrates on capacitating the physical transportation while secondary legal acts under the TFEU focus on the safe transfer itself. These to regulations do not collide but, contrarily, complement each other.

2.3 Common Market

This part of the research is devoted to analyse how the Euratom Treaty and the TFEU interact in the common market area. There is a vast diversity of aspects that could be discussed here, but, due to the certain limitations of the research and the aim to present the most problematic questions, three main chapters of this part will be: free movement of goods, competition law and state aid.[158]

2.3.1 Free movement of goods

The internal market of the EU is based on principle of freedom of movement that consists of four rights – free movement of goods, services, capital and people. However, I devote a subchapter in this research only to free movement of goods due to several reasons. Firstly, internal market of goods is considered to be a "fundamental element of European Integration"[159]. And, secondly, it seems that free movement of goods raises more questions on interaction between the TFEU and the Euratom Treaty than any other of four rights. The reason for that probably lays in the nature of moving goods in the internal market - they can be radioactive, as well as they can be parts of nuclear reactors or other equipment that is highly specialised. Therefore, the major question here is whether free movement of these goods can be limited in the EU and how sometimes clearly different objectives of the treaties, e.g. free movement of goods and protection of health of general public, would interact in this field. As previously, in the beginning I would like to rather generally introduce the principles of free movement of goods in the EU, than to present the regulation of the Euratom Treaty in this field and finally discuss the interaction of the treaties in the field of free movement of goods in the EU.

2.3.1.1 Free movement of goods under the TFEU

As mentioned earlier, the principle of free movement of goods has been a key element creating and developing the internal market. It originated from articles 28-30 of the EC Treaty. However, nowadays the internal market goes beyond these three articles as harmonised legislation in many areas has specified the meaning of the internal market and has thereby framed the principle of free movement of goods in concrete terms for specific products.[160] Unfortunately, due to the vast quantity of information and specific objectives of this research, I will only present main principals of free movement of goods without getting deeper in to problematic aspects of this question.

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[158] Even though the following aspects can be relevant for nuclear energy, due to the fact that they are not regulated by the Euratom Treaty, the decision was made to omit them in the research: mergers and public procurement.

[159] Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, "The Internal Market for Goods: a cornerstone of Europe's competitiveness", of 14 February 2007, COM(2007)35 final. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0035:FIN:EN:PDF.

[160] "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010, p. 8. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.

Article 34 and 35 establishes prohibition of quantitative restrictions and all measures having equivalent effect on imports and exports between Member States.

These are some of the important **general conditions**[161] of application of these articles:

1. Non-harmonised area

Articles 34 and 35 only are applied to non-harmonised area. Consequently, latter articles do not apply when free movement of a given product is fully harmonised by more specific EU legislation, i.e. especially where the technical specifications of a given product or its conditions of sale are subjects to harmonisation by means of directives or regulations adopted by the EU. This is due to the fact that harmonising legislation can be understood as substantiating the free movement of goods principle by establishing actual rights and duties to be observed in the case of specific products. Therefore, any problem that is covered by harmonising legislation would have to be analysed in the light of such concrete terms and not according to the broad principles declared in the TFEU. Accordingly, when harmonising legislation cannot be identified the general rules are the ones to rely on.

2. Meaning of "goods"

The range of goods covered is as wide as the range of goods in existence, so long as they have economic value: "by goods, within the meaning of the […] Treaty, there must be understood products which can be valued in money and which are capable, as such, of forming the subject of commercial transactions"[162]. In its rulings the Court of Justice has clarified that works of art[163], coins that are no longer in circulation[164], waste (even non-recyclable), electricity[165] and natural gas[166] counts as goods; while television signals and donations[167] do not.

3. Addressees

Articles 34-36 of the TFEU deal with measures taken by the Member States. In this context, however, the "Member States" has been interpreted broadly to include all authorities of a country, be they central authori-

[161] All general conditions presented in: "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.
[162] Judgement of the Court of 10 December 1968, Case 7/68 *Commission v. Italy*. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61968J0007:EN:PDF>.
[163] Case 7/78 Thompson [1978]
[164] Case C-358/93 Bordessa and others [1995]
[165] Case C-393/92 [1994]
[166] Case C-159/94 Commission v. France [1997]
[167] Case C-318/07 Persche [2009], para. 29

ties or any territorial authorities[168]. In recent case, the Court even more expand the latter term by stating that statements made publicly by an official, even though having no legal force, can be attributed to a Member State and constitute an obstacle to the free movement of goods in the addressees of the statement can reasonably suppose, in the given context, that these are positions taken by the official with the authority of his or her office[169]. Although the term "Member State" has been given a broad meaning, it does not apply to *purely* private measures taken by private individuals or companies.

4. Active and passive measures

The prohibition of quantitative restrictions applies to both – active and passive measures. Active measures to ensure free movement of goods sounds very natural, but passive obligations also exist. In one case France was held responsible for actions of national farmers seeking to restrict import of agricultural goods from neighbouring Member States by intercepting lorries transporting these goods and/or by destroying their loads. The non-intervention of national authorities against these acts was considered as infringing Article 34 of the TFEU, as Member States are obliged to ensure the free movement of products in their territory by taking the measures necessary and appropriate for the purposes of preventing any restrictions due to the acts of private individuals.[170]

5. No de minimis rule

There is not *de minimis* in relation to the articles concerning the free movement of goods. Due to that, national measure that infringe free movement of goods do not fall outside the scope of prohibition in Articles 34 and 35 just because the hindrance for free movement of goods is slight or because it is possible for products to be marketed in other ways. Therefore, State measure can still me a prohibited measure having equivalent effect even if:

- It is of relatively minor economic significance;
- It is only applicable on a very limited geographical part of national territory;
- It only affects a limited number of imports/exports or a limited number of economic operators.

6. Quantitative restrictions

According to the Court of Justice[171], quantitative restrictions should be understood as "measures which amount to a total or partial restraint on

[168] Joined Cases C-1/190 and C-176/90 [1991.]
[169] Case C-470/03 AGM-COS.MET [2007]
[170] Case C-265/95 Commission v. France [1997]
[171] Judgment of the Court of 12 July 1973, Case 2/73 *Riseria Luigi Geddo v Ente Nazionale Risi*. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61973J0002:EN:PDF>.

imports, exports or goods in transit". Examples would include an outright ban or a quota system[172], i.e. quantitative restrictions apply when certain import or export ceilings have been reached. However, only non-tariff quotas are caught by this article, since tariff quotas are covered by Article 30 TFEU (prohibition of custom duties).

7. Measures of equivalent effect

The term "measure having equivalent effect" is much broader in scope than quantitative restriction. The Court of Justice state that "all trading rules enacted by Member States which are capable of hindering, directly or indirectly, actually or potentially, intra-Community trade are to be considered as measures having an effect equivalent to quantitative restrictions"[173]. Article 34 of the TFEU will apply not only to national measures which discriminate imported goods, but also to those which in law seem to apply equally to both domestic and imported goods, but in practice are more burdensome for imports. The latter burden comes from the fact that the imported goods are in fact required to comply with two sets of rules – one laid down by Member State of manufacture, and other by the Member State of importation.

Besides the general conditions, another important aspect is the **mutual recognition principle**[174]**.**
Under this principle, different national technical rules continue to coexist within internal market. In the non-harmonised area the latter principle consists of a rule and an exception. General rules is that, notwithstanding the existence of a national technical rule in the Member State of destination, products lawfully produced or marketed in another Member State enjoy a basic right to free movement, guaranteed by the TFEU. The exception is that products lawfully produced or marketed in another Member State do not enjoy this right if the Member State of destination can prove that it is essential to impose its own technical rule on the products based on the reasons outlines in Article 36 of the TFEU.
The principle originated in the Judgement[175] of the Court of Justice and was the basis for new development in the internal market of goods. While at the beginning not expressly mentioned in the case-law of the Court of Justice, it is now fully recognised.

However, free movement of goods is not an absolute value – under Article 36 of the TFEU, certain prohibitions are allowed if they are justified on certain grounds. The **specific grounds for restraint** of free movement of goods are[176]:

- public morality, public policy or public security;

[172] Case 13/68, Salgoil [1968].
[173] Case 8/74 Dssonville [1974].
[174] "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010, p. 15. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.
[175] Judgement of Court of Justice of 20 February 1979, Case 120/78.
[176] "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010, p. 26-28. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.

While it is up to each Member State to set standards enabling goods to comply with national provisions concerning morality, the fact remains that discretion must be exercised in conformity with the obligations arising under EU law.
Public policy, however, is interpreted very strictly by the Court of Justice and has rarely succeeded as grounds for derogation under this article. The public policy justification alone was accepted in one exceptional case177, where a Member State was restricting the import and export of gold-collectors' coins. The Court held that it was justified on grounds of public policy because it stemmed from the need to protect the right to mint coinage, which traditionally regarded as involving the fundamental interest of the state.
Public security justification has been advanced in a specific area, namely the EU energy market. In one such case178 a Member State ordered petrol importers to purchase up to 35% of their petrol requirements from a national petrol company at prices fixed by the government. The Court of Justice held that the measure was clearly protectionist and constituted a breach of Article 34 of the TFEU. However, it was held to be justified on the grounds of public security, that is, for maintaining a viable oil refinery to meet supply in times of crisis. The Court also accepted the justification on the grounds of public security in cases involving trade in strategically sensitive goods179 and dual use goods180, as "the risk of serious disturbance in foreign relations or to peaceful coexistence of nations may affect the security of a Member State". In these cases the Court stated that the scope here covers both internal and external security.

- the protection of health and life of humans, animals or plants;

The Court of Justice has ruled that "the **health and life of humans rank first** among […] interests protected by Article [36] and it is for Member States, within the limits imposed by the Treaty, to decide what degree of protection they intend to assure, and in particular how strict the checks to be carried out are to be"[181].
It is the most popular justification which Member States usually try to justify obstacles to the free movement of goods. While the Court's case law is very extensive in this area, there are some principal rules that have to be observed: the protection of health cannot be evoked if the real purpose of the measure is to protect domestic market; the measures adopted have to be proportionate – restrict only that, what is necessary to attain legitimate aim of protection of health; measures at issue have to be well-founded – providing relevant evidence, data and all other relevant information.

[177] Case 7/78 Thompson [1978].
[178] Case 72/83 Campus Oil [1984].
[179] Case C-367/89 [1991]
[180] Case C-83/94 Leifer and others [1995]; Case C-70/94 Werner [1995].
[181] Case 104/75 [1976]

- the protection of national treasures possessing artistic, historic or archaeological value;

The exacts definition of "national treasure" is open to interpretation and it is up to the Member State to determine which items fall within this category. Most often Member States impose different restrictions on the export of antiques and other cultural artefacts, and those restrictions as well as related administrative procedures are generally considered to be justified under this article. However, attempts to discourage the export of art treasures by the imposition of tax have not been deemed justifiable since it constitutes a measure equivalent to a custom tax (Article 30) regard to which Article 36 cannot be invoked as a justification[182].

- the protection of industrial and commercial property;

The most important types of industrial and commercial property are patent, trademarks and copyright. Two principles can be deducted from the case law: first – the Treaty does not affect the existence of industrial property rights granted pursuant to the legislation of the Member State; second – an industrial property right is exhausted when a product has been lawfully distributed in the market of a Member State by the owner of the right or with his or her consent.

Summarising the grounds for restrain of free movement of goods, it can be said that the Court of Justice interprets narrowly this list of derogations which all relate to non-economic interest.[183] The burden of proof in justifying these measures lies within the Member State[184], but when a Member State provides convincing justifications it is then for the Commission to show that the measures taken are not appropriate in that particular case[185].

Besides the general legislation of the TFEU, there are **secondary legal acts** elaborating the general provisions on free movement of goods:

Directive 98/34/EC laying procedure for provision of information in the field of technical standards[186]

Under the latter directive, "**technical regulation**" include: laws, regulations or administrative provisions of a Member State which refer either to technical specifications or other requirements or to professional codes or codes of practice which in turn refer to technical specifications or other requirements; voluntary agreements to which a public authority is a contracting party and which provide for compliance with technical specifications; and

[182] Case 7/68 Commission v. Italy [1968].
[183] Case C-120/95 Decker [1998]; Case 72/83 Campus Oil [1984].
[184] Case 251/78 Denkavit Futtermittel [1979].
[185] Case C-55/99 Commission v. france [2000].
[186] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations, O.J. L 204 of 21 July 1998, p. 37–48. Consolidated version available here: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1998L0034:20070101:EN:PDF.

technical specifications or other requirements which are linked to fiscal or financial measures affecting the consumption of products (Article 1).

The main **aim** of this Directive is to establish preventive control mechanism of the national technical standards in order to secure free movement of goods. The notification procedure under the Directive requires that Member States would immediately communicate to the Commission any draft technical regulation, except where it merely transposes the full text of an international of European standard (Article 8). Member State must also postpone the adoption of that draft for three months from the date of receipt by the Commission. This period can be extended to up to 18 months where measure in question is likely to create unjustified barriers to trade or where harmonisation work is in progress at EU level in the area covered by the notified draft (Article 9). According to the case-law[187] of the Court of Justice, any regulation which has not been notified at the draft stage or has been adopted during mandatory standstill periods cannot be applied and thus enforced by national courts against individuals.

Regulation (EC) No 2679/98 on functioning of internal market in relation to free movement of goods[188]

This Directive provides for special procedures to cope with serious obstacles to the free movement of goods among Member States which cause heavy loss to the individuals affected and require immediate action. Those obstacles may, for example, the result of passivity of national authorities in the face blockages of boarders, or of actions by a Member State, such as institutionalised boycott of imported products. The regulation provides for an alert procedure and for exchange of information between Member States and the Commission. It also reminds Member States of their obligation to adopt necessary measures to ensure free movement of goods and empowers the Commission to send notification to the Member State concerned requesting that those measures be adopted within a very tight deadline.[189]

Regulation (EC) No 764/2008 on the mutual recognition principle[190]

As it was mentioned earlier, mutual recognition principle mean that notwithstanding the existence of a national technical rule in the Member State of destination, products lawfully produced or marketed in another Member State enjoy a basic right to free movement.
The main objective of this regulation is to define the rights and obligations of national authorities and businesses when the Member State of destination intend to deny mutual recognition and to refuse market access of a product lawfully marketed in another Member State. The regulation places the burden of proof on "intending to deny" Member State which must set out in

[187] Case C-194/94 CIA Security International [1996]; Case C-443/98 Unilever [2000]; Case C-20/05 Schwibbert [2007].
[188] Council Regulation (EC) No 2679/98 of 7 December 1998 on the functioning of the internal market in relation to the free movement of goods among the Member States, O.J. L 337 of 12 December 1998, p. 8–9.
[189] "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010, p. 36. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.
[190] Regulation (EC) No 764/2008 of the European Parliament and of the Council of 9 July 2008 laying down procedures relating to the application of certain national technical rules to products lawfully marketed in another Member State and repealing Decision No 3052/95/EC, O.J. L 218 of 13 August 2008, p. 21–29.

writing the precise technical and scientific reason for their intention to deny the product access to the national market. The regulation also establishes "product contact points" in each Member State, which provide information about technical rules on products and the implementation of the mutual recognition principle to enterprises and competent authorities in other Member States.[191]

2.3.1.2 Free movement of goods under the Euratom Treaty

In the field of free movement of goods, the Euratom Treaty has certain special aspects that might not be that obvious from the beginning. In order to understand how the Euratom Treaty regulates free movement of goods, the actual concept of "goods" under the latter treaty should be sorted out.

Conception of "Goods"

Article 92 of Chapter 9 of the Euratom Treaty state that the rules of nuclear common market shall apply to the goods and products specified in the Annex IV. Systematic analysis of these provisions leads to the conclusion that "goods" in the nuclear common market under the Euratom Treaty among other things, are:

1. Nuclear fuels and materials;
2. Nuclear reactors;
3. Equipment for the separation of uranium isotopes;
4. Equipment specially designed for the chemical processing of radioactive material;
5. Vehicles specially designed for transport of highly radioactive substances;
6. Containers with lead radiation shielding for the transport or storage of radioactive material;
7. Remote-controlled mechanical manipulators specially designed for handling highly radioactive substances;
8. Reactor stimulators;
9. Liquid-vacuum and high-vacuum pumps;
10. Heat exchangers specially designed for nuclear power stations;
11. Specific radiation detection instruments, specially designed or adaptable, for the detection of measures of nuclear radiation;
12. Electrostatic generators, linear accelerators and other machines capable of imparting an energy greater than 1 MeV to nuclear particles;
13. Magnets specially designed and constructed for the abovementioned machines and equipment;
14. Anti-radiation plate glass;
15. Airtight clothing affording protection against radiation of radioactive contamination.

[191] "Free movement of goods. Guide to the application of Treaty provisions governing the free movement of goods", European Commission, Enterprise and Policy, European Union 2010, p. 36. Available on internet: < http://ec.europa.eu/enterprise/policies/single-market-goods/files/goods/docs/art34-36/new_guide_en.pdf>.

Content of the list presented above allows indicating several aspects:

Firstly, it denies the myth that nuclear common market under the Euratom Treaty is only limited to the nuclear supplies defined in Article 197. Obviously from the Annex IV it also includes other materials, technique and even clothes that allow to work in radioactively contaminated environment. Secondly, it also show that, on one hand, "goods" in nuclear common market are materials and technique that have a defined purpose to be used **in production of nuclear energy**. On the other hand, the technique on this list does not have to be *made* exceptionally for that purpose, but it only falls under the conception of "goods" of the nuclear common market when it is only *used* in the process related to production of nuclear energy. For example, even though high-vacuum pump is universal technical instrument that can also used in oil industry, if it is used in nuclear energy, it will fall under the "goods" of the nuclear common market.
And thirdly, the content of the latter list and general understanding of the regulation of the Euratom Treaty clearly confirm that concept of "goods" in the nuclear common market does not cover *all goods* that provisions of the Euratom Treaty could be applied to. For example, how about radioactive substances that are not used in nuclear industry (used for medical diagnosis, treatment or research) or production of goods that have deliberately incorporated radionuclides and may be radioactive. As far as common nuclear market is concerned, they do not fall under the conception of "goods", nevertheless they emit ionizing radiation and due to that fall under the Euratom Treaty. If to look at this from the historical perspective, it is quite understandable that the latter materials and goods did not fall under the nuclear common market as the purpose of the Euratom Treaty itself was purely concentrated to the establishment and development of nuclear energy sector. In addition to this, it might be considered that such exclusion is rather reasonable – as they are not used in nuclear sector why would they belong to the common *nuclear* market. Nevertheless, it seems to be clear that "goods" of the Euratom Treaty is wider conception that "goods" of the nuclear common market.

Movement provisions

As conception of goods has been identified, the rules of the Euratom Treaty applying to these main two categories ("nuclear" goods and "other than nuclear" goods) should be analysed as well.
Article 93 states that all customs duties on imports and exports or charges having equivalent effect, and all quantitative restrictions on imports and exports are prohibited between Member States, in respect of products that can be (were created or designed to be) used only in nuclear industry and products that in principle can be used in other industries, but are accompanied by certificate issued by the Commission stating that they are intended to be used for nuclear purposes. Due to this provision it is clear that the Euratom Treaty has explicit provisions regulating nuclear common market and assuring free movement of goods within it. In addition to this article, secondary legislation in the area of transport (including BSS Directive) should be kept in mind as well. As it was stated in the "Transport" chapter, secondary legislation under the Euratom Treaty in the area of transport is mainly intended to regulate the notification and authorisation procedure in order to

control the movement of radioactive substances. Due to that, the free movement of, for example, nuclear supplies might be restricted if requirements of the latter legal acts are not satisfied or if the respective authority does not authorise the shipment.

However, more problematic question is what rules apply to the "other than nuclear" under the Euratom Treaty. There are no provisions in the Euratom Treaty assuring free movement of such goods. Nevertheless, keeping in mind that the objectives of the Euratom Treaty function throughout the whole treaty, protection of health and safety of general public plays a certain role here. Due to that, free movement of "non-nuclear" radioactive goods must comply with rules of Article 31 of the Euratom Treaty and the BSS Directive as well. Differently from the transport of radioactive substances, where BSS Directive sets *a possibility* of authorisation procedure, the latter Directive *explicitly requires* prior authorisation for import and export of goods than have deliberate addition of radioactive substances in every Member State. This means that Member State can decide not to allow import of such goods into its territory and that must be accepted by the Member State of origin. Consequently, any movement of goods which have radioactive substances should be authorised within the EU irrespective of the fact that it might restrict the free movement.[192]

Summarising the regulation of free movement of goods under the Euratom Treaty, it could be said that free movement of goods used in the nuclear industry is explicitly regulated by Chapter 9 of the Euratom Treaty, however, other radioactive goods have no explicit regulation of free movement except one restriction of free movement established by the BSS Directive – the obligatory requirement for authorisation of import and export of such goods.

2.3.1.3 The Euratom Treaty and the TFEU interaction in the field of three movement of goods

After presenting the regulation on free movement of goods in both treaties, the analysis of their interaction should be done. Comparing the extent of both regulations, it is quite clear that free movement of goods under the TFEU was much wider than under the Euratom Treaty. As the actual interaction between these treaties is the main aim here, the answer to this question will be obtained by taking the Euratom Treaty as the starting point. In other words, I will analyse *if* and *in what areas* of the Euratom Treaty is it possible to apply rules of the TFEU on free movement of goods.

As it was stated earlier, Chapter 9 of the Euratom Treaty set certain specific rules of for free movement or "nuclear" goods which by definition might be considered as rather similar to Article 30 and 34 of the TFEU. Besides that, Chapter 6 and 7 establish a detail regulation on the secure movement of nuclear materials and technology due to its specific nature. Due to that and according to Article 106a (3) of the Euratom Treaty, it is clear that in case of competition of regulation between treaties, provisions of the Euratom Treaty prevail. This means that the nuclear common market and nuclear goods is

[192] The possibility to prohibit or restrict free movement of goods based on BSS Directive in some sense could be considered as parallel to the exception defined in Article 36 of the TFEU - the protection of health and life of humans;

exceptional competence of the Euratom Treaty and provisions of the TFEU are not applicable here.[193]
Movement of "non-nuclear" radioactive goods is the area where the relation between the treaties could be considered as more complicated. It was mentioned above that there are no rules in the Euratom Treaty regulating the actual movement of the latter goods. As the Euratom Treaty does not provide the regulation here, possibility to apply the TFEU rules must be considered here.
I presented the TFEU regulation on free movement of goods in quite detailed way earlier with a specific purpose of showing that these rules and secondary legal acts accordingly were issued to pursue the specific objective of internal market without borders.

Due to that, applicability of the TFEU rules to movement of "non-nuclear" radioactive goods under the Euratom Treaty depends on the **purpose of usage** of the latter goods.

That is, if the objective purpose of activity that includes "non-nuclear" radioactive goods is related to the market, then the TFEU rules should be applied. However, if goods are used in other activities not related to the market, the TFEU rules and secondary legal acts cannot be applied due to the fact that such application would go beyond the objectives of the EU legislation in this field. Nevertheless, the requirements of the BSS Directive are applied irrespective of the purpose of usage as they come due to the specific feature of these goods – ionizing radioactivity.

For example, national radiation safety authority has issued a regulation which set technical standards for materials, premises and land that could be contaminated by ionizing radiation due to their usage in activities that are related to ionizing radiation and that require authorisation. According to the regulation, the purpose of these technical standards is to facilitate management and usage of those materials, premises and land. Due to emission of ionizing radiation, provisions of Chapter 3 of the Euratom Treaty and the BSS Directive should be applied here. But there is also Directive 98/34/EC on provision of information on technical standards and regulations require informing the Commission about new technical standardisation. It might seem that this directive should be applied here and the notification about these new technical standards should be provided to the Commission. However, it should be kept in mind that the aim of Directive 98/34/EC is to establish preventive control mechanism of the national technical standards in order to secure free movement of goods. Meanwhile, it is quite obvious that the purpose of the national regulation mentioned above has no connection with the free movement of goods and the internal market as such. Due to that, application of the Directive 98/34/EC should be considered as unneces-

[193] This position is also quite settled in the doctrine as well: Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", pp. 121, *Common Market Law Review 40: 117-142, 2003*, p. 129; Erhag T., "Är kärnavfall ett bekymmer för EU eller medlemsstaterna? – om kärnavfallsfrågan och principen om nationellt ansvar I EG-fördraget och Euratom-fördraget", *CERGU Working Papers Series Nr 07:01*, p.15. Available on internet: < http://www.cergu.gu.se/digitalAssets/966/966392_Thomas_Erhag_07.01__A4-format.pdf>.

sary here, leaving only the requirements under the Euratom Treaty to be satisfied.

Conclusions

Due to all that, certain conclusions can be drawn:

1. "Goods" under the Euratom Treaty could be divided in two main groups – "nuclear" goods and "non-nuclear" radioactive goods. Nuclear common market under Chapter 9 of the Euratom Treaty covers only the "nuclear" ones and the TFEU rules on free movement of goods are not applied for them.

2. In movement of "non-nuclear" radioactive goods the TFEU rules could be applied only if their purpose of usage is related to EU internal market.

3. Provisions of Chapter 3 of the Euratom Treaty and the BSS Directive are applied in movement of all radioactive goods irrespective of their purpose of usage and possible distortion of free movement.

2.3.2 Competition Law

First of all, it should be noticed, that even though the relationship between EU competition law and nuclear sector has been tackled to some extent in general works of competition law and energy law and developed research has been carried out in the framework of nuclear forums, such basic issues as the extent of the applicability of competition law to the nuclear sector are still disputed.[194]
As competition law originally is a field of EU law, I would like to start the analysis by presenting the principles of legislation under the TFEU, then discuss respective provisions of the Euratom Treaty and finally analyse the interaction between these two treaties in the field of competition law.

2.3.2.1 Competition rules under the TFEU

Generally, EU provisions on competition include a whole series of provisions on anti-competitive agreements and dominant positions (anti-trust regulations), on mergers, state aid, etc. All these provisions have the common objective – to ensure free competition between economic operators and facilitate intra-community trade.[195] In this part I will only analyse certain competition rules[196] that are considered to be "the main pillars"[197] of the EU competition law and which I find the most important for the research.

The first one is **prohibition on anti-competitive agreements** (Article 101). This prohibition includes not only agreements, but also decisions by associations of undertakings or concerned practices. Besides that, the latter ones must have a sufficient influence on internal market – effect the prevention, restriction or distortion of competition. Any agreement, decisions and concerted practice failing to comply with the competition rules is automatically void.

Despite the first impression that this rule is quite strict, it includes rather wide exemption possibilities. According Article 101(3) of the TFEU, agreements, decisions and concerted practice which restrict or distort competition within internal market can be allowed if they contribute to improving the production or distribution of goods or promote technical or economic progress, while allowing consumers a fair share of the resulting benefit. In addition to this, agreements, decisions and practice must not impose restrictions which are not indispensable to attainment of these objectives and not give a possibility to eliminate competition in respect of a substantial part of the products in question. Under this paragraph, the Commission has adopted and may continue to adopt so called "block" exemption Regulations by which it

[194] Sousa Ferro, M. "Competition Law and the Nuclear Sector: An EU Outlook", *Nuclear Law Bulletin No. 86(2010)*, p. 14.
[195] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 288-303.
[196] In total there will be three – prohibition of state aids (Articles 107-109) could also be included here, however, due to the specific position of state aids in the Euratom Treaty, the latter aspect will be analysed in a separate subfield.
[197] Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1167.

declares Article 81(1) of the Treaty inapplicable to categories of agreements, decisions and concerted practices. The already existing ones are:

- Commission Regulation (EU) No 1218/2010 on application of Article 101(3) to certain categories of specialisation agreements[198].
  It states that Article 101(1) shall not apply for unilateral specialisation agreement, a reciprocal specialisation agreement or a joint production agreement if they contain restrictions of competition.

- Commission Regulation (EU) No 1217/2010 on application of Article 101(3) to certain categories of research and developments projects[199].
  It declares that Article 101(1) shall not apply to research and development agreements for the duration of that research or development. However, it also sets certain conditions for application of this exemption, such as, that all the parties must have full access to the final results of the joint research, and each party must be granted access to any pre-existing know-how of the other parties, if this know-how is indispensible for the purpose of its exploitation of the results.

- Commission Regulation (EU) No 461/2010 on application of Article 101(3) to categories of vertical agreements and concerned practices in the motor vehicle sector[200].
  Generally, it stipulates that Article 101(1) shall not apply to vertical agreements relating to the conditions under which the parties may purchase, sell or resell new motor vehicles. This exemption is limited in time and is only valid from 1st of June 2010 until 31st of May 2013.

- Commission Regulation (EU) No 330/2010 on application of Article 101(3) to categories of vertical agreements and concerned practices[201].
  It establishes that Article 101(1) shall not apply to specific vertical agreements entered into between an association of undertakings and its members, or between such an association and its suppliers, only if all its members are retailers of goods.

- Commission Regulation (EU) No 267/2010 on application of Article 101(3) to certain categories of agreements, decisions and concerned practices in the insurance sector[202].

[198] Commission Regulation (EU) No 1218/2010 of 14 December 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of specialisation agreements, O.J. L 335, of 18 December 2010.
[199] Commission Regulation (EU) No 1217/2010 of 14 December 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of research and development agreements, O.J. L 335 of 18 December 2010.
[200] Commission Regulation (EU) No 461/2010 of 27 May 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector, O.J. L 129 of 28 May 2010.
[201] Commission Regulation (EU) No 330/2010 of 20 April 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices, O.J. L 102 of 23 April 2010.
[202] Commission Regulation (EU) No 267/2010 of 24 March 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of agreements, decisions and concerted practices in the insurance sector, O.J. L 83 of 30 March 2010.

It states that Article 101(1) shall not apply to agreements entered into between two or more undertakings in the insurance sector under specified conditions.

It should be noticed that all of these elaborating Commission Regulations unanimously state that in order to benefit from the exemptions made, the agreements must satisfy the conditions of Article 101(3) with sufficient certainty. In other words, if agreements, decisions and concerted practices to which such Regulations apply nonetheless have effects that are incompatible with Article 81(3) of the Treaty, the Commission and the competition authorities of the Member States has the power to withdraw in a particular case the application of the block exemption Regulation[203].

Another competition rule worth mentioning is **prohibition of abuse of dominant position** within the internal market or in substantial part of it (Article 102). It should be noticed though, that this provision does not prohibit dominance per se, but merely the abuse of such a dominant position.[204] In order to apply this regulation correctly, two aspects must be kept in mind. Firstly, it must be stated that the undertaking has a dominant position. According to ECJ[205], the dominant position is when the undertaking has economic strength to prevent effective competition on the relevant market by having the power to behave independently of its competitors and its consumers. Secondly, the abuse aspect is also necessary. Essentially, there are two types of abuse – by excluding actual or potential competitors, or being unfair or unreasonable towards persons who depend on the company for supply of relevant products or service.[206] In practice, such abuse may consist in directly or indirectly imposing unfair prices or other unfair trading conditions; limiting production, markets or technical development to the detriment of consumers; applying dissimilar conditions to equivalent transactions with other trading parties, etc.[207] Unlike Article 101, this competition rule does not provide any exemption possibilities.

According to Article 106(3), the Commission has an obligation to ensure competition rules would be applied and implemented. In order to do that, certain secondary legal acts were issued.
Until 2004, EEC Council Regulation No 17[208] was implemented setting a system of central control where the Commission was the only institution

[203] Paragraph (10) of the Preamble of Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, O.J. L1 of 4 January 2003
[204] More detailed in: Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1238.
[205] European Court of Justice, Judgement of 13 February 1979, Case 85/76. Available on internet: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61976J0085:EN:PDF&bcsi_scan_921B58821B3E7C8C=xrw0C1LXTlsAWsyjzsjCwAwAAADrtuYA&bcsi_scan_filename=LexUriServ.do>.
[206] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1241.
[207] Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1169.
[208] EEC Council: Regulation No 17: First Regulation implementing Articles 85 and 86 of the Treaty, O.J. 13 of 21 February 1962, p. 204–211. Consolidated version available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1962R0017:19990618:EN:PDF>.

which had a power to declare the exemption under the Article 101(3) for agreements distorting competition. Respective authorities of the Member States were only informed and could express their opinion on the procedures initiated by the Commission. However, 1st of May 2004 new Council Regulation (EC) No 1/2003[209] came into force which decentralised the enforcement mechanism allowing national competition authorities to act as well. Nowadays the competition authorities of the Member States have the right to apply the Articles 101 and 102 of the TFEU which mean that they can also decide to make the exemption according to Article 101(3). According to Article 5 of the latter Council Regulation, they also make the decisions ensuring the protection of competition regulation in the internal market: require that an infringement be brought to an end, order interim measures, accept commitments and impose fines, periodic penalty payments or any other penalty provided by the national law. Nevertheless, these national authorities must inform the Commission in writing before or without delay after commencing the first formal investigative measures, and the summary of the case with the envisaged decision no later than 30 days before the adoption of the decision. (Article 11, Regulation 1/2003). The Commission, on the other hand, is concentrating its resources on curbing only the most serious infringements. All that leads to the conclusion that competition authorities of the Member States gained the right and the obligation to control the implementation of the competition rules on the national level.

2.3.2.2 Competition rules under the Euratom Treaty

As it was mentioned before, the main objective of the Euratom Treaty was to create nuclear energy sector which implies the promotion and exceptional position for this source of energy. Due to that, it seems that competition rules have not and could not be a part of such regulation. However, analysing provisions of the Euratom Treaty in a more detailed way, it is possible to find certain aspects that, although cannot be named as clear competition clauses, have an aim to regulate the operation of nuclear market to ensure the attainment of the Euratom Treaty's goal – creation of conditions necessary for the speedy establishment and growth of nuclear industries[210].

The Euratom Treaty provisions having certain competition regulation aspects are:

1. Equal status of all users in the Euratom Community:
   Article 52(1) – the principle of equal access to source of supply;
   Article 52(2)(a) – prohibition of privileged position to any user;
   Article 68 – prohibition to set such prices that would secure privileged position for certain users.

2. The Euratom Community's possession of the supplies:
   Article 52 (2)(b) – the right of option on ores, source materials and special fissile materials;

[209] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, O.J. L1 of 4 January 2003.
N.B. Articles 81 and 82 are renumbered after Lisbon amendments to Articles 101 and 102.
[210] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1225.

Article 86 – exclusive right of ownership of special fissile materials;
Article 52 (2)(b) – exclusive right to conclude contracts relating to supply of ores, source materials and special fissile materials.

3. Price setting for nuclear fuel supplies:
   Article 67 – prices of the supplies shall be determined as a result of balancing supply against demand;
   Article 68 – prohibition of privileged prices;
   Article 69 – the Council's right to fix prices.

Summarising the provisions of the Euratom Treaty presented above, it should be said that regulation from the competition point of view is quite specific here. On one hand, the Euratom Treaty had a clear aim to secure the Community's supply possibilities in case of shortage of uranium which explains why the Community has right of option, exclusive right of ownership and right to conclude the supply contracts. That creates the vertical relation between Community institutions and the users of the Member States and has no connection with securing the competition. On the other hand, the objective of the Euratom Treaty was also to create nuclear common market, which among other things would be based on classical equal competition possibilities of all undertakings. It shows such provisions as equal position of all users and price setting based on supply and demand. Due to all that, it seems that the Euratom Treaty has certain aspects of competition rules as well as there are provisions where competition rules could not be applied because of specifics of the latter regulation.
As the review of the existing regulation has been made, it is time to analyse on how the provisions of the Euratom Treaty and competition rules of the TFEU interact.

2.3.2.3 The Euratom Treaty and the TFEU interaction in the field of competition law

Before analysing the relation between treaties in the field of competition law, it is worth mentioning once again that fundamental difference between the TFEU and the Euratom Treaty is that the Euratom Treaty mainly aimed to promote a particular and highly specialised industry, which at that time was largely non-existent, whereas the EC Treaty aimed at general economic integration, by, among other things, the adoption of strict rules to ensure competition in all the industrial and economic sectors which had in general reached a certain maturity.[211]

Concerning the relation between the treaties, legal doctrine presents three main positions[212]:

1. Nuclear energy sector does not fall under the rules of competition;

2. The Euratom Treaty contains no provisions on competition, consequently the TFEU rules apply without limitations;

[211] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 289.
[212] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 290.

3. The TFEU has to be applied without conflicting with certain provisions of the Euratom Treaty.

The first position unfortunately became undefendable since the Commission's Decision in the United Reprocessors case.[213] In this case the Commission decided to grant an exemption for an agreement between the reprocessing companies KEWA, BNFL and CEA which aimed, within the framework of the joint venture, "United Reprocessors", to coordinate investments and the capacities of each partner and to allocate production quotas between them. This involved, in particular, not building the reprocessing plant in Germany until the UK's and France's capacity had been used up. The Commission noted that this agreement restricted competition and should therefore be theoretically prohibited pursuant to Article 85(1) (now Article 101(1). Nevertheless this agreement was exempted under Article 85(3) (now Article 101(3)), because the agreement contributes, without containing unnecessary restriction on competition, to improving production by avoiding uneconomic or premature investments and to improving safety, allowing consumers a share in the benefits, without completely eliminating competition. The Commission also pointed out that United Reprocessors remains subject to the provisions of the Chapter VI of the Euratom Treaty for reprocessing contracts and for supply agreements.[214] As certain researchers[215] state, it is clear from the decision that the Commission wanted to create the circumstances within which the parties would be able to develop their activities within reprocessing industry on a sound economical footing with the aim of making this industry profitable. In particular, without the coordination of investment, harm would be caused to the Community's interest, as "the reprocessing industry would the get structured of the basis of national rather than Community requirements"[216]. Another interesting aspect here is that the Euratom Treaty was not even mentioned in the latter decisions – it was purely made under articles of the EC Treaty regulating competition rules. Due to that, the position that nuclear energy sector does not fall under the rules of competition might be considered as inapplicable in practice.

The second position that competition rules are applied in the nuclear sector without limitations does not reflect the reality either. Even though the Euratom Treaty does not consist of any direct competition rules, as it was provided earlier, it has certain provisions that have competition regulating elements. Due to that, the absolute application of the TFEU competition rules is not possible either.

The third position that the TFEU can and should be applied without conflicting with certain provisions of the Euratom Treaty is the doctrine that most researchers hold on to. The question here is when exactly the TFEU could be applied and what exclusions are provided by the Euratom Treaty. In order to answer this question is it important to analyse Article 106a of the Euratom Treaty regulating the relation between treaties. According to the

[213] Case No. COMP/IV/26.940/a, *United Reprocessors GmbH*, [1975], O.J. L 51/7.
[214] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 290-291.
[215] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1228-1229.
[216] Case No. COMP/IV/26.940/a, *United Reprocessors GmbH*, [1975], O.J. L 51, p. 7, para. III (3).

latter article, it is considered to be clear that if both treaties regulate the same situation/question, the Euratom Treaty always prevail. Certain aspects here are worth mentioning.

Firstly, as the Euratom Treaty regulation prevails it is essential to understand, when the questions is considered to be regulated by the Euratom Treaty. Is it enough that the Euratom Treaty state certain rights or objectives for it to regulate or should it have the detailed system of the provisions. For example, Chapter 6 sets special competition aspects for supply of nuclear materials. Would that mean that same rules are applied for supply of nuclear equipment or are they only applied to *supplies*? Another example not related to competition rules but having the same problem could be Article 93. It establishes free movement of nuclear goods in the EU by only stating that such objective should be secured. However, it does not provide any elaborating provisions on how to reach it and there are no competition rules regulating such free movement of goods there either. Should it mean that free movement of nuclear goods is regulated by the Euratom Treaty? Unfortunately, there is no unanimous position on this question. In my opinion, if certain question to be *regulated*, it is not enough just to state the objective as well as it is not enough to regulate only certain aspects of it either. In order to be able to state that certain question is *regulated* – it is equally important to give further rules on what must be done in order to reach certain objective as well as they must explicitly cover the whole area. Due to that, it could be stated that competition rules does not seem to be excluded in the nuclear sector as such. Therefore, **only** those provisions that exist[217] in the Euratom Treaty or its secondary legal acts have exclusion from the application of the TFEU. This position was also confirmed by the European Court of Justice of the EU. In its opinion[218] it stated that "as the provisions of the EC Treaty do not derogate from the stipulations of the treaty setting up the European Atomic Energy Community and the Euratom Treaty do not include any provisions on trade, there is nothing to prevent [...] the EC treaty being extended to cover trade in products covered by the Euratom Treaty". In addition, judgement[219] of the Court of First Instance was made that "the EAEC Treaty contains no specific provisions relating to the linking of the system governing supplies set up in Chapter VI of the EAEC Treaty to measures for combating dumping practices in the area of nuclear resources. In these circumstances, nothing excludes a priori the application to the nuclear energy sector of the antidumping provisions laid down by the EC Treaty". However, in this case any application of the anti-dumping procedures of the EC Treaty with regard to nuclear matters may not be carried out to the detriment of the rights and powers of the Supply Agency, otherwise the intervention would breach the prohibition of derogation set in Article 106a of the Euratom Treaty. Therefore, the applicability of the anti-dumping rules on nuclear fuel supplies seems to be quite theoretical.[220] The Commission has

[217] By "exist" I mean they explicitly are written in the Euratom Treaty or Court of Justice of EU has stated that question belongs to the competence of the Euratom Community, such as regulation of nuclear safety.
[218] Opinion 1/94 of the Court of Justice, 1994, point 24. Available on internet: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61994V0001:EN:PDF.
[219] Court of First Instance, Judgement of 15 September 1995, combined cases T-458/93 and T-523/93, ENU v. Commission, 1995, point 70. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61993A0458:EN:PDF>.
[220] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 294.

adopted decision[221] which provides the conclusion that agreements on instrumentation and control systems for nuclear power plants fall fully under the EU competition law. In doctrine there is also an opinion[222] that Chapter 6 of the Euratom Treaty does not cover agreements between producers of nuclear supplies and those agreements can certainly be anti-competitive (e.g. restrictions on prices, output or consumers). Therefore, such contracts may very well be subject to the EU competition law. Consequently, these areas of the nuclear sector could be considered as falling under the EU competition rules: trade of products covered by the Euratom Treaty[223], agreements on nuclear equipment, dumping practices (more theoretically) and contracts between producers of nuclear supplies.

Secondly, in order to apply the provisions of the TFEU in the sector of nuclear energy they should not derogate not only from the provisions of the Euratom Treaty, but also from the objectives set in Article 2 of the this treaty. For example, the protection of workers and the general public against the dangers arising from the ionizing radiation is purely an objective of the Euratom Treaty. Due to that, even though the TFEU would provide legal acts that could theoretically supplement the regulation of the Euratom Treaty they should not be applied in the area of radiation protection. If such additional measures would be considered as necessary in the nuclear energy sector, they should be issued under the Euratom Treaty. However, the Euratom Treaty sets specific objectives, which are not always favoured by antitrust rules. Article 1 of the Euratom Treaty entrust the Community with creating the conditions necessary for speedy establishment and growth of nuclear industries. It is clear that competition rules may result in the prohibition of practices and measures which would favour the development and growth of nuclear industry.[224] In this case to objectives – fare competition and development of nuclear energy sector – collide and the dominant one should be determined on case-by-case basis. As certain researchers[225] notice, it should be kept in mind that general objective without being associated with **any** specific provision should not be considered as sufficient legal ground for inapplicability of EU competition law.

Finally, it should be noticed that although applicability of the EU competition law to the nuclear sector was several times confirmed by the Commission, all of those times the exemption of Article 101(3) was applied.[226] Due to that, in can be stated in practice such statement of application had no impact. Some consider it to be the compromise between the Commission and the participants of nuclear energy market; others state that such exclusions should not be drawn to any conclusions in application of competition provisions in nuclear sector in the future as the exemptions were made on case by case basis. Nevertheless, what can be stated is that in the area of competition

[221] Case COMP/M.1940, *Framatome/Siemens/Cogéma/JV*, O.J. L 289, of 6 November 2001, p. 8-33.
[222] Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1200.
[223] "Products" term here exclude nuclear fuel supplies.
[224] Sousa Ferro, M. "Competition Law and the Nuclear Sector: An EU Outlook", *Nuclear Law Bulletin No. 86(2010)*, p. 16.
[225] Sousa Ferro, M. "Competition Law and the Nuclear Sector: An EU Outlook", *Nuclear Law Bulletin No. 86(2010)*, p. 18.
[226] Commission Decisions in such cases as: Case No. COMP/IV/26.940/a, *United Reprocessors GmbH*, [1975], O.J. L 51, p. 7; Case No. IV/26.940, *KEWA*, [1976], O.J. L51, p. 15; Case No. IV/33/473, *Nuclear Energy Agreement*, [1991], O.J. L 178, p. 31;

law the TFEU and the Euratom Treaty have both their parts to play and the Commission has to analyse certain measures and practices under the provisions of both treaties here.

Conclusions

Due to all that, certain conclusions can be drawn:

1. In the field of competition law the provisions of the Euratom Treaty always prevail over the parallel provisions of the TFEU.

2. The EU competition rules can be applied in cases when the Euratom Treaty does not regulate the question and such application does not contravene with the objectives of the Euratom Treaty; those objectives should be associated with certain provision on the Euratom Treaty.

3. It can be considered that competition rules are applied in these areas of nuclear energy sector: agreements on nuclear equipment, dumping practices (more theoretically) and contracts between producers of nuclear supplies.

2.3.3 State Aid

Although generally regulation on state aid fall under the broad perception of the competition law, due to the specific status of state aids in the Euratom Treaty, I decided to analyse these rules in a separate sub-paragraph. In the beginning I would like to present the general concept of rules regulating state aid under the TFEU and its secondary legal acts, then present specific provisions having elements of state aid regulation in the Euratom Treaty and then analyse the relation between the treaties in this field.

2.3.3.1 State aid rules under the TFEU

Articles 107-109 of the TFEU provide general rules on State aid. According to Article 107, state aid is an aid granted by the Member State or given through state resources which distorts of threaten to distort competition by favouring certain undertakings or production of certain goods. However, certain types of state aids are compatible[227] with internal market while others *may be* considered to be compatible[228]. Essentially, the state aid rules are aimed at ensuring a level playing field for companies in market so that they are able to compete on fair terms and to avoid subsidy races between Member States. The ultimate aim of state aid regime is to avoid distortions to competition and to help create a unified single market by generally preventing Member States from engaging in protectionist behaviour and assisting national undertakings.[229]
The institution controlling existing and new state aid systems is the Commission. According to Article 108 of the TFEU the Member States must inform the Commission of any plans to grant or alter aid. If the Commission decides that aid granted or planned to be granted by a State or through State resources is not compatible with the internal market or that such aid is being misused, it has a right to decide that the State concerned should abolish or alter such aid within certain period of time. However, the Council has an exclusive right to unanimously give exemption to a specific aid due to exceptional circumstances.

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[227] According to Article 107(2) compatible state aid is :
(a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned;
(b) aid to make good the damage caused by natural disasters or exceptional occurrences;
(c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division. Five years after the entry into force of the Treaty of Lisbon, the Council, acting on a proposal from the Commission, may adopt a decision repealing this point.

[228] According to Article 107(3) these state aids may be compatible:
(a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation;
(b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State;
(c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest;
(d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Union to an extent that is contrary to the common interest;
(e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission.

[229] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1246-1247.

In assessing whether an aid measure can be deemed compatible with the common market, the Commission balances the positive impact of the aid measure in reaching an objective of common interest against its potentially negative side effects by distortion of trade an competition. The State Aid Action Plan[230], building on existing practice, has formalised this balancing exercise in what has been termed a "balancing test". It operates in three steps to decide upon the approval of a State aid measure; the first two steps are addressing the positive effects of the State aid and the third is addressing the negative effects and resulting balancing of the positive and negative effects. The steps are[231]:

1. Is the aid measure aimed at a well-defined objective of common interest (growth, employment, cohesion, environment)?

2. Is the aid well designed to deliver the objective of common interest, does the proposed aid address the market failure or other objective?

    a. Is State aid an appropriate policy instrument?
    b. Is there an incentive effect – does the aid change the behaviour of market players?
    c. Is the aid measure proportional – could the same change in behaviour be obtained with less aid?

3. Are the distortions of competition and effect on trade limited, so that overall balance is positive?

The balancing test is applicable to the design of State aid rules as well as for the assessment of cases.

Besides this general regulation, special framework[232] was issued on state aids to research, development and innovation (R&D&I). Originally this exemption was based on the agreement made by the Council in 2002 that overall spending on R&D&I in the Community should be increased with the aim of approaching 3 % of gross domestic product by 2010. To reach this objective, research investment should grow at an average rate of 8 % every year. The aim of this framework is to make it easier for Member States to better target the aid to relevant market failures.

According to this legal framework:

- State aid for R&D&I will be compatible on basis of Article 107(3)(b) and 107(3)(c) if the aid can be expected to lead to additional R&D&I and if the distortion of competition is not considered to be contrary to the common interest if economic efficiency.

[230] State Aid Action Plan. Less and better targeted State aid: a roadmap for State aid reform 2005-2009, 7 June 2005, COM(2005) 107 final, para. 11 and 20.
[231] Commission Community Framework for State Aid for Research and Development and Innovation, 2006/C 323/01, O.J. C 323, 1.3 Introduction , p. 5.
[232] Commission Community Framework for State Aid for Research and Development and Innovation, 2006/C 323/01, O.J. C 323, p. 1-26.

- Public funding of research organisations which carry out an economic activity (activity consisting of offering goods and/or services on a given market) irrespective of its legal status (public or private) will be considered as state aid.

- Public funding of non-economic activities does not fall under the TFEU regulation of state aid. Activities with non-economic character are such as education for more and better skilled human resources, the conduct of independent research and development for more knowledge and better understanding, the dissemination of research results, etc.

- Public funding of economic activities is generally considered to be state aid. However, if the research organisation can prove that totality of the State funding that it received to provide certain services has been past on to the final recipient, and that there is no advantage granted, the research organisation is not considered to be th recipient of State aid.

- Aid for technical feasibility studies which are preparatory to industrial research or experimental development activities are compatible with the common market within the meaning of Article 107(3)(c), provided that intensity of the aid does not exceed certain specified limits.

- The Commission analyses the incentive effect and necessity of aid, as well as its compatibility with common market.

- All Member States must submit annual reports to the Commissions, providing with names of beneficiaries, aid amount per beneficiary, the aid intensity and the sectors of activity where the aided projects are undertaken.

Due to all that, it can be concluded that general state aid regulation under the TFEU establishes a prohibition of state aid that distorts or threatens to distort competition within the internal market. However, state subsidies to the research, development and innovation is one of the exemptions where general rules do not apply.

2.3.3.2 State aid rules under the Euratom Treaty

It is commonly agreed[233] that the Euratom Treaty does not include a general prohibition on subsidies or any other provisions dealing with prevention or regulation of state aid. However, certain provisions of the Euratom Treaty are worth attention here as they have specific state aid features.

Firstly, Article 2 (c) establishes the Euratom Community's objective to facilitate investment and to ensure establishment of basic installations necessary

[233] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1251; Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1201; Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 298.

for development of nuclear energy. As Community's objective can be reached through Member State's actions as well, this generally mean that facilitation of investment and establishment of nuclear installations can be accomplished by Member State which may imply certain financial support as well. Accordingly, it is clear that state aids in this context might be generally possible.
In addition to this, Article 6 (d) of the Euratom Treaty state that in order to encourage the carrying out of research programmes Community may promote joint financing by the Member States, persons or undertakings. This provision even clearer state that certain financial support is allowed for promotion of the research. Consequently, the Euratom Treaty principles provide for a nuclear community that should be *encouraged* and *developed* by the Member States.[234]

Secondly, besides the principles, some substantive provisions of the Euratom Treaty provide possibilities for state aid implementation as well:

1. Chapter IV provides detailed provisions on **investment** in the nuclear energy sector.

   They call for the declaration of the investment projects (Article 41) and enable the Commission to formulate its own point of view (Article 43). These provisions furthermore stipulate that the Commission shall periodically publish guidelines on nuclear production targets and necessary investments (Article 40). The Commission Regulation[235] implementing these provisions state that, among other elements, the financing methods of the investment programme (whether the investment is to be publicly financed or not) must be included in the notification of the investment project to the Commission. This means that generally investment project can be financed by the Member State and this, consequently, may be taken into the account by the Commission in its opinion under Article 43.

2. Chapter V on joint undertakings.

   It also provides certain rules that suggest the possibility of state aid, as setting up joint ventures can be accompanied by subsidies from Member States. According to Article 48 and Annex III, joint undertakings have a right to receive advantages that have clear features of being state aid, such as:
   a. exemption from all duties and charges when joint undertaking is established and from all duties on assets contributed;
   b. exemption from all duties and charges levied upon acquisition of immovable property and from all registration and recording charges;
   c. exemption from all direct taxes to which joint undertakings, their property, assets and revenue might otherwise liable.

[234] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1251.
[235] Point 1.7 of the Appendix of Commission Regulation (Euratom) 1209/2000 of 8 June 2000, O.J. L 138 or 9 June 2000, p. 12.

Even though it might be clear that such measures might be important for joint undertaking as it has a fundamental importance to the development of the nuclear industry (Article 45), the fact that it clearly might fall under the state aid conception, cannot be denied.

3. Chapter I on promotion of research.

   As it was mentioned earlier, provide principle and provisions elaborating it that the Euratom Community has a clear objective to promote and facilitate research in the sector of nuclear energy and certain financial support from Member States might be possible here.

4. Article 70 of Chapter VI on Supplies encourages the **prospection of minerals** by providing government subsidies.

   This regulation has a purpose of ensuring that Member States would sufficiently exploit their mining resources. In this case, it has certain features of state aid as well.

To summarise, it could be said that although the Euratom Treaty does not establish state aids rules explicitly, the analysis of certain provisions show that not only general prohibition of state aid does not exist, there are legal grounds to conclude that in specific cases subsidies form the Member States are encouraged. Due to the fact certain encouragement of state aid in the Euratom Treaty does not really cohere with general prohibition of such aid in the TFEU, the interaction of these treaties should be analysed.

2.3.3.3 The Euratom Treaty and the TFEU interaction in the field of competition law

Following the same logic as in competition law, Article 106a of the Euratom Treaty can be named as the key provision for the interaction analysis. According to the latter article, it is clear that provisions with state aid features of the Euratom Treaty prevail over the rules of the TFEU. It should be noticed, that according to the concept of "regulated question" provided earlier, the conclusion can be drawn here that research and investment (with or without state subsidies) are *regulated* in the Euratom Treaty, due to the quantity and particularity of the provisions of Chapter I and Chapter IV of the Euratom Treaty. Therefore, neither general rules on state aid in the TFEU, nor Community Framework for State Aid for R&D&I may be applied for **research** and **investment** in the nuclear energy sector. Therefore, it must be agreed with a conclusion[236] that, in any case, a general prohibition of state aid in principle does not apply here. Due to that, it seems to be clear that exemption from state aid rules in the nuclear energy should **only** apply to those specific provisions on the Euratom Treaty presented above.

[236] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 298.

Another question, of course, is whether state aid rules could be applied in other fields of nuclear energy. The doctrine states that the principle for the promotion of the nuclear industry across the Community is not entirely open ended[237] and state subsidies, other than those connected to investments or research, such as subsidies for the operation of a nuclear power plant, should not be excluded from EU state aid rules[238]. According to systematic perception of this position and Article 106a of the Euratom Treaty, it seems reasonable to presume that *in theory* other fields of nuclear energy sector fall under the general EU rules on state aid. In order to be sure, the *practice* should be analysed as well.

There was only one ECJ (now Court of Justice of the EU) judgement[239] related to the application of state aid to nuclear energy sector and even the latter one is interpreted differently. The case concerned a challenge to Commission Directive 80/723/CEE on the transparency of financial provisions between Member States and public undertakings. This directive is an important tool in the Commission´s arsenal for enforcing the state aid rules as it ensures that public undertaking of the Member States provide transparent financial reports and accounts, in order to assess whether any State funds have been used to subsidise any economic activities. The French government submitted that in so far as the latter Directive applied to undertakings within the scope of the Euratom Treaty, the Directive should be declared void. In contrast the Commission in its submissions expressed the opinion that "In relation to undertakings in the nuclear sector, it contends that the EAEC Treaty does not contain any provisions on State aids. Consequently, Articles 92 and 93 of the EEC Treaty and hence the directive are applicable to undertakings within that sector, subject to the exceptions expressly provided for in Article 4 of the directive."[240] In its conclusions the Court summarised Article 305 (2) (now 106a (3)) and stated that French government had not established that the provisions of the EU Directive on transparency of financial relations derogate from the provisions of the Euratom Treaty and consequently rejected the French submission.[241] The researchers dissent on interpretation of this judgement. Some[242] state that in this judgement the Court have not rejected the non-applicability of state aid rules in nuclear sector and this question has to be considered as still open pending a future judgement in one direction or the other. Others[243] disagree stating that the Court implicitly accepted the possibility that state aid rules could apply to the nuclear sector and that the Euratom Treaty does not exclude the application of the EU state aid rules per se.

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[237] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1252.
[238] Report by Working group III on "Legal Certainty in International Nuclear Trade", Nuclear Inter Jura 2001, p. 299.
[239] Joined Cases 188 to190/80, *United kingdom, France and Italy v. Commission*, 1982. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61980J0188:EN:PDF>.
[240] Joined Cases 188 to190/80, *United kingdom, France and Italy v. Commission*, 1982. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61980J0188:EN:PDF>, para. 29.
[241] Joined Cases 188 to190/80, *United kingdom, France and Italy v. Commission*, 1982. Available on internet: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61980J0188:EN:PDF>, para. 32.
[242] Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", p. 133, *Common Market Law Review 40: 117-142, 2003.*
[243] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1253.

While the EU Court practice did not give a clear answer to the question of state aid rules applicability in the nuclear energy sector (other than research and investment), the Commission clearly has clearly stated[244] that measures that concern issues covered by the Euratom Treaty have to be assessed accordingly. However, the extent that they are not necessary for or go beyond the objectives of the Euratom Treaty or distort or threaten to distort competition in the internal market, they have to be assessed under the EC Treaty (now the TFEU). Essentially this means that the Commission will apply the state aid rules even to measures taken in line with the objectives of the Euratom Treaty where competition is threatened or distorted.[245] In the British Energy case this position was implemented in practice. The Commission approved[246] two state aids to the rescue and the restructuring of a nuclear operator. As such the aid was not a nuclear investment, but a package to rescue and restructure British Energy, which was in difficulties. The Commission extensively assessed here whether the aid was not going further that what was necessary to that end and in line with the Euratom Treaty objectives. At the same time it was necessary to avoid that the aid would distort competition on the downstream markets for electricity supply, and therefore the aid was allowed under the condition that it would not be diverted for other aims ("ring fencing" of the aid).[247] Nevertheless, it should also be stated that in practice none of the actual state subsidies that were needed in the nuclear sector, were disapproved by the Commission – besides **authorised**[248] under certain conditions state aids, either they were **not** considered to be **state aid**[249] or **no objections**[250] on such subsidies were raised by the Commission. Due to that, it should be agreed with a conclusion "that when a certain subsidy is necessary for the objective of the Euratom Treaty, it will not be prohibited under the EC treaty"[251] (now TFEU).

Conclusions

Due to all that, it can be concluded that:

1. General rules on state aid in the TFEU and Community Framework for State Aid for R&D&I are not applied for **research** and **investment** in the nuclear energy sector.

[244] Case 52/3, *State aid which the United Kingdom is planning to implement for British Energy Plc*, O.J. L 142/26.
[245] Garzaniti L. "Competition Law in the Nuclear Sector", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1257.
[246] Commission Decision of 21 November 2002 (rescue aid) and of 22 September 2004 (restructuring aid), O.J. L 142, of 6 June 2005, p. 26.
[247] Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1202.
[248] State aid was authorised for: UK re-organisation of electricity generation and distribution, see EU Press Release, Commission authorises aid for nuclear electricity sector, IP/90/267, 3 March 1990; Aid in favour of British Energy II was authorised with certain conditions, see Case C52/2003; aid for UK Nuclear Decommissioning Authority was authorised with certain conditions, see Case C 39/2004. These are only example cases.
[249] Not considered to be state aid: German reserves for nuclear power plant, see Commission Press Release, commission decides on reserves for nuclear power plant decommissioning, IP/01/1799, 11 December 2001; Coface guarantee for the building of a Framatome nuclear power plant, see State aid C 45/2006 (ex NN 62/A/2006) – Coface guarantee – construction by Framatome ANP of a nuclear power station for Teollisuuden Voima Oy, O.J. C 23, of 1 February 2007. These are only example cases.
[250] The Commission had no objections: Aid in favour of British Energy I, see Case NN 101/2002; Tax exemptions for Ignalina nuclear power plant, see Case N 337/2005; These are only example cases.
[251] Bouquet A. "Which Competition Rules for Nuclear Energy in a (Progressively) Liberalised European Market Environment?", INLA/AIDN (Ed.) *Nuclear Inter Jura 2007: Proceedings – Actes du Congrès, 1 – 4 Octobre 2007, Bruxelles*, Bruylant Bruxelles 2008, p. 1203.

2. Other fields of nuclear energy sector that are not regulated by the Euratom Treaty fall under the general EU state aid rules.

3. In practice, subsidies that are necessary for the objectives of the Euratom Treaty are not considered to be prohibited under the TFEU.

2.4 Common Energy Policy

After the Lisbon amendments the TFEU now has provisions on energy that were not in the old EC Treaty. Title XXI consists of Article 194 that establishes the Union policy on energy. As the aim nuclear sector is also to produce energy, I decided to devote the last chapter of this research to rather short contemplation on whether nuclear energy could be considered as a part of EU common energy policy and, if answer is positive, what consequences it might bring. I would also like to notice that energy policy is mainly a political question and, due to that, my considerations might differ from political decisions of the reality.

2.4.1 Nuclear energy as a part of common energy policy

As it was mentioned before, the first question is whether nuclear energy belongs to the common energy policy.
In its Communication[252] the Commission states that "the contribution of nuclear energy, which currently generates around one third of EU electricity and two thirds of its carbon-free electricity, must be assessed openly and objectively". In the same document it also states that "Energy policy is also responsible for protecting European citizens from the risks of energy production and transport. The EU must continue to be world leader in developing systems for safe nuclear power, the transport of radioactive substances, as well as the management of nuclear waste". Due to all that it can be considered as quite clear that the Commission understands the nuclear energy as a part of the common energy policy. However, the question could be raised here, how can the EU energy policy established under Article 194 of the TFEU cover nuclear energy production which is exclusively regulated by the Euratom Treaty? Theoretically the answer to this question depends on the general conception of the relation between the treaties. If to understand both treaties as "autonomous, self-contained and exhaustive legal codes"[253], such overlap in the energy policy might seem as infringement of the boundaries of the Euratom Treaty. However, previous chapters of this research have obviously proved that in certain areas there is an active interaction between treaties and, due to the Article 106a of the Euratom Treaty as well, such total "separation" of the treaties could be considered as out of date. In practice, though, the answer is quite simple – there is one energy policy on two legal bases.

2.4.2 Nuclear energy in common energy policy - consequences

Although it is rather clear that nuclear energy belongs to common energy policy of the EU, the determination of consequences of such inclusion should be analysed more detailed.

[252] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Energy 2020. A strategy for competitive, sustainable and secure energy", COM(2010) 639 final, of 10 November 2010.
[253] Cusack, T. "A Tale of two Treaties: an Assessment of the Euratom Treaty in Relation to the EC Treaty", pp. 142, *Common Market Law Review 40: 117-142, 2003.*

Article 194 of the TFEU establishes the main goals of EU energy policy: **security of supply**, **competitiveness** and **sustainability**.
In order to fulfil these goals the Commission has presented[254] five new energy strategy priorities and actions that are needed to take to achieve each of them:

1. Achieving an energy efficient Europe:
    a. Tapping into the biggest energy-saving potential – buildings and transport;
    b. Reinforcing industrial competitiveness by making industry more efficient;
    c. Reinforcing efficiency in energy supply;
    d. Making the most of National Energy Efficiency Action Plans.

2. Building a pan-European integrated energy market:
    a. Timely and accurate implementation of the internal market legislation;
    b. Establishing a blueprint of the European infrastructure for 2020-2030;
    c. Streamlining permit procedures and market rules for infrastructure developments;
    d. Providing the right financing framework.

3. Empowering consumers and achieving the highest level of safety and security:
    a. Making energy policy more consumer-friendly;
    b. Continuous improvement in safety and security.

4. Extending Europe's leadership in energy technology and innovation:
    a. Implementing the Strategic Energy Technology (SET) Plan without delay;
    b. The Commission will be launching four new large-scale European projects;
    c. Ensuring long-term EU technological competitiveness.

5. Strengthening the external dimension of the EU energy market:
    a. Integrating energy markets and regulatory frameworks with our neighbours;
    b. Establishing privileged partnerships with key partners;
    c. Promoting the global role of the EU for a future of low-carbon energy;
    d. Promoting legally binding nuclear-safety, security and non-proliferation standards worldwide.

Analysing these action plans it stands out that certain of these actions are devoted generally to the energy market while others specifically indicate the exact energy sector.
Single specific action plan for improvement of safety and security in nuclear energy states: "The legal framework for nuclear safety and security will be

[254] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Energy 2020. A strategy for competitive, sustainable and secure energy", COM(2010) 639 final, of 10 November 2010.

further enhanced through the mid-term review of the Nuclear Safety Directive, the implementation of the Nuclear Waste Directive, the redefinition of the basic safety standards for the protection of workers and the population and a proposal for a European approach on nuclear liability regimes. Greater harmonisation of plant design and certification at the international level should also be actively pursued. All these measures should allow the EU to keep its leadership in safe nuclear energy and contribute to responsible use of nuclear energy worldwide. ”Due to that, the question is whether the general action plans, such as streamlining permit procedures and making energy policy more consumer-friendly, would apply to the nuclear energy sector or is it just specific demands that should be followed.
Generally the conception of EU policy seems to be associated with political and legal decision to have common actions in certain areas, for example, environmental policy. Under such decision EU secondary legal acts are being issued and the institutions are assuring their application. Due to that, it seems natural that policy can cover the whole area by providing general principles as well as be detailed on specific questions. It implies that general rules are to be complied with either way. Therefore, goals of the common energy policy and general action plans accordingly are to be applied to nuclear energy sector.

However, due to the fact decisions here are rather political and keeping in mind that these action plans of the Commission are directed to necessity of issuing actual legal acts, the role and obligations of nuclear energy sector in the common energy policy should be clearer after these legislative actions.

Conclusions

Due to all that, it should be said that the pattern is clear – even though nuclear energy is based on separate treaty that establishes specific regulation that differs from general EU legislative acts, this sector belongs to the EU common energy policy, which means that it has to follow the goals and comply with obligations set by the EU.

General Conclusions of the Research

Summarising all that has been analysed and concluded after every chapter I would to present general conclusions of this research which hopefully could be used universally in the future:

1. In areas regulated by and under the Euratom Treaty the latter provisions always prevail before the treaties of the EU.

2. Application of the TFEU in the nuclear energy sector is only possible if it does not infringe the objectives and main principles of the Euratom Treaty.

3. There is no tendency of interaction between the Euratom Treaty and the TFEU – specific relation between them depends upon the area.

Summary

Generally regulation under the Euratom Treaty could be divided into two main groups: areas explicitly regulated by the Euratom Treaty (promotion of research and dissemination of knowledge; health and safety; encouragement of investment; supplies; safeguards; the nuclear common market) and areas which are in the competence of the Euratom Community, but are not laid out in the Euratom Treaty (nuclear safety; management of spent fuel and radioactive waste. The Euratom Treaty in comparison with other international treaties and the EU Treaties (TEU and TFEU) has some special features, distinguishing it from all others: special enforcement procedure, stagnant material law and new areas of competence. Perception of their existence is essential in order to understand the secondary legal system based on the Euratom Treaty and to implement Euratom Treaty provisions correctly on the national level. After the Lisbon Treaty amendments, implementation of new provisions in the Euratom Treaty on ordinary legislative procedure and role of national parliaments is considered to be quite problematic.

The interaction between the Euratom Treaty and the TFEU in the specific fields is presented in the table below.

No.	Field	Relation between treaties
1.	Environmental nuclear liability	Compensation and remediation of damage to the environment in case of nuclear incident is not regulated by any of these treaties. If would be in the future, the Euratom Treaty should be the legal ground and the TFEU would not be applied here.
2.	Transport of radioactive substances	The Euratom Treaty and its secondary legal acts mostly regulate the authorising, notification and other similar processes that build grounds for the physical transportation and control the movement of radioactive substances in Europe to be possible, while the TFEU and its secondary legislation focus on the safety of the actual transfer of the radioactive substances from place A to place B.
3.	Free movement of radioactive goods	The nuclear common market and "nuclear" goods is exceptional competence of the Euratom Treaty and provisions of the TFEU are not applicable here. Applicability of the

		TFEU rules to movement of "non-nuclear" radioactive goods under the Euratom Treaty depends on the **purpose of usage** of the latter goods. If the objective purpose of activity that includes "non-nuclear" radioactive goods is related to the market, then the TFEU rules should be applied. However, if goods are used in other activities not related to the market, the TFEU rules and secondary legal acts cannot be applied.
4.	Competition law	In the field of competition law the provisions of the Euratom Treaty always prevail over the parallel provisions of the TFEU. The EU competition rules can be applied in cases when the Euratom Treaty does not regulate the question and such application does not contravene with the objectives of the Euratom Treaty.
5.	State aid in nuclear sector	General rules on state aid in the TFEU and Community Framework for State Aid for R&D&I are not applied for research and investment in the nuclear energy sector. Other fields of nuclear energy sector that are not regulated by the Euratom Treaty fall under the general EU state aid rules.
6.	Common energy policy	Nuclear energy belongs to the EU common energy policy, which means that it has to follow the goals and comply with obligations set by the EU.

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The Swedish Radiation Safety Authority has a comprehensive responsibility to ensure that society is safe from the effects of radiation. The Authority works to achieve radiation safety in a number of areas: nuclear power, medical care as well as commercial products and services. The Authority also works to achieve protection from natural radiation and to increase the level of radiation safety internationally.

The Swedish Radiation Safety Authority works proactively and preventively to protect people and the environment from the harmful effects of radiation, now and in the future. The Authority issues regulations and supervises compliance, while also supporting research, providing training and information, and issuing advice. Often, activities involving radiation require licences issued by the Authority. The Swedish Radiation Safety Authority maintains emergency preparedness around the clock with the aim of limiting the aftermath of radiation accidents and the unintentional spreading of radioactive substances. The Authority participates in international co-operation in order to promote radiation safety and finances projects aiming to raise the level of radiation safety in certain Eastern European countries.

The Authority reports to the Ministry of the Environment and has around 270 employees with competencies in the fields of engineering, natural and behavioural sciences, law, economics and communications. We have received quality, environmental and working environment certification.

Strålsäkerhetsmyndigheten
Swedish Radiation Safety Authority

SE-171 16 Stockholm
Solna strandväg 96

Tel: +46 8 799 40 00
Fax: +46 8 799 40 10

E-mail: registrator@ssm.se
Web: stralsakerhetsmyndigheten.se