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THE IMPLEMENTATION OF THE KYOTO TARGETS IN LITHUANIA FROM A PERSPECTIVE OF MULTI-LEVEL GOVERNANCE

MYKOLAS ROMERIS UNIVERSITY

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LIST OF ABBREVATIONS

BAT	Best Available Technique
CEPS	The Centre for European Policy Studies
COP	Conference of the Parties to the UNFCCC
CDM	Clean Development Mechanism
DG CLIMA	Directorate-General for Climate Action of the European Commission
EU	European Union
EPI	Environmental Policy Integration
EU ETS	Emission Trading System in the European Union
GHG	Greenhouse Gas
JI	Joint Implementation Mechanism
MLG	Multi-level Governance
NAS	National Adaptation Strategy
NAP I	National Allocation Plan for 2005-2007
NAP II	National Allocation Plan for 2008-2012
NERIs	New Environment Policy Instruments
OECD	Organization for Economic Cooperation and Development
REPD	Regional Environmental Protection Departments under the Ministry of Environment of the Republic of Lithuania
UNFCCC	The United Nations Framework Convention on Climate Change

INTRODUCTION

Background

Climate change, together with its possible negative outcomes for nature and humanity, has been widely recognized by scientists – and followed by global political actions. The United Nations Convention on Climate Change (1992; hereinafter - UNFCCC) was followed by the Kyoto protocol (1997). The issue of how to deal with climate change is now of significant importance, especially when the close of the first Kyoto period is approaching[1].

International agreements such as the UNFCCC and the Kyoto protocol are implemented at state-level, through legal rules and legislation. In order to understand these implementation processes, I have chosen to use theories Multi-level governance and Sociology of Law. This allows me to work both with the internal legal perspective and with external sciences such as political science, governance and sociology. Climate science needs to take a multidisciplinary approach towards research and studies – because of the variety of disciplines which are involved in the research of climate change regulations. This doctoral dissertation will analyze the implementation of legal rules regarding GHG emission reductions, with specific reference to the industrial sector in Lithuania. Lithuania is one of the member states of the European Union. It ratified the UNFCCC in 1995 – and the Kyoto protocol in 2002. With this Lithuania committed to reduce GHG emissions by 8 % compared with 1990, by 2012.

Topical events in the international arena

The ambitious aim to have a new agreement in place failed during the COP15/CMP5[2] sessions in Copenhagen in 2009. Participating countries could not agree on further obligations and ways to solve the problem of climate change in a suitable manner for all Parties[3]. According to the Kyoto protocol, firstly 37 industrialized countries and the European Community ought to take domestic actions against climate change and fulfil international commitments. Secondly, by the Kyoto protocol countries were provided with other possibilities to reduce GHG emissions outside their territories. This possibility is given by participating in flexible mechanisms of the Kyoto protocol (so called "market based mechanisms") and making emission reductions abroad.

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1 The Kyoto protocol, a legally binding agreement to reduce GHG in the world, entered into force in 2005. Targets to reduce GHG emissions during the period of 2008-2012 were set to developed countries and countries, which were undergoing the process of transition to a market economy (Annex B of the Protocol). It is not clear yet what is the future of this international agreement after 2012.

2 Conference of the Parties (COP) to the UNFCCC; Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP).

3 The Kyoto protocol has been ratified by 192 Parties and one 1 regional economic integration organization, 37 industrialized states and the European Community have pledged themselves to reduce their emissions by 5 percent by 2012 against 1990 levels.

Yvo de Boer, Executive Secretary of the UNFCCC, made an official statement after the Copenhagen sessions. He noted that in spite of the fact that a new agreement had not been signed, but "an accord has been reached that has significant elements"[4]. According to the UNFCCC, the negotiations in Copenhagen were important as they "raised climate change to the highest level of government"[5]. The accord also shows a political consensus on a long-term global response of mitigation and adaptation to climate change. Besides, a full set of decisions has been made to finalize the implementation of climate change action[6].

Further negotiations in Cancun in 2010 were more fruitful than expected. One of the significant points of the key agreements was that it was agreed in a mutually accountable way to reduce GHG emissions "with national plans captured formally at international level"[7]. In addition, a comprehensive package was agreed by Governments in order to help developing nations to deal with the climate change[8].

However Christiana Figueres, Executive Secretary of the UNFCCC, considering achievements accomplished in Copenhagen (the Copenhagen accord in particular) – defined GHG reductions and also emphasized that reductions need "to be implemented as fast as possible, and that this needs to be accompanied by credible accountability systems that will help in measuring real progress"[9].

The official report of the UNFCCC estimates that if all expected targets and actions would be fully implemented, "they could deliver only 60 percent of the emission reductions that science says will be needed to stay below the agreed two degree rise in average temperatures"[10]. Yet even if the 2 degrees target will be reached, this does not assure the survival of the most vulnerable people. According to Figueres statement, "Tuvalu, Maldives, Kiribati, Vanuatu are looking for ways to evacuate their entire population because of salt water intrusion and rising sea levels"[11]. Hence political agreements appear still to not be sufficient enough.

The aim of the research

Nevertheless, existing international climate change agreements and the European Union legislation are likely to influence different levels of governance, including national legal systems and administrative schemes that receive mandates from the govern-

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4 Official conclusions of the UNFCCC after COP15/CMP5 in Copenhagen. *UNFCCC* [interactive] Available at: http://www.unfccc.int, accessed online: January 10, 2010

5 Ibid.

6 Ibid.

7 UNFCCC statement on significance of the key agreements reached in Cancun. *UNFCCC* [interactive]. Available at: http://cancun.unfccc.int/cancun-agreements/significance-of-the-key-agreements-reached-at-cancun/#c45; accessed online: May 2, 2011.

8 Ibid.

9 Official conclusions of the UNFCCC after COP16/CMP6 in Cancun. *UNFCCC* [interactive]. Available at: http://unfccc.int, accessed online: April 10, 2011

10 Ibid.

11 Statement at the high-level segment by Christiana Figueres, Executive Secretary, UNFCCC during COP16/CMP6 in Cancun, 7 December 2010

ment to implement certain rules. The IPCC[12] fourth assessment report (AR4) describes implementation as:

> The actions taken to meet commitments under a treaty and encompasses legal and effective phases. Legal implementation refers to legislation, regulations, judicial decrees, including other actions such as efforts to administer progress which governments take to translate international accords into domestic law and policy. Effective implementation needs policies and programmes that induce changes in the behaviour and decisions of target groups. Target groups then take effective measures of mitigation and adaptation[13].

Implementing international requirements and objectives at state level, is a difficult task placed on governments. Governments need to develop strategies for implementation, suitable to their own particular contexts. What sectors and levels are affected and how should they be discussed, as well as what response will be triggered?

The implementation of legal rules – and its impact on society – is one of the research issues of sociology of law. Research has been done on implementation from different aspects by Åström (1998, 2005), Hydén (2006), Svensson (2008), Svensson, Larsson (2009), Wickenberg (1998), Alkan Olsson J., Alkan Olsson I. (2008) and others. Policy implementation in Lithuania has been studied by Vilpišauskas, Nakrošis (2003, 2004), Maniokas (2004) and other scholars.

According to my view, the implementation of climate change regulations is done through a hierarchical top-down and regulated implementation of legal rules and associated actors involved at different levels. Hierarchical order represents the implementation chain which consists of the international level (the UNFCCC and the European Union), the state (Lithuania), sub-state (administrative bodies) and industry, which have to apply the legal rules in their activities[14]. This is a formal structure of implementation. Another parallel structure of implementation, related to reality in society, is more complex. Climate change regulations likely course impacts and response to legal rules. Sociology of law perspective makes it possible to relate top-down implementation of legal rules to society. It also shows how implementation of legal rules sometimes works from a bottom-up process.

It would be an input to sociology of law as well as to administration and management if the implementation of climate change regulations is analyzed from a Multi-level governance perspective which describes the dispersion of authoritative decision making

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[12] The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change. IPCC was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in order to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. (Organisation. IPCC [interactive]. Available at http://www.ipcc.ch/organization/organization.shtml; accessed online: April 10, 2011).

[13] IPCC, 2007. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R. K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland. P. 82.

[14] This implementation chain is adopted from Hydén's implementation chain, presented in *Implementation of International Conventions As a Socio-legal Enterprise: Examples from the Convention on the Rights of the Child (2006).*

across multiple territorial levels[15]. The aim of the research is to improve the understanding of policy implementation through Multi-level governance regarding regulations with requirements for GHG reductions.

Research question and sub-research topics

In order to meet the research aim, the main research question raised is:

How does Lithuania, specifically the industrial sector, implement GHG reduction requirements under the Kyoto protocol and the European Union regulations?

The research is done through empirical studies in three main companies of energy industry and one company of fertilizers industry. These are some of the industries which are involved in the obligatory participation in GHG emission trading system[16] (EU ETS) and account for nearly largest GHG emissions.

Lithuania became a part of the European Union in 2004. Since then laws and regulations in the state have to be harmonized with the EU's acquis communautaire. With this, a vertical perspective of implementation emerges – and it is considered that "politics and policy-making in the EU have to be regarded as multilevel governance"[17].

The European Union has become one of the leading players to address climate change problems. EU policies and regulations regarding climate change are more ambitious than obligations under the Kyoto protocol. Nevertheless, the fulfilment of obligations to reduce GHG emissions of the industrial sector, participating in the EU ETS, looks as successful implementation at present[18]. However what is success in this case? What lies deeper under official numbers of achieved GHG reductions in the industrial sector?

To understand this, the research will be carried out through a multidisciplinary approach to sociology of law, multi-level governance and public administration. This is a thorough approach to comprehend the context in which norms on different levels of implementation arise. Hence there is a formal structure of implementation of legal rules (regulations) and reality, or in other words – "law and society". To reveal this approach and elaborate on the main research question, the following sub-research topics are explored:

1. description and analysis of legal frameworks regarding reductions of GHG emission and how they are related to each other;

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15 Bache, I. Domestic Level Theories, in *Encyclopedia of Governance [Elektronisk Resurs]*, ed. Bevir, M. Thousand Oaks, Calif. : Sage Publications, 2006.

16 Emission Trading System in the European Union (EU ETS) was launched with the Directive 2003/87/EC of the European Parliament and of The Council *on establishing a scheme for greenhouse gass emission allowance trading within the Community* and further amendents afterwards. The EU ETS estimates sectors which activities are regulated regarding reductions of GHG emissions.

17 Benz, A. Zimmer, C. The EU's Competences: The 'Vertical' Perspective on the Multilevel System. *Living Reviews in European Governance.* 2008, 3(3). P. 1

18 No cases of incompliance of industry's activity according to the annual EU ETS reports have been identified so far.

2. evaluation of the most dominant driving forces and norms affecting actors on each level of implementation;
3. responses on policy implementation from the industrial sector.

Thesis outline

The thesis will consist of an introduction and six main parts. The first part will reveal theoretical considerations on policy implementation perspectives and multi-level governance. Implementation from a policy / administration outlook, as well as transposition of the European Law approach, will be considered. The first part will also examine the implementation of climate change regulations.

The second (methodology) part will disclose the scheme of how empirical data will be analyzed. The following empirical data are considered: EU directives; national laws; official reports on implementation of requirements regarding GHG emission reductions; and other related documents. Semi-structured interviews are the second part of empirical data for analysis. This part will elaborate on the studies that were carried out during the research.

The third and fourth parts are related with presenting empirical data. The third part will present the legal frameworks and distribution of power regarding GHG emission reductions. Distribution of tasks and spheres of competences among arenas will be elaborated – mandates and institutions will be distinguished.

The fourth part will present empirical data from interviews in three arenas in Lithuania: national, administrative and industrial. Five categories are formed when identifying themes during the interviews: a small state (1); knowledge (2); threat of losing production (3); means of compliance (4) and standard of living and priorities (5).

The fifth part will present an analysis of data and research findings.

The sixth part aims to provide answers to the research question and research subtopics, as well as to present possible suggestions and the future outlook for Lithuania.

1. THEORETICAL CONSIDERATIONS: MULTI-LEVEL GOVERNANCE AND IMPLEMENTATION PERSPECTIVES

This part will cover theoretical considerations on several disciplines which are linked in the doctoral dissertation. Firstly, theoretical considerations on multi-level governance theory, its approaches and research perspectives are presented that covers related sub disciplines and policy areas. To get a thorough understanding of shifts in governance, it should be described in "much stronger multidisciplinary orientation embracing politics, law, public administration, economics <…> as well as sociology, geography and history"[19]. Hence secondly, implementation from policy and administration perspectives is described. Thirdly, implementation of the European Union law is assessed. Fourthly, environmental policy and multi-level governance is described as well as relevant issued of climate change. The final focus is on multi-level governance, implementation and sociology of law.

1.1. Theoretical Considerations on Multi-level Governance

Multi-level governance (hereinafter – MLG) can be considered as the new governance, especially referring to the European Union (hereinafter – the EU). The EU gives a proper example of MLG where MLG represents hierarchical structure and its vertical and horizontal cohesion with structures inside the EU and with its Member States[20].

Although succession dependency of distribution of vertical mandates and obligations between structures do exist, which I refer to when doing empirical study in the dissertation, there are also "growing uncertainties over frontiers between levels and entities of governments"[21], which politics is interested in. These growing uncertainties are linked to "public problems associated with the regulation of increasingly interdependent economies and also institutional solutions"[22] which are set to deal with them. Smith refers to decentralization in France[23], devolution in the United

[19] Van Karsbergen, K., Van Waarden, F. Governance' as a Bridge between Disciplines: Cross-Disciplinary Inspiration Regarding Shifts in Governance and Problems of Governability, Accountability and Legitimacy. *European Journal of Political Research.* 2004, 43(2). P. 143.

[20] Cf Marks, G. et al (1996), Bache, I. (2006), Bache, I., Flinders, M. (eds., 2010), Boras, S. (2006), Benz, A., Zimmer, C. (2008, 2010).

[21] Smith, A. Multi-Level Governance: What It Is and How It Can Be Studied, in *Handbook of Public Administration: E Book*, ed. Peters, B. G. and Pierre, J. London: Sage Publications, 2009; cf Book Reviews. *Governance.* 2004, 17(2).

[22] Ibid.

[23] Examined by explaining power relations between the central government of the state and a series of medium-sized towns, as quoted by Smith in Multi-Level Governance: What It Is and How It Can Be Studied. France case also reveals emphasis on "the relationship between representatives of local areas <…> and those of external power sources" (Ibid.), such as ministers, prefects and civil servants. Hense the term "centre-periphery" emerged which itself and its relations with the state became a focus of studies about single-countries and also comparative studies. In North America those relations were studied as intergovernmental relations (Ibid.).

Kingdom[24], etc. The author highlights "power-sharing" between levels of government with "no centre of accumulated authority"[25].

Boras (2006) defines the governance approach in EU studies, emphasizing that the object of study "is not the process of integration as such, but mainly the problems and questions that arise about how this new type of political system operates"[26]. MLG is one of the approaches that European integration can be analyzed from. Bomberg, Peterson and Stubb (2008) distinguish the following theoretical approaches to an analysis of European integration. These are neofunctionalism, liberal inter-governmentalism, new institutionalism, policy networks and social constructivism[27]. Boras stresses issues that are "associated with effectiveness, legitimacy and sustainability of the collective political action undertaken in this new political order"[28]. Some new modes of governance raise theoretical debates, focused on their problem-solving capacity and effectiveness. Effectiveness in this case is related "with a shadow of hierarchy"[29].

Multi-level governance, as Bache states, "describes the dispersion of authoritative decision making across multiple territorial levels. It emerged to explain the changing nature of the European Union"[30] and especially "the changing relations between supranational, national and sub national actors"[31]. Horizontal relations and interdependence between governments and nongovernmental actors are emphasized. Bomberg, Peterson and Stubb (2008) describe the EU and MLG as "a system in which power is shared between supranational, national, and sub national levels"[32]. They also suggest, that "there is a fair bit of interaction and coordination of political actors across those levels"[33].

Relating the EU and new governance, according to Hix, "the EU is transforming politics and government at the European and national levels into a system of multi-level, non-hierarchical, deliberative and apolitical governance"[34]. Stating that, Hix does not see the EU governance system as hierarchical. Still, referring to the increasing influence of supranational elements and changing processes in government and politics, the multilevel dimension is valued in order to show the increasing importance of vertical interactions[35].

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[24] The Westminster model was relatively simple hierachical model with a clear location of authority and responsibility. "The starting point was centralized state in which parliament was sovereign" (Bache, I. Domestic Level Theories. 2006).

[25] Hooghe, L. (1998), as quoted by Smith, A. Multi-Level Governance: What It Is and How It Can Be Studied. 2009.

[26] Boras, S. Governance, in *Encyclopedia of Governance [Elektronisk Resurs]*, ed. Bevir, M. Thousand Oaks: Sage Publications, 2006.

[27] Bomberg, E., Peterson, J. and Stubb, A. *The European Union : How Does It Work?* The New European Union Series, 99-3272170-0. Oxford: Oxford University Press, 2008. P. 14.

[28] Boras, S. Governance. 2006.

[29] Ibid.

[30] Bache, I. Domestic Level Theories. 2006.

[31] Ibid.

[32] Bomberg, A., Peterson, J. and Stubb, A. *The European Union : How Does It Work?* 2008. P. 10.

[33] Ibid.

[34] As quoted by Nugent, N. *The Government and Politics of the European Union*. The European Union Series Basingstoke: Palgrave Macmillan, 2006. P. 556.

[35] Bache, I. Domestic Level Theories. 2006.

Scholars that refer to the European Union as system of MLG, usually set themselves against the state-centric model. It is not denied that national governments play an important role, however here they appear to be not the dominant ones and do not control the decision-making processes[36]. Marks, Hooghe and Black (1996) take "initial steps in evaluating contending models of EU governance"[37]. Their argument is that individual states loose their sovereignty in the EU arena because of supranational institutions and collective decision making. The authors disclose that "the separation between domestic and international politics, which lies at the heart of the state-centristic model, is rejected by the multi-level governance model"[38]. Following the scheme presented by Marks, Hooghe and Black, Nugent summarizes three main characteristic of the MLG model of the EU:

- Decision-making competences are deemed to lie with, and to be exercised by, not only national governments but also institutions and actors at other levels. The most important of these levels is the EU level, where supranational actors <…> are identified as exercising an independed influence on policy processes" <…>
- Collective decision-making by states at the EU level is regarded as involving a significant loss of national sovereignty, and therefore a significant loss of control by national governments <…>
- Political arenas are viewed as interconnected rather than nested. So, rather than national political activity being confined to the national arena and national inputs into EU decision-making being channelled via state-level actors, a variety of channels and interconnections between different levels of government – supranational, national, and sub national – are seen as both existing and being important"[39].

According to Rhodes, the concept of governance is as self-organizing inter-government networks[40]. Governance is characterized by "interdependence between organizations <…>, interactions between network members <…>, game-like interactions <…> and a significant degree of autonomy from the state"[41]. Local governance, according to Smith, is described by "power relations between actors of public, private and associative status"[42]. Hence non-public actors are included in the governance research. Smiths states that research on multi-level politics involves institutionalization and legitimation. He argues that MLG presents two sets of challenges for public administrators. They are related with "the respective role of politicians and civil servants in the steering of public policies within multilevel regimes" and "the management of interfaces between levels of government and the multitude of organizations"[43]. According to Švarpys and Matulionis (2009), European institutions gain power for political initiatives and influence institutions in the Member states. The authors refer to new theories that emphasize institutional, multi-level and constructive governance of the EU[44].

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36 Nugent, N. *The Government and Politics of the European Union*. P. 556.

37 Marks, G., Hooghe, L. and Blank, K. European Integration from the 1980s: State-Centric V. Multi-Level Governance. *Journal of Common Markets Studies.* 1996, 34(3). P. 342.

38 As quoted by Nugent, N. The Government and Politics of the European Union. 2006. P. 556.

39 Ibid., P. 556-557.

40 As quoted by Smith, A. Multi-Level Governance: What It Is and How It Can Be Studied. 2009.

41 Ibid.

42 Ibid.

43 Ibid.

44 Švarplys, A., Malutionis, A. V. Konceptuali kaita Europos integracijos teorijose. *Filosofija. Sociologija.* 2009, 2(20). P. 110.

From public management perspective, institutions are state or local government 'establishments'[45] that are important for shaping and determining government preferences[46]. Institutionalization is "implanting" a rule, concept or value.

There are two branches of institutionalization and new institutionalism in particular, historical and sociological[47]. Steinmo and Thelen (1992) predicate that "institutions are a range of 'state and societal' rules 'that shape how political actors define their interests and structure their relationships of power to other groups"[48]. Institutions "at the policy-specific level are the laws, norms and informal practices which structure the regulation of economic and/or administrative sector"[49]. At the regime level, institutions are "more centered upon the mechanisms that connect its component parts to one another in a configuration of actors and processes that are specific in a particular arena"[50]. M. Dugger reviews Douglass C. North's new institutionalism and states, that North "changed some of the neoclassical assumptions about economic rationality and emphasized the importance of transaction cost minimization"[51]. North in his study "Institutions, institutional change and economic performance" examines "the nature of institutions and the consequences of institutions for economic (or societal) performance"[52]. He outlines a theory of institutional change and explains "how past influences the present and future"[53]. North states that performance of economies is determined by institutions. The author raises a question about efficient institutions – what creates them? Concluding he proposes that "we need to know much more about culturally derived norms of behaviour and how they interact with formal rules"[54] to get a better answer on the efficiency of institutions.

A critical analysis of public agencies' collaboration is presented by Johansson in the study "Law, power and institutional change"[55]. The author states that: "the power perspectives, combined with the institutional perspectives, helps to illustrate the interactions between actor and structure, and between conscious and unconscious as well as clear and diffuse power effects of collaboration"[56].

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45 Puškorius, S. *Viešojo sektoriaus institucijų administravimas.* Vilnius: Lietuvos teisės universiteto Leidybos centras, 2002. P. 143. [Administration of Public Sector Institutions; own translation].

46 Bomberg, A., Peterson, J. and Stubb, A. *The European Union: How Does It Work?* 2008. P. 12.

47 Cf Tumėnas, A. Valstybinių organizacijų reformų ir pokyčių teorinė analizė: daktaro dis.soc. mokslai: vadyba ir administravimas (03S)/MRU, Vilnius, 2010. P. 125-129 [Theoretical Analysis of Changes and Reforms of State Organisations. Doctoral Dissertation, MRU; own translation].

48 As quoted by Smith, A. Multi-Level Governance: What It Is and How It Can Be Studied. 2009.

49 Ibid.

50 Ibid.

51 M. Dugger, W. Douglass. C. North's New Institutionalism. *Journal of Economical Issues.* 1995, XXIX (No. 2). P. 453.

52 North, D. C. *Institutions, Institutional Change, and Economic Performance. The Political Economy of Institutions and Decisions*. 99-0675626-8 Cambridge: Cambridge University Press, 1990. P. 3.

53 Ibid.

54 Ibid., P. 140.

55 Barnahus district in Malmo, Sweden is studied.

56 Johansson, S. Rätt, Makt Och Institutionell Förändring. En Kritisk Analys Av Myndigheters Samverkan I Barnahus. Doctoral Dissertation. Lund University, 2011. P. 227 [Law, Power and Institutional Change. A Critical Analysis of Public Agencies' Collaboration in Barnahus].

In order to understand the effectiveness of EU institutional change, its' impact on economic structures, as well as norms of behaviour have to be considered. In the EU context "institutionalism demonstrates how the EU's common institutions (Commission, Council, Parliament or Court) are more important arbiters in the policy-making process: they are key players with their own agendas and priorities"[57].

The concept of MLG was greatly developed in 1992 by Marks in order "to capture developments in the EU structural policy following its major reform in 1988".[58] As MLG implies a separation between international and domestic politics[59], it involves international relations and public policy, also multi-level interactions, when a dialogue between levels (domestic and the EU) has to emerge. Because of that national political (and jurisdiction) systems are affected greatly.

MLG theory describes the relationships between actors on different territorial levels. The theory comes from the EU policy and implies "continuous negotiation among nested governments at several territorial tiers"[60]. With this supranational, national and local governments (actors) are distinguished which present issues of role, power and authority of the states.

Although MLG implies a broad scope of policy areas and the manner they are developed, it does not involve a sociology of law aspect, which is important for explaining policy implementation on different levels and barriers that may occur during the process. The MLG theory distinguishes the EU level (EU institutions), national level (states) and regional. One of the criticisms of the theory as well as problems is related to the notion (understanding) of those levels, as mentioned at the beginning of this chapter.

Bache and Flinders (2004) introduce a variety of approaches of MLG. The authors state that before Marks, who applied a multi-level governance analysis to decision making in the EU, "most of the theorizing about the EU had been dominated by approaches derived from the study of international relationships (IR)"[61]. From IR and its tradition of pluralism, *neofunctionalism* was developed (Haas (1958) and Lindberg (1963), whereas state-centered realism was applied in *intergovernmentalism* (Hoffmann (1964, 1966). Before the "new wave" of thinking[62], the concern of nature and motion of European integration was explained by those theorists[63].

> Intergovernmentalists emphasized the centrality of states in the process, developing the concept of governments as "gatekeepers" able to resist unwanted consequences of integration. Neofunctionalists claimed that governments were increasingly caught up in the web of interdependence that provided a role for supranational actors and organized interests in shaping integration. The development of multi-level governance was a part of a new wave of thinking about the EU as a political system rather than seeing to explain the process of integration[64].

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57 Bomberg, A., Peterson, J. and Stubb, A. *The European Union: How Does It Work?* 2008. P. 12.

58 Bache, I., Flinders, M. V., eds., *Multi-Level Governanc*e. Oxford: Oxford University Press, 2010. P. 1.

59 Ibid.

60 Marks, G. Structural Policy and Multilevel Governance in the EC. In *The State of the European Community - the Maastricht Debates and Beyond*, edited by Cafruny, A. W., Rosenthal, G. G. Longman, 1993.

61 Bache, I., Flinders, M. Themes and Issues in Multi-Level Governance. In *Multi-Level Governance*, ed. Bache, I., Flinders, M. Oxford Scholarship Online: April 2004, P. 1.

62 The Single European Act accelerated the process of integration, the states agreed with this act in 1987.

63 As quoted by Bache, I., Flinders, M. Themes and Issues in Multi-Level Governance. 2004. P. 1.

64 Ibid., P. 1.

Analyzing a major reform in structural policy of the EU, which took place in 1988, Marks referred to the support to the poorer states. With the support and additional allocations, additional funding were allocated for the member states which had to be "administered through partnerships established within member states, consisting of representatives of national, regional (and/local), and supranational actors (namely, the Commission)"[65]. Hence the study of developments of structural policy was developed into a concept of multi-level governance by Marks (1992, 1993),[66] although present studies scrutinize the concept in other different policies such as Environmental, EU regional, Economic policies. However multi-level governance supported the view of neofunctionalism that "supranational actors and interest groups were significant in shaping EC decisions"[67]. Hence sub national and supranational organizations and political power are investigated by scholars of politics and government. With this related state power and its challenges, increasing influence of non-state actors and proliferating jurisdiction have influence on multi-level governance. According to *Hooghe and Marks*, "most important is the claim that governance must operate at multiple scales in order to capture variations in the territorial reach of policy externalities". They also argue that:

> Understanding of the dynamics of authoritative decision making requires a broader focus that distribution of policy and fiscal responsibilities between jurisdictions. In most cases, it is necessary to consider how different jurisdictions interact with each other. This requires a focus on both formal and informal institutions to explain whether hierarchy, interdependence, or relative independence characterizes relationships[68].

Hooghe and Marks in *Contrasting visions of Multi-level Governance (2004)* argue that "formal authority has been dispersed from central states both up to supranational institutions and down to regional and local governments"[69]. According to Garman et al. (2005*),* most of the developing countries have been undergoing decentralization of authority in one way or another[70]. The region of European Union is not an exception. Hooghe and Marks in *Unraveling the Central State, But How?* aim to answer the question of "how authority should be organized in a European Union, composed (after 2004) of 25 member states"[71]. With this the authors distinguish two types of multi-level governance. Type I is determined as having general-purpose jurisdictions, non-interesting memberships, jurisdictions at a limited number of levels and system-wide jurisdiction. Type II is characterized by task-specific jurisdiction, intersecting membership, no limit to the number of jurisdictional levels and flexible design[72].

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65 Ibid., P. 3.

66 Ibid.

67 Ibid.

68 Ibid., P. 5.

69 Marks, G. Hooghe, L. Contrasting Visions of Multi-Level Governance, In *Multi-Level Governance*, ed. Bache, I., Flinders, M. 2004. P. 15.

70 As quoted by Marks, G. Hooghe, L., Ibid.

71 Liesbet, H. Gary, M. Unraveling the Central State, but How? Types of Multi-Level Governance. *American Political Science Review.* 2003, 97(2). P. 1

72 Marks, G., Hooghe, L. Contrasting Visions of Multi-Level Governance. In *Multi-Level Governance*, ed. Bache, I., Flinders, M. 2004. P. 17.

Table 1. Types of Multi-Level Governance

Type I	Type II
General-purpose jurisdictions	Task-specific jurisdictions
Non-intersecting memberships	Intersecting memberships
Jurisdictions at a limited number of levels	No limit to the number of jurisdictional levels
System-wide architecture	Flexible design

Source: Hooghe, G., Marks, L.[73]

Concluding the authors state that:

> The main benefit of multi-level governance lies in its scale flexibility. Multi-level governance allows jurisdictions to be custom-designed in response to externalities, economies of scale, ecological niches, and preferences. Both Type I and Type II multi-level governance deliver scale flexibility. <…> Type I multi-level governance does so by creating general-purpose jurisdictions with non-intersecting memberships. Jurisdictions at lower tiers are nested neatly into higher ones. Type II multi-level governance, by contrast, consists of special –purpose jurisdictions that tailor membership, rules of operation, and functions to a particular policy problems[74].

Rosenau in *Strong Demand, Huge Supply: Governance in an Emerging Epoch* argues that governance consists of rule systems that are "steering mechanisms through which authority is exercised in order to enable the governed to preserve their coherence and move toward desired goals"[75] The author introduces a critique of MLG, namely that "the notion of multilevel governmental hierarchies and explicitly posits the various levels as vertically structured in layers of authority <…> Put differently, many of the demands for governance involve an insistence on autonomy that may or may not be operative within hierarchical structures"[76].

However Borzel in *European Governance: Negotiation and Competition in the Shadow of Hierarchy* argues that „the nature of the EU beast is neither unique nor captured by a particular type of governance. <…> the EU features a combination of different forms of governance that cover the entire range between market and hierarchy"[77]. The author describes the governance mix in the EU and shows that the EU depends on hierarchy when making its policies - the EU supranational institutions allow "the adaptation and enforcement of legally binding decisions without the consent of (individual) Member States"[78]. Borzel asserts that it is public actors who formulate and implement EU policies – further stating that political competition plays a role in European governance.

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[73] Marks, G., Hooghe, L. Unraveling the Central State, but How? Types of Multi-Level Governance. *American Political Science Review*. 2003, 97(2). P. 236.

[74] Marks, G., Hooghe, L. Contrasting Visions of Multi-Level Governance. In *Multi-Level Governance*, ed. Bache, I., Flinders, M. 2004. P. 29.

[75] Bache, I., Flinders, M., eds. Multi-Level Governance. P. 6.

[76] Rosenau, J. Strong Demand, Huge Supply: Governance in an Emerging Epoch. In *Multi-Level Governance*, ed. Bache, I., Flinders, M. Oxford: Oxford University Press, 2004. P. 39.

[77] Borzel, T. European Governance: Negotiation and Competition in the Shadow of Hierarchy. *JCMS: Journal of Common Market Studies.* 2010, 48(2). P. 191.

[78] Ibid.

Lunding (2007) in his research "The Conditions for Multi-level Governance" raises the question "How can the central state direct local public units to work effectively towards public sector goals?"[79] The author states that political systems comprise several tiers of government and there is no reason to expect that a certain geographical entity would be appropriate for all public concerns. However the author accepts that bureaucratic machinations at all levels are involved at the same time when they implement political ideas at the local level. The research is focused on the policy of active labor market (ALMP) in Sweden[80]. Conclusions of the study reveal that:

> Left wing local governments are more involved in local activities than right-wing ones, but only in large local entities; <…> cooperation increases if actors trust one another and have similar goals – but both factors must exist simultaneously. Another factor that boosts cooperation is resource independence; <…> cooperation only improves the implementation of complex tasks[81].

H. Bulkeley et al. (2003) undertook research on environmental governance and transnational municipal networks in Europe. The authors state that "the nature of environmental governance within Europe is increasingly considered to be multilevel – involving actors and institutions at local, national and international levels – and from the public, private and civil societal spheres"[82]. They stress that political power and institutional capability depends on capability to use and coordinate resources from public and private actors and interests, over and above formal constitutional powers received from the state.

Type I and Type II multi-level governance are presented by the authors as follows:

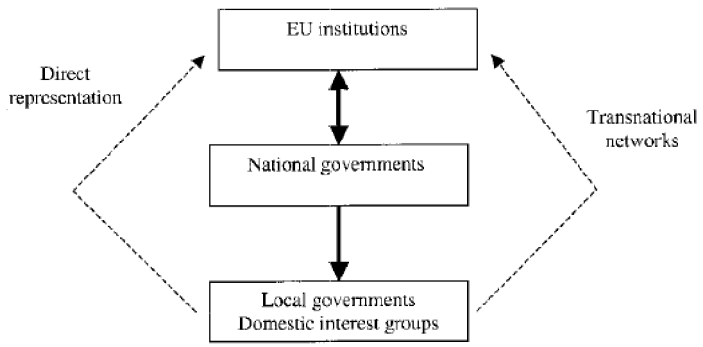

Figure 1. "Type I" (nested) MLG
Source: H. Bulkeley, Davies, A. et al. [83]

[79] Lundin, M. The Conditions for Multi-Level Governance : Implementation, Politics and Cooperation in Swedish Active Labor Market Policy. Doctoral Dissertation. Uppsala University, 2007. P. 9.

[80] Ibid.

[81] Ibid.

[82] Bulkeley, H., Davies, A. et al. Environmental Governance and Transnational Municipal Networks in Europe. *Journal of Environmental Policy and Planning*. 2003, 5(3). P. 235.

[83] Ibid., P. 238.

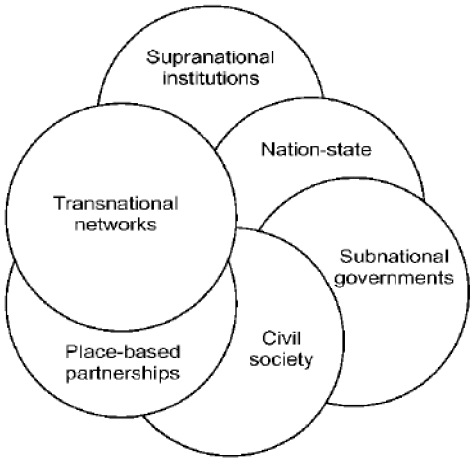

Figure 2. "Type II" (polycentric) MLG
Source: H. Bulkeley, Davies, A. et al.[84]

Overall the authors distinguish three themes for analysis, which emerge in relation to the role of networks and environmental governance. These are: the impact of networks on policy making, their influence in MLG and issues of representation and legitimacy[85].

Having described the main concepts and research fields of MLG and its relations with the EU, a focus on implementation will be presented in the next chapters.

1.2. Implementation from Policy / Administration Perspective. Historical Approach

Starting to talk about implementation as such, it should be described that implementation gains various aspects of the fields implementation is performed. What makes implementation studies a core issue for understanding the implications of politics / administration? And what actually happens at policy recipient level?[86]

Referring to the cycle of policy process, the cycle starts with agenda setting and is followed by policy formation, policy implementation, steering and evaluation and reversible effect[87]. Implementation can vary in different fields and may have several approaches. There are substantial benefits for the researcher when synthesizing ideas from various disciplines – and addressing similar issues from different perspectives[88].

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84 Ibid., P. 239.

85 Ibid., P. 235.

86 Barrett, S. M. Implementation Studies: Time for a Revival? Personal Reflections on 20 Years of Implementation Studies. *Public Administration.* 2004, 82(2), P. 120.

87 Vilpišauskas, R., Nakrošis, V. *Politikos įgyvendinimas Lietuvoje ir Europos Sąjungos įtaka*. Vilnius: Eugrimas, 2003. P. 17 [Policy Implementation in Lithuania and the Impact of the European Union; own translation].

88 Ibid., P. 261.

Therefore the focus of implementation research is made on "particular portions of specific programs or on a narrow slice of the implementation process"[89].

Starting from 1970-ies, when implementation research was introduced as such, it was described as "an attempt to problematize the public administration reflex of separating politics and administration". [90] When behavioural public administration began to be spread in the USA, implementation research came to Europe soon afterwards. However the distinction between those two spheres in Europe was not that clear[91].

Mazmanian and Sabatier in "Effective Policy Implementation"[92] (1981) investigated the growing need for implementation analysis[93]. The authors elaborated on "the missing link", which in the study of policy-making "takes place between the formal enactments of a program by a legislative body and its intended or unintended impacts"[94]. The missing link as a concept remains until present days, but may be presented in other words – as a gap, mismatch, etc. Still, it means inconsistency with formal enactment and the actual situation on the ground.

Elaborating on this fix and dissemination of the gap, Hjern argues that "the crucial role of implementation analysis is to identify the factors that affect the achievement of statutory objectives"[95]. Thereby Mazmanian and Sabatier present "three categories of independent variables: 1) tractability of the problem; 2) ability of the statute to structure implementation; and 3) non-statutory variables affecting implementation". A cluster of dependent variables is separated which is "stages in the implementation process"[96].

Critical variables for the *implementation process* were defined as "socioeconomic conditions, tractability in most facets of the problem and agency leaderships"[97]. Also several critically important variables for effective implementation were distinguished:

> The establishment of clear standards and objectives, the general commitment to the goals of the program by implementation agency, the existence of an administrative and organizational capability to implement and monitor the program, and the support from the agency's legislative and executive sovereigns[98].

Assessing the missing link, the important capability of political bodies is "to link good representation of societal aspirations and effective realization of them". This is significant for "the legitimacy and impact of formal constitutions"[99].

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89 Mazmanian, D. A. Sabatier, P. A. *Effective Policy Implementation*, Policy Studies Organization Series, Lexington, Mass. : Lexington Books, 1981.

90 Hjern, B. Implementation Research - the Link Gone Missing. *Journal of Public Policy.* 1982, 2(3). P. 301

91 Ibid.

92 Mazmanian, D. A., Sabatier, P. A. *Effective Policy Implementation*. 1981.

93 Hjern, B. Implementation Research - The Link Gone Missing. 1982. P. 30.

94 Mazmanian, D. A., Sabatier, P. A. *Effective Policy Implementation*. 1981. P. xi.

95 Hjern, B. Implementation Research - The Link Gone Missing. 1982. P. 303.

96 Mazmanian, D. A., Sabatier, P. A. *Effective Policy Implementation*. 1981. P. xii.

97 Mazmanian, D. A., Sabatier, P. A. *Effective Policy Implementation*. 1981. P. xiv.

98 Ibid., P. xiii.

99 Hjern, B. Implementation Research – The Link Gone Missing. 1982. P. 306.

Hjern and O. Porter argue that implementation structures as a multi-organization unit of analysis should be used for description and evaluation of the implementation and administration of the programmes[100]. The authors determine an implementation structure as the administrative entity which is used by programme implementors to achieve objectives of the programme. According to the authors, implementation of programmes is done by clusters of private and public organizations. Some of them are parts of markets and others are parts of government bureaucracies. In order to implement a programme at the national level, it is necessary to create an overall framework of regulations and resources, where a complex set of relationships exists. Hence an administrative imperative would be to define a pool of organizations within the task environment of a programme[101]. Implementation structures are formed from a potential pool of organizations. A variety of goals and motives are elements that implementation structures can have in common. The authors also state, that

> Within implementation structures, subgroups of actors and organizations perform specialized roles. There are substructures *for policy making, planning and intelligence, resource provision, intermediary and coordinating roles, service provision and evaluation*. Coordination of roles within and among substructures varies considerably from one implementation structure to another"[102].

The importance of investigation into how legal norms are set within implementation structures is stressed.

Further Hull and Hjern (1983) take the implementation approach when analyzing policy in mixed economies. The central issues in mixed economies are institutional arrangements through which resources are allocated in modern society. It is important "what actors with what motives participate in what decisions and influence how particular goods and services are allocated between individuals and social groups"[103]. The authors define policy as "a set of ideas (goals) and the practical search for institutional arrangements for their realization"[104].

Dimensions of mixed economy and resource allocation are defined. The first dimension is "the institutional attributes of the participating actors <…> in terms of their public and private affiliations[105]. The second one comes from principles of decision used in allocation. Some alternative principles such as 'market' and 'hierarchy' can be taken as alternative principles. The authors predicate that sometimes two dimensions are reduced to one as "public actors and hierarchical principles are a 'natural' pair and that private actors and market decisions are similarly always uniquely associated with one another"[106]. The investigation of three models of mixed economy, where public and private sectors (spheres) are either not overmarking, partially overmarking or private

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[100] Hjern, B. Porter David, O. Implementation Structures: A New Unit of Administrative Analysis. *Organization Studies.* 1981, 2(3). P. 11.

[101] Hjern, B. Implementation Research – The Link Gone Missing. P. 214.

[102] Ibid., P. 223.

[103] Hull, C., Hjern, B. Policy Analysis in Mixed Economy: An Implementation Approach. *Policy and Policies.* 1983, 11(3). P. 295.

[104] Ibid.

[105] Ibid., P. 297.

[106] Ibid.

sector is nested by public[107] is done. One of the prepositions, separating public-private and market-hierarchy dimensions illustrate that:

> The allocative and institutional attributes of a given allocative decision are independent of the attributes of both prior and subsequent decisions. Thus a market decision may be preceded by a hierarchy decision and followed by a hierarchy decision. Public and private actors may be similarly interspred within the process"[108].

The authors conclude that 'the true' relationship should be re-established "between the public and private and market and hierarchy elements of mixed economy"[109]. After this it will be easier to strengthen (if necessary) the capability to steer the process of resource allocation.

Using personal reflections on 20 years of implementation studies, Barrett presents a review of three decades. She starts with the time the book "Policy and Action" by Barrett and Fudge appeared in 1981, and goes up to 2004. At that time there was an objective to improve policy decision-making and organize it into a more strategic framework. As a result interest in the implementation process appeared that was transmuted to a focus on *change management* and *performance targets*, as Barret writes. She notes that transmutation reflected "in the reassertion of normative, top-down processes of policy implementation"[110]. Hence she raises important points of analytical difficulties of evaluating the role of bureaucratic discretion and motivation, the problem of evaluating policy outcomes and the need also to focus upon micro political processes in the organization. In her paper, her interest mainly lays in the continued importance of implementation studies in order to understand what "actually happens at policy recipient level".

Describing policy-action relationship, it is noted that when policy is formulated and legitimated "at the top centre", it is handed to the administrative system for further implementation (execution). Then it moves down the hierarchy and operates at the bottom, involving "agents" in the top-down way. The problematic of implementation at that time revealed several key factors of implementation failure, as researched and explicated by Pressman and Wildavsky (1984), Gunn (1978), Sabatier and Mazmanian (1976), Dunsire (1978), Hanf and Scharpf (1978)[111]. Those factors include:

1. Lack of clear policy objectives; leaving room for differential interpretation and discretion in action;
2. Multiplicity of actors and agencies involved in implementation; problems of communication and co-ordination between the 'links in the chain';
3 Inter- and intra-organizational value and interest differences between actors and agencies; problems of differing perspectives and priorities affecting policy interpretations and motivation for implementation;
4. Relative autonomies among implementing agencies; limits of administrative control[112].

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[107] Three models of mixed economy: The Bi-sectoral Model, The Tri-sectoral Model and The Nested Model are used in investigation by Hull, C., Hjern, B.

[108] Hull, C. Policy Analysis in Mixed Economy: An Implementation Approach. 1983. P. 301.

[109] Ibid., P. 310.

[110] Barrett, S. M. Implementation Studies: Time for a Revival? Personal Reflections on 20 Years of Implementation Studies. *Public Administration.* 2004, 82(2). P. 251.

[111] As quoted by Barret, S. Ibid., P. 252.

[112] Ibid., P. 252.

Hence policy objectives, multiplicity of actors involved in implementation, values and interests, relative autonomies and limits of administration has great impact. As Barret argues, there is still a need "to invest in studies of implementation and change processes", to understand the dynamics of policy-action relationships. It is also "a paradox of control and autonomy" when achieving performance/outcomes which are desired[113].

Describing the theory of implementation and practice in policy implementation research, O'Toole (2004) emphasizes the difficulty of theoretical challenge, the needs of practitioners and complicated normative issues to take into account[114]. However he states that "valid theory can inform and improve practice by offering knowledge that can be trapped by people in the world of action"[115]. In other words, theory may improve practical implications.

Turning to an explanation of the implementation of public policy nowadays and referring still to the missing link, Robichau and E. Lynn Jr. (2009) refer to theories of public policy and theories of governance[116]. It is preliminarily considered "how theories of governance and of public policy might better complement each other". Authors emphasize the influence on government performance of implementation through administrative systems, which tends to be de-emphasized in public policy models and to be emphasized in governance theories. The following influence is "broadly described as the actions taken by those engaged in administration after a policy has been lawfully promulgated by elected officials and interpreted by the courts"[117].

Robichau and E. Lynn Jr. in the research "The Missing Link" use a multilevel "LOG", which assumes that "politics, public policymaking, public management, and service delivery are hierarchically linked with one another in the determination of public policy outputs and outcomes"[118].

However Knill (1998) assumes that the main problem of effective implementation "is its impact of national administrative traditions, since the formal and practical transformation of EU law rests mainly at the national level"[119]. He refers to the issue of European integration and states that "national compliance with EU law depends on the level of adaptation pressure perceived in the member states"[120]. Effective implementation is assumed as "full compatibility of European requirements and existing national arrangements"[121].

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113 Ibid., P. 260.

114 O'Toole, Jr., Laurence, J. The Theory–Practice Issue in Policy Implementation Research. *Public Administration*. 2004, 82(2). P. 30.

115 Ibid., P. 311.

116 Waters Robichau, R., E.Lynn Jr., L. The Implementation of Public Policy: Still the Missing Link. P*olicy Studies Journal*. 2009, 37(1). P. 21.

117 Ibid., P. 21.

118 Ibid., P. 22.

119 Knill, C. European Policies: The Impact of National Administrative Traditions. Journal of public policy. 1998, 18(1). P. 1.

120 Ibid., P. 24.

121 Ibid., P. 25.

1.3. Implementation from Transposition of European Law Approach

Having described shortly implementation from policy / administrative application, I will follow the implementation process in the form of transposition of European law to the member states. Transposition of laws (mainly named as directives) when they are adopted at the Council of Ministers, according to the proceedings for its actual implementation, needs to be transposed into national legal codes. Only after that member states' public administrations can execute them, or they can be applied to shape formally the behaviour of actors involved[122].

In the case of transposition of EU law, its application in member states is considered. After legitimating the decision "at the top" (the EU law), the process of its implementation moves down towards member states, different structures (policy recipients) and individuals who practically apply determined rules. Studies referred to below are mainly academic quantitative research in the field, presented in the database of the implementation of EU Law[123].

When describing the implementation of EU law, Steunenberg and Rhinard (2010) consider transposition of European Union (EU) directives making evaluation from the time perspective[124]. According to the steps of implementation, directives must be transposed into national policies first. The authors highlight the approach which describes that transposition mainly takes place "in ministerial agencies rather than across government systems"[125]. The performance of the member states is represented in timing of transposition - dependent variable is taken: time until transposition. The performance is represented also in other set of "popular explanatory variables", including the ones related to domestic processes and transposition process-related, also related to features of directive itself and Commission monitoring. For explaining transposition, the premise for it is considered that "actors pursuing their interests have a major role in determining decision outcomes"[126]. Hence the main players here are political and administrative actors, having power to form the process. Actors in a lower hierarchical "line" are considered also as having an indirect impact on the process. Negotiations as well as actor and context specific views are taken into consideration. The authors conclude that it is much easier to describe implementation when variables of domestic processes are referred to.

Steunenberg and Rhinard state that domestic actors receive and process European policy differently. According to the authors, arguments for the European policy process can be found in various political science and administration approaches. Borzel and Risse (2000), Tallberg (2002), Borzel et at. (2004) and Linos (2007) refer to an international relationship perspective. Hence the incompliance of the member states with the

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122 Bomberg, A., Peterson, J. and Stubb, A. *The European Union : How Does It Work?* 2008. P. 120.

123 Toshkov, Dimiter (n. d.) Implementation of EU Law: An Online Database of Existing Research, in cooperation with the Institute for European Integration Research at the Austrian Academy of Sciences, available at: www.eif.oeaw.ac.at/implementation, accessed on April 6, 2011.

124 Steunenberg, B., Rhinard, M. The Transposition of European Law in EU Member States: Between Process and Politics. *European Political Science Review*. 2010, 2(3).

125 Ibid., P. 495.

126 Ibid.

EU policy is a consequence of member states' "general unwillingness to act or a lack of administrative capability to act"[127]. Lucia and Kronsell (2010), analyzing the implementation of a detached EU policy (the implementation of the EU biofuels Directive in particular), refer to three pathways that describe the negative outcome of implementation: "the willing (but unable); the unwilling; and the unable"[128]. The findings of the study do not contradict previous studies – explaining that non-implementation is determined by a "dichotomy between the member states unable to implement because they lack capacity"[129].

Heritier (1996), Knill (1998), Knill and Lenschow (1998), Knill and Lehmkuhl (1999), Rise *et al.* (2001), Graver (2002) see non-implementation as a result of a "mismatch" between domestic norms and ideas about the policy, with the goals and instruments mentioned by the directive[130].

The study of Robert Thomson (2009) examines the variation in timing of transposition of EU directives to national legislation and considers cultural context. The author presumes that "the fit between the EU directives and existing national arrangements differ by cultural context of "world of compliance"[131]. However the findings show that "the direction of the effects is the same in different cultural contexts"[132].

Reviewing studies on transposition performance of the countries, transposition efforts should be considered. Streuenberg and Toshkov (2009) analyze those in all 27 member states with regards to four EC directives, which create considerable difficulties for compliance at the national level. The authors find that "discretion and legal fit are significant factors in explaining transposition"[133]. Interestingly to state that the authors find new member states from Central and Eastern Europe doing not any worse than the rest of the EU when it concerns the timing for transposition of the EU directives. It is also stated that "findings emphasize the importance of legal-administrative factors and fit for compliance with EU law"[134]. Authors argue that discretion is important for transposition duration. The findings show that a national discussion "On how to transpose and implement a directive may cause delay"[135]. In this case a conflict between domestic players as a result of discretion may arise. The preferences (if they are different or opposing) of domestic players have great impact as they also may cause conflicts in decision-making processes.

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[127] As quoted by Steunenberg, B., Rhinard, M. The Transposition of European Law in EU Member States: Between Process and Politics. P. 496.

[128] Di Lucia, L. Kronsell, A. The Willing, the Unwilling and the Unable - Explaining Implementation of the EU Biofuels Directive. *Journal of European Public Policy*. 2010, 17(4). P. 560.

[129] Ibid., P. 545.

[130] Steunenberg, B., Rhinard, M. The Transposition of European Law in EU Member States: Between Process and Politics. *European Political Science Review*. 2010, 2(3). P. 495-520, P. 496.

[131] Compliance to the EU legislation means the transposition of the EU law (adopting of implementation measures) into national systems.

[132] Thomson, R. Same Effects in Different Worlds: The Transposition of EU Directives. *Journal of European Public Policy.* 2009, 16(1). P. 1.

[133] Steunenberg, B. Toshkov, D. Comparing Transposition in the 27 Member States of the EU: The Impact of Discretion and Legal Fit. *Journal of European Public Policy*. 2009, 16(7). P. 951.

[134] Ibid.

[135] Ibid., P. 965.

The second finding, made by Streuenberg and Toshkov, refers to the legal architecture of the member state. The "legal fit", as authors describe, is not the same as political, policy or administrative fit, but has an important impact on transposition. Hence it is important if the national legal order should be changed. In this case the change may be a significant reason for the delay of transposition[136].

Luetgert and Dannwolf's (2009) study of national transposition efforts is related with 1192 directives relating to the factors that describe the beginning of usually long and complicated domestic processes. The authors acknowledge that "a focus on the initiation of the process ignores both the length of the process as well as many institutional factors that can be known only *ex post*, but that may contribute to better explanations of compliance delay"[137]. The authors indicate additional sources that delay transposition, indicating "political silence, bureaucratic discretion or conflict potential"[138] that are proposed for future quantitative research. The findings state that there is a lack of definitive and cross-national data on national transposition (and compliance) that limited previous research in separate countries or policy sectors.

Turning to institutional structures and an institutionally driven explanatory approach, which according to Chayes and Handler Chayes (1995) argues that "non-compliance may result from capacity restrictions, namely tight transposition deadlines and the inability of domestic actors to quickly introduce and monitor policy change"[139].

Referring to the capacity argument, a number of qualitative studies (Azzi, 2000; Siedentopf and Ziller, 1998; Pappas, 1995; Knill, 2001; Falkner et al., 2005; Borghetto, 2007) reveal that "the organization of the executive and the involvement and independence of national administrative authorities is of central importance[140].

Jensen (2007) states that uneven implementation of directives is driven by member states governments' ability rather than their willingness. The author refers to infringement cases as to incompliance with the EU law[141]. In this case member state government's compliance to the EU policy matters. According to Jensen, "much work has come from the "management school" of international treaty compliance, which reasons that states' compliance within international obligations is a function of their capacity to implement, rather than their willingness"[142]. Jensen's argument is that the types of mechanisms that governments of the member states use to conduct oversight play a significant role for implementation of EU policy. Introducing new approaches for the operationalization of administrative institutions, the author uses oversight mechanisms, that are policy patrol oversight and fire alarm oversight. The operation of fire alarm oversight is discussed only at national level. The findings show that "policy patrol and fire alarm oversight mechanisms are a significant predictor of governments' ability to resolve infringement

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136 Ibid., P. 966.

137 Luetgert, B., Dannwolf, T. Mixing Methods a Nested Analysis of EU Member State Transposition Patterns. *European Union Politics*. 2009, 10(3). P. 329.

138 Ibid.

139 As quated by Luetgert, B., Dannwolf, T. Mixing Methods a Nested Analysis of EU Member State Transposition Patterns. P. 311.

140 Ibid.

141 Analysis of 186 labor policy infringement cases were made in 15 member states between 1978-2000.

142 Jensen, C. B. Implementing Europe a Question of Oversight. *European Union Politics*. 2007, 8(4). P. 452.

cases"[143]. The findings state that "fire alarm oversight at the national level actually hinders member state government's ability to resolve failures", although at the EU level it is considered greatly to identify failures by the member states[144].

Kriaučiūnas, when analyzing the implementation and application of EU legislation in Lithuania, points to the importance of preparedness and administrative capacities as well as effectiveness of the legal framework in the state. The author also acknowledges differences in individual factual circumstances and differences of interpretations of legal provisions. As incompliance with the EU law, infringement procedures are referred to and it is considered that according to comparative analysis, "the general situation in Lithuania is much better then average"[145].

1.4. Implementation from Transposition of Environmental and Climate Change Legislation Approach and Concerning Matters

1.4.1. Focus on Environmental Policy and Multi-level Governance

Having described shortly the implementation of the EU directives in member states, a further focus on environment policy and its integration will be made in brief. It will be followed by a more detailed overview on the implementation of climate change policy and legislation.

Jordan and Lenschow's policy paper (2010*)* on Environmental Policy Integration (EPI) reveals that EPI as a principle gets a great political support in the European Union as it has "a prominent quasi-constitutional status"[146]. In other words, EPI has a relevant legal status. Hence the article seeks to review "the state of art" in EPI research. The perspective of conceptual meaning, policy implementation processes and its outcome on the ground are overlooked. Findings show that political duty of EPI is far-reaching, however when it comes to reality, its actual application is surrounded by strong disagreement[147].

Previous studies (academic papers, edited books, arising from international collaborations, and also policy reviews, conducted by OECD and EEA, etc.) on EPI research demonstrate that in spite of the maturity of the principle, "everyday practice of EPI remains surprisingly fragmented"[148].

Governance systems should be in place in order to implement environmental policy. Benson and Jordan in a book section on *Environmental Politics in Multi-level Governance Systems* (2007) predicate that environmental policy-making has become more multi-level "with more actors and preferences to accommodate in the production and implementation of new policies"[149]. This process is regarded as "multi-level governance" (or MLG). In

[143] Ibid., P. 451.

[144] Ibid.

[145] Kriaučiūnas, D. Europos Sąjungos teisės įgyvendinimas ir taikymas Lietuvoje. Politologija. 2007, 48 (4). P. 163.

[146] Jordan, A. Lenschow, A. Environmental Policy Integration: A State of the Art Review. *Environmental Policy and Governance.* 2010, 20(3). P. 147.

[147] Ibid.

[148] Ibid., P. 148.

[149] Benson, D. Jordan, A. Environmental Politics in Multi-Level Governance Systems, in The Politics of the Environment : A Survey, ed. Okereke, C. London: Routledge, 2007. P. 87.

recent years scholars have linked the concepts and models of MLG with the development of EU environmental policy. According to Fairbrass and Jordan (2004), the involvement of non-state and state actors and broad decision making competencies is a good ground for investigation of multi-level governance in general[150]. Benson and Jordan state (in relation to policy formulation) that decision making in the EU has became more multi-actored and multi-levelled, task assignments "has not entirely escaped the controlling power of member state governments"[151]. The authors also declare that national policies are affected greatly by the MLG. They evaluate policy instrumentation in this context and state that although NEPIs (New Environmental Policy Instruments) have become more popular in the EU states, they have changed marginally in relation to traditional forms of regulation. At the end the authors make a comparison of EU and other multi-level systems. They find that "debates over policy formulation and task allocation, processes of policy interaction and convergence, policy choice" are similar with "design, structure and functioning of other multi-level systems"[152].

Newig and Fritsch (2009) in their paper "Environmental Governance: Participatory, Multi-Level and Effective?" investigate if and how multilevel governance affects the ability of participatory decision-making[153] in order to provide a high quality outcome of environmental policy – and better ensure its implementation and compliance. Analysis of their study depends on 47 case studies on environmental decision making. Those studies were conducted in different continents (Western Europe and Northern America) in the period from 1970 and 2007. Academic literature on MLG, complex systems, policy implementation and public participation helped to draw and develop five sets of hypotheses relating to *Participatory Versus Top-Down Modes of Governance*, *Spatial Relevance of Actor Interest, Local Scale Versus Higher Scale Decision-Making, Spatial Fit Between Governance Scales and Natural Scales and Polycentricity of the Multi-Level Governance System*[154]. The findings of the study show that involved actors play a great role as their environmental preferences "determine the environmental outputs and outcomes" of decision making".[155] Communication also has a positive impact on the ecological standard of a decision. Face to face, but not mere two way communication is referred to. Analysis suggests that "a highly polycentric governance system comprising many agencies and levels of governance yields higher environmental outputs than monocentric governance"[156].

As referred to in Jordan and Lenschow's article, the European Union has a great influence on environmental policy arrangements in general. Knill and Tosun (2009) in their study analyze how the EU shapes environmental policy adaptations within and beyond its borders. The authors investigate weather accession countries adopted European environmental legislation. The effectiveness of environmental policy as well as the impact on neighbouring countries was examined. Referring to the studies made in

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150 As quoted by Benson, D., Jordan, A. Ibid. P. 87.

151 Ibid., P. 96.

152 Ibid., P. 97.

153 Newig, J. Fritsch, O. Environmental Governance: Participatory, Multi-Level - and Effective? *Environmental Policy and Governance.* 2009, 19(3). P. 197.

154 Ibid., P. 199-202.

155 Ibid., P. 197.

156 Ibid., P. 210.

the area, the authors state that "the EU had a positive impact on the direction and level of environmental policy reform".[157] According to Schimmelfenning and Sedelmeier (2004, 2005), the positive impact may be seen through "governance by conditionality" or administrative assistance (Carius et al. 2000). [158] However empirical details to which Jordan and Lenschow refer, indicate, that:

> Many review authorities have very general mandates such as "overseeing sustainable development" or "promoting" EPI; many are too poorly resourced and politically weak to open up sectoral policy making to critical scrutiny; the majority simply do not have the time or the resources to dig into the everyday grind of policy making[159].

The results of Knill and Tosun's study, which refers to the EU's external governance in the area of environmental policy and adaptation of three European policy measures in the period from 1980 till 2006 in 33 European states and neighbourhood, reveal, that "hierarchical governance is still the most effective form of external governance"[160]. Hierarchical governance here is referred to the precondition that "national governments are legally required to adopt similar policies and programmes as part of their supranational obligations"[161]. It was also discovered that market governance is of minor relevance but the impact of information exchange with the EU has a positive effect for network governance. For example some neighbouring countries adopt European environmental policies, "contrasting parties committed themselves to adopt EU legal acts in the area of electricity, gas, the environment and renewable energy"[162].

1.4.2. Focus on Climate Change Policy and Relevant Issues in the European Union - the Emissions Trading System and Multi-level Governance

The European Union being the leader in climate change policy and ambitions, its 27 Member States "committed themselves in 2007 to reduce emissions from 1990 levels by 20% by 2020".[163] As Giddens states (2010), "worries about risks posed by climate change date back some thirty years"[164]. Hence relevant policies have been developed since the beginning of 1980s and the change in the EU itself has had a great impact on it.

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157 Knill, C., Tosun, J. Hierarchy, Networks or Markets: How Does the EU Shape Environmental Policy Adoptions within and Beyond Its Borders? *Journal of European Public Policy*. 2009, 16(6). P. 873.

158 As quated by Knill, C., Tosun, J. Ibid.

159 Jordan, A., Lenschow, A. Environmental Policy Integration: A State of the Art Review. E*nvironmental Policy and Governance*. 2010, 20(3). P. 155.

160 Knill, C. Tosun, J. Hierarchy, Networks, or Markets: How Does the EU Shape Environmental Policy Adoptions within and Beyond Its Borders? *Journal of European Public Policy*. 2009, 16(6). P. 890.

161 Ibid., P. 875.

162 Ibid., P. 890.

163 Saikku, L. Soimakallio, S. Top-Down Approaches for Sharing GHG Emission Reductions: Uncertainties and Sensitivities in the 27 European Union Member States. *Environmental Science and Policy*. 2008, 11(8). P. 723, also Commission's decision on Effort and sharing.

164 Jordan, A., Huitema, D., Van Asselt, H. et al. ed. *Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation?* Cambridge: Cambridge University Press, 2010. P. ix.

Biesbroek et al. state (2010), that "for the last two decades, European climate policy has focused almost exclusively on mitigation of climate change"[165]. In other words, policy has focused on actions to decrease the impacts of activities causing global warning. The authors indicate that later, adaptation was added to the policy agenda. Hence the EU Member States had to develop National Adaptation Strategies (NASs), which were analyzed in the study. The findings show that the role of NASs "in wider governance of adaptation differs between countries but clearly benchmarks new political commitments to adaptation at national policy levels"[166]. However the findings also show that approaches to implement and evaluate strategies have still to be determined. In concluding the authors state that:

> Even though the strategies show great resemblance in terms of topics, methods and approaches, there are many institutional challenges, including multi-level governance and policy integration issues, which can act as considerable barriers in future policy implementation[167].

Wettestad states (2009) that the core of EU climate policy is the EU emissions trading system (EU ETS). This is also "the first large-scale international emissions trading system"[168] globally.

In order to control and achieve reductions in the emissions of gaseous pollutants, state governments use emissions trading as a market–based approach[169].

> In the emissions trading scheme, a government, in close consultation with companies, scientists and other stakeholders, such as environmental non-governmental organization (NGOs), sets limit on the amount of a pollutant that should be emitted within a given time period. After setting the limit (the "cap"), the government then distributes the total amount of emissions permissible among companies and other emitting entities in the form of allowances or credits, with each allowance representing one ton of the relevant emission. Entities, that emit more than their allocated allowances are expected to buy credits from those that pollute less. Conversely, entities that use less than their allocated quota are allowed to sell their credits to those that pollute more [170].

Hence governments in this manner can control the total emissions of the country, as well as of a given pollutant within the ETS. Companies under the EU ETS are flexible to choose the way of GHG emission reductions that best suits them[171].

Analyzing the EU ETS – one of the pivots in EU climate policy, Wettestad acknowledges "increasing acceptance of stronger centralized governance among the member states due to ETS pilot phase problems"[172]. In other words, it is argued that member states had too much autonomy in the pilot phase of the EU ETS and as a result "EU

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165 Biesbroek, G. R., Swart, R. J. et al. Europe Adapts to Climate Change: Comparing National Adaptation Strategies. *Global Environmental Change.* 2010, 20(3). P. 440.

166 Ibid.

167 Ibid.

168 Wettestad, J. European Climate Policy: Toward Centralized Governance? *Review of Policy Research*. 2009, 26(3). P. 311.

169 Okereke, C. *The Politics of the Environment : A Survey*. London: Routledge, 2007. P. 186.

170 Ibid., P. 187.

171 Ibid.

172 Wettestad. European Climate Policy: Toward Centralized Governance? P. 311.

climate change policy has taken a clear turn toward centralization"[173]. The case analyzed acknowledges the multilevel character of the EU, but "still emphasizes the key role of changing member states' interests and positions for understanding outcomes"[174].

As indicated in the Centre for European Policy Studies, the ETS touches issues of "multilevel power and governance with implications far beyond the sphere of climate politics"[175]. The study helps to understand the phases of the EU ETS. Also is reveals the increasing acceptance of strong centralized governance among member states due the problems in the pilot phase of the system.

Findings of the study show that EU climate policy has taken a clear turn toward centralization. However, the key role of changing member states' interests and positions for understanding outcomes is also revealed.

Skjærseth in *EU Emissions Trading: Legitimacy and Stringency* (2010) explores the basis and consequences of the legitimacy of the revised EU ETS, which was introduced in 2008 when the ETS was expanded. Findings show that the revision of the EU ETS is "grounded in a broader multilevel legitimacy basis"[176]. It is also concluded that "the system faces significant challenges with regard to carbon markets and effectiveness, which could reduce its legitimacy in the long term"[177].

When turning to the implementation of the EU environmental directives and the Kyoto Protocol requirements in Lithuanian power and district heating sectors, Štreimikienė aims to suggest "the implementation measures and necessary investments needed for the implementation of the main environment requirements relevant to the Lithuanian energy sector". [178] The purpose of the author's paper is to present data and analysis, which shows the ground on which strategies for the implementation of the two EU directives (the EC Directive 2001/80/EC *on limitation of emissions of certain pollutants into the air from large combustion plans (LCP)* and Directive 1999/32/EC *on reduction in the sulphur content of heavy fuel oil (HFO) to 1%*) are developed. One of the findings reveals that "local conditions as well as the actual development of the heat and power sector may diverge from the preconditions set out in the implementation plan"[179]. Due to this reason local conditions are suggested to be included into the plan upgrades.

1.5. Multi-level Governance, Implementation and Sociology of Law

Linking studies of implementation and governance is a central theme in Hill and Hupe's (2009) "Implementing public policy: an introduction to the study of operational governance". Talking about the concept of implementation, it can be understood as "to

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[173] Ibid., P. 325.

[174] Ibid.

[175] Ibid.

[176] Skjærseth, J. B. EU Emissions Trading: Legitimacy and Stringency. *Environmental Policy and Governance.* 2010, 20(5), P. 295.

[177] Ibid.

[178] Šteimikienė, D. Implementation of EU Environmental Directives and Kyoto Protocol Requirements in Lithuanian Power and District Heating Sectors. *Energetika* 2004(3). P. 30.

[179] Ibid., P. 37.

carry out, accomplish, fulfil, produce, complete"[180]. In implementation theory and research "implementation is always connected to specific policies as particular responses to specific problems in society"[181]. A "clinical" attitude of "policy science" is knowledge about society, as Parson states: "knowledge of society could provide a way of making it better"[182]. Implementation is also described as:

> Implementation is the carrying out of basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders or court decisions. Ideally, that decision identifies the problem(s) to be pursued, and in a variety of ways, 'structures' the implementation process [183].

Deflem (2008) analyses theoretical variations of democracy and law, stating that "politics always concerns a relationship between government and citizens, between those who govern and those who are governed"[184].

As referred to in the first chapter, research agendas of MLG can be shaped by fundamental concepts of political sociology – institutionalization and legitimation. Smith distinguishes two types of legitimacy regimes: "certain regimes are based on consensus where citizens, or their representatives, make constant cost-benefit analyses as whether they accept its authority"[185]. On the other side, according to Lagroye (1985), "legitimate regimes are those whose citizens rarely question their authority and instead confer upon the regime a social value, which encourages support, or at least general obedience"[186].

Wade (1982) predicates, that the 'rule of law' has four aspects. These can be applied to implementation studies:

1. Its primary meaning is that everything must be done according to the law', which when applied to the powers of government means that "every act which affects the legal rights, duties or liberties of any person must be shown to have a strictly legal pedigree. The affected person may always resort to the courts of law, and of the legal pedigree is not found to be perfectly in order the court will invalidate the act, which he can then safely disregard.
2. The secondary meaning of the rule of law… is that government should be conduced within a framework of recognized rules and principles which restrict discretionary power.
3. Disputes about the law should be settled by a judiciary that is independent of government.
4. The law should be even-handed between government and citizen[187].

However "implementation" of law in society sometimes results in deviations from legislators 'will' and 'intentions'. The following can be studied referring to the science

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[180] Hill, M. J., Hupe, P. L. *Implementing Public Policy: An Introduction to the Study of Operational Governance*. Los Angeles: SAGE, 2009. P. 3.

[181] Ibid., P. 5.

[182] As quoted by Hill, M. J., Hupe, P. L. Ibid. P. 5.

[183] Ibid., P. 7.

[184] Deflem, M. *Sociology of Law : Visions of a Scholarly Tradition* Cambridge: Cambridge University Press, 2008. P. 169.

[185] Smith, A. Multi-Level Governance: What It Is and How It Can Be Studied, in *Handbook of Public Administration:E Book*, ed. Peters, B. G., Pierre, J. London: Sage Publications, 2009.

[186] As quoted by Smith, A. Ibid.

[187] As quoted by Hill, M. J., Hupe, P. L., *Implementing Public Policy : An Introduction to the Study of Operational Governance*. P. 22-23.

of sociology of law. The relationships between law and society can be complemented by norms, which is one way to investigate complex implementation of law:

The authors introduce norms "as something operating in-between law and society" and underline, that "norms can be seen both as something lying behind legal rules and also something that may distort the legal regulations"[188].

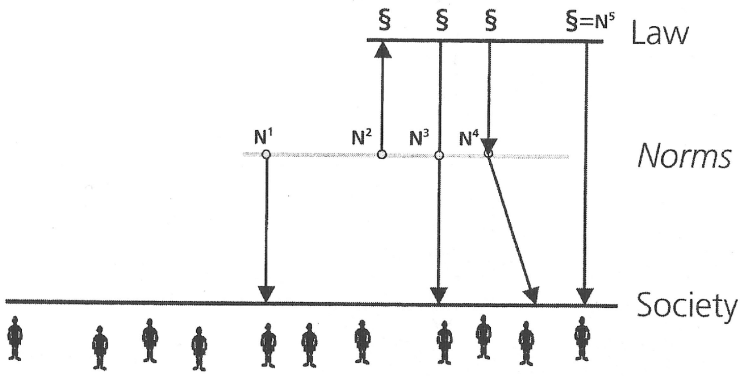

Figure 3. The Relations Between Law, Norms and Society
Source: Hydén, H., Svensson, M. (2008)[189]

The political system in relation with legal rules / norms can be seen as following:

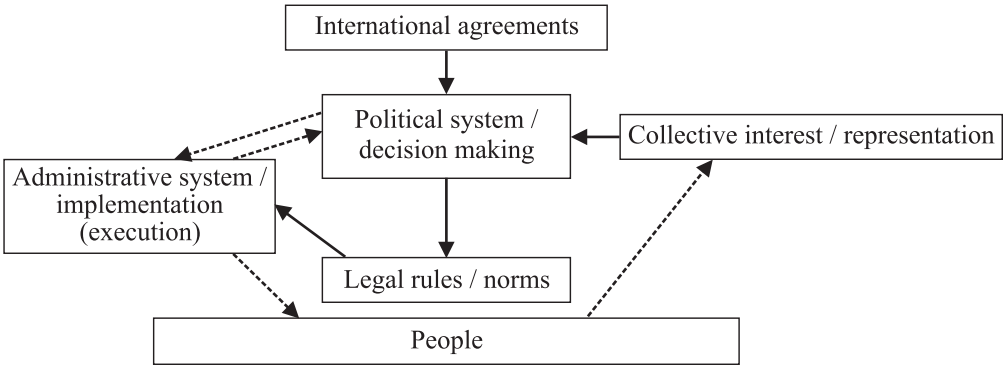

Figure 4. Political System in Relation with Legal Rules / Norms

The picture shows a top down perspective in the implementation of international agreements. This in turn influences the political system and decision making on national levels. From a bottom up perspective, the political system is affected by collective interests, public interests[190] and their representation.

[188] Hydén, H., Svensson, M. Using Law as a Model - Different Approaches to the Understanding of Normative Decision Making. In *Contributions in Sociology of Law*, edited by Hydén, H., Wickenberg, P. Lund studies in Sociology of Law (29). Lund: Lund university, 2008. P. 24.

[189] Ibid., P. 23.

[190] Hydén, H. *Normvetenskap*, Lund Studies in Sociology of Law, 1403-7246 Lund: Sociologiska institutionen, Univ., 2002.

Liebert and Trenz in "Civil society and the reconstitution of democracy in Europe: Introducing a new research field" (2009) map out new forms in the interdisciplinary research field of European civil society. The research reviews "recent contributions from political science, sociology and law. All share the concern with the pervading empowerment of the institutions of European multi-level governance"[191]. The authors argue that:

> The EU-constitutional experience has sharpened the ambivalence between top down activating or "partnership" approaches vs. bottom up mobilizing or "social constinuency" approaches of European civil society[192].

Linkages of studies on policy implementation, governance, law and sociology of law has been presented. The next part will elaborate on the methodological approach which will combine disciplines in the research.

[191] Liebert, U., Trenz, H. J. Civil Society and the Reconstitution of Democracy in Europe: Introducing a New Research Field. *Policy and Society.* 2009, 28(1). P. 1.

[192] Ibid.

2. METHODOLOGY

The conception of the research should be identified firstly in order to carry out a research in a certain methodological approach [193]. It is done by the research question and sub-research topics. By this the general idea and main theoretical affirmations are identified and the research is implemented.

This part will present a selection of methods used throughout the research in order to collect empirical data – and their applicability afterwards. Besides, the part will give a classification and a description of arenas that are considered, methodological tools that are applied and will describe the operationalisation of the research at the end.

2.1. Scope of the Research

The research approach directly corresponds to the research question and sub-research topics. In the research I combine MLG and policy implementation with the sociology of law approach. This is done in order to elaborate on the implementation of legal rules that are related to GHG emission reduction requirements in Lithuania (the first sub-research topic). This analysis is focused on different arenas of policy implementation – international; national; administrative and industrial. The most dominant driving forces and norms that affect actors on each arena of implementation are explored (as a second sub-research topic). Finally the response from the industrial sector regarding legal rules is studied.

2.2. Arenas and Methodological Tools Applied

In the research I am referring to the implementation chain of 4 levels: **supra-state, state, sub-state and societal,** which is presented by Hydén[194]. This order represents a clear top-down perspective of implementation and corresponds to nested MLG (Type I)[195], presented by H. Bulkeley et al (see Figure 1). However my own interpretation of levels would correspond to the following theoretical arenas and representing actors that is shown in the table bellow:

[193] Kardelis, K. *Mokslinių tyrimų metodologija ir metodai*. Šiauliai: Lucilijus, 2005. P. 88 [Research Methodology and Methods; own translation].

[194] The implementation chain is presented in Hydén's article "Implementation of International Conventions As a Socio-legal Enterprise: Examples from the Convention on the Rights of the Child". 2006.

[195] Type I (nested) and Type II (polycentric) MLG are elaborated by Bulkeley, H., Davies, A. et at. in the research on environmental governance and transnational networks in Europe.

Table 2. Levels and Corresponding Arenas of Policy Implementation[196]

Level	Arena	Actors / Institutions
Supra-state	International / UN and the European Union	The UNFCCC Secretariat, The European Commission (The Directorate-General for Climate Action ("DG CLIMA")[197]
State	National / Lithuania (N)	Representatives from the Committee on Environment Protection, the Seimas of the Republic of Lithuania; the Ministry of Environment of the Republic of Lithuania
Sub-state	Administrative (relevant administrative structures) (A and A^{I})	Representatives from the national Environmental Protection Agency, Regional Environmental Departments; relevant state institutions, public enterprises with mandates to carry certain activities regarding GHG emission reductions; related non-state institutions
Societal	Industrial (I)	Representatives from companies, included into the EU ETS and which activity is affected by legislations regarding GHG reductions

Three dimensions that influence norms on each arena are considered in the research. This model has been developed by Wickenberg and Hydén at the Sociology of Law Department at Lund University – and has inspired me to approach the study in a particular way. The created model helps to reveal driving forces by which behaviour in each arena is influenced. The mentioned dimensions are will (motives-values-driving forces), knowledge (cognition) and possibilities/restrictions (also equated to system conditions[198]). Hence, interview questions were formed in such a manner in order to reveal those dimensions (elaborated further on describing the studies).

The selection of actors and their placement at relevant levels is described in the chapter below.

2.3. A Pre-study. Selection Procedure of Actors

The arena and number of actors, involved in climate change issues is great. Obviously, a careful selection of the material and actors (stakeholders) is required in order to answer the research question and sub-research topics as well as choosing relevant empirical data for the research. In order to minimize the number of related legislation and to select stakeholders' representatives, the initial phase of preparation of the dissertation, **a pre-study**, was undertaken. The pre-study was carried out as a part of my work at the Division of Climate Change of Lithuanian Environmental Investment Fund (hereinafter – LEIF). I gained basic knowledge about the field and practitioners in the climate change field in different arenas. Natural working surroundings in this case

[196] Coding of arenas in letters N, A and A^{I}, I is used for presenting interview quotations later-on.

[197] Although The United Nations and the European Union operate according to different principles, but they are considered as one "international" arena because of supremacy "power" towards the state.

[198] Hydén, H. Putting Law in Context - Some Remarks on the Implementation of Law in China. In *Contribution in Sociology of Law*, edited by Hydén, H., Wickenberg, P. Lund studies in Sociology of Law (29). Lund: Lund university, 2008. P. 153-154.

were important for observing events, processes[199] and gathering primary empirical data. In some cases participant observation was applied. A preliminary study of legal acts and publicly available documents was also performed during the pre-study.

The following tasks were raised during direct observation:

- to gain knowledge about the research field through the relation with cognition object[200];
- to identify legal acts with requirements for GHG emission reductions, analyze their types and supremacy;
- to explore actors on different arenas that have to deal with the creation and implementation of legal rules towards the reduction of GHG;
- to observe relationships and power dimensions between actors in different arenas and to observe how interests are represented;
- to review international and analyze national official reports about GHG emissions during the pre-Kyoto (2005-2007) and Kyoto periods (2008-2012);

Hence research arenas (determined previously as levels), actors representing them, relevant legislation and other documents were mainly determined during the pre-study. The actors and relevant legislation were itemized during subsequent studies: a study on legislation and interviews.

In the initial phase of the preparation of the dissertation I used to attend meetings on the international and national arenas, where issues on implementation of the EU ETS[201] in the EU and the state (Lithuania) were discussed. Issues that related to the registry systems were also talked about[202] during the meetings. According to Season and Gilliam et al, the meetings can be entitled as "centrally placed sources"[203] and information. In my case the meetings directed towards the key actors and documents of the emission trading system.

Depending on the arena of the research, the actors fulfil different tasks starting with the initialization of legal acts towards implementation: the distribution of mandates, their effectuating and implementation of legal rules in practice. The activity of companies is directly affected by legal rules. Hence, they end the implementation chain explored in the research.

The selection of actors and stakeholders is also undertaken in the study of legislation, documents and interviews.

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[199] Tidikis, R. *Socialinių mokslų tyrimų metodologija*. Vilnius: Lietuvos teisės universiteto leidybos centras,2003. P. 447 [Research Methodology in Social Science; own translation].

[200] Kardelis. *Mokslinių tyrimų metodologijai ir metodai*. 2005. P. 12 [Research Methodology and Methods; own translation].

[201] Emission Trading System in the European Union (the EU ETS) is shortly described in the theory part and is considered as a starting point for analysis.

[202] All information about national GHG emissions and GHG emissions that are included in the EU ETS, is registered in national GHG registries and is publicly available. The registry system is created in order to keep records about operators and their GHG emissions in the EU. This electronic system with its database is used as a tool for implementation of Directive 2003/87/EC, establishing the EU ETS as well as emission trading on national, the EU and global levels. As estimated in legislations, registry system provides with yearly data on EUA allocations and actual emissions up to installation level in each country in the EU.

[203] As quoted by Bergman, A. K. Law in Progress? A Contextual Study of Norm-Generating Processes – the Example of GMES. Doctoral dissertation. Social Sciences, Lund University, 2009. P. 60.

Thereby direct observation of the process of implementation of climate change policy, creation and implementation of relevant legal acts was carried out[204]. Three arenas were directly observed following the logic of MLG and arenas of implementation chain:

1. International / the European Union arena: participant observation of relevant meetings.
2. National arena / Lithuania: participant observation of some relevant meetings at the Ministry of Environment.
3. Administrative arena: participant observation of relevant meetings and processes at relevant administrative structures:
   - budgetary institutions:
     - National Environmental Agency;
     - Regional Environmental Departments;
   - public institutions and institutions with key tasks:
     - Lithuanian Environmental Investment Fund;
     - Cowi Lietuva – a private company, having performed main studies related to the EU ETS and relevant others.

Esaiasson, Gilljam et al. (2004) described principle of "centrally placed courses"[205], which gives a possibility to designate potential actors with relevant responsibilities and knowledge. But still, in this case the number of appropriate actors may be too large. According to generalization principles, presented by Bitinas et. al. (2008), a selected number of actors in a qualitative research is small[206]. Following this, the selection should be further refined[207]. For narrowing the selection, I chose several methods: criterion sampling, stratified purposeful sampling and snowballing sampling.

Criterion sampling means that the selection is done according to criteria (principles) that are defined by a researcher. When doing a selection, all criteria should be fulfilled and as a result, the data obtained is of high quality[208].

Stratified purposeful sampling is used in order to illustrate the characteristics of investigated groups (referred to arenas in the dissertation), their similarities and differences for further comparison. The selection is based on grounded theory and is done according to characteristics (principles), estimated in advance[209].

The following selection principles were considered for criterion and stratified purposeful sampling: 1) actors' (institutions) consistency with the arena according to their activity; 2) delegation of mandates to institutions by legislation, related to the implementation of GHG reduction requirements.

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[204] Due to my work, sometimes during the observation process I turned to a participant observer.

[205] A quoted by Bergman, A. K. *Law in Progress? A Contextual Study of Norm-Generating Processes - the Example of* GMES. 2009. P. 60.

[206] Bitinas, B., Rupšienė, L. *et al.* V. *Kokybinių tyrimų metodologija*. Klaipėda 2008. P. 95 [Qualitative Research Methods, own translation].

[207] Bergman, A. K.. *Law in Progress? A Contextual Study of Norm-Generating Processes - the Example of* GMES. 2009. P. 60.

[208] Bitinas, B., Rupšienė, L. et al. *Kokybinių tyrimų metodologija.* Klaipėda 2008. P. 102 [Qualitative Research Methods; own translation].

[209] Ibid., P. 102, 104. For grounded theory cf Merriam, S. B. *Qualitative Research : A Guide to Design and Implementation* San Francisco: Jossey-Bass, 2009. P. 199.

Snowball sampling as well as *criterion sampling* was used in order to make selection in the industry arena. This was completed during the pre-study when information was gathered and processed. In order to estimate further industry companies, a question during the study of interviews was asked: "what are outstanding cases of implementation?"

During the pre-study I gained preliminary knowledge about industrial companies that had to meet obligatory requirements of GHG emission reductions. Several selection principles for industrial actors were identified before starting interviews with them: 1) types of industry, estimated in the EU ETS directive[210]; 2) snowball sampling.

Snowball sampling was applied in order to get references about mostly exclusive industries from their performance in Lithuania. It ended up with choosing the biggest companies from energy, heating and fertilizers' industries, included in the EU ETS. It should be stated that representatives of most companies were interviewed in Vilnius or Vilnius district. Only one company was interviewed in Panevėžys district. It was chosen according to snowball sampling – references from interviews on state and the administrative arenas.

A more precise description of actors (institutions) and their relevance to the investigated arena is presented in the chapter below.

2.4. Description of Institutions and Companies according to Arenas

Arenas in the study were formed in order to represent power, activities and tasks that are fulfilled regarding GHG emissions reductions. This format is related to MLG where decision-making is dispersed across multiple territorial levels. Legislation was also grouped in correspondence with arenas – from international treaties to national laws and government acts that legitimize legal rules.

The chosen top-down implementation model in the study is related with hierarchical order. Kronsell (1997) describes hierarchization as "a bureaucratic practice which implies that coordination is mediated by recombining sectored solutions though chains of authority emanating from the top"[211].

The following actors are selected or considered in the research:

The UNFCCC Secretariat, which makes arrangements for the Conference of the Parties (COP), its subsidiary bodies established under the Convention and their Bureau and provides them with required services.

The Directorate - General for Climate Action ("DG CLIMA"), which leads international negotiations on climate, helps the EU to deal with the consequences of climate change and to meet its targets for 2020 and beyond. The DG CLIMA also develops and implements the EU Emissions Trading System.

Actors in the national arena. *The Committee on Environment Protection* at the Seimas of the Republic of Lithuania and *The Ministry of Environment* of the Republic of

[210] Industries, which are included in the EU ETS and which activities are influenced, are presented in Annex I of Directive 2003/87/EC.

[211] Kronsell, A. Greening the EU, Power Practices, Resistances and Agenda Setting. Doctoral dissertation. Lund Unviersity, 1997. P. 68.

Lithuania were selected. The Committee was formed by the Seimas from its members. The Seimas is considered as the highest authority that issues laws. *The Committee on Environment Protection* considers draft laws and issues regarding environmental protection and coordinates the work of the interested State institutions and other organizations in the process of drafting laws.

The Ministry of Environment has been assigned by laws as a coordinating ministry for the implementation of the Kyoto protocol, the EU ETS directive and other relevant legislation on climate change. The Ministry belongs to the Government of the Republic of Lithuania that issues government acts.

Actors in the administrative arena. Relevant administrative structures (budgetary and public institutions) and companies were selected:

The Environmental Protection Agency – one of its responsibilities is to coordinate the work of *Regional Environmental Protection Departments (REPD)*. REPDs are responsible for issuing permits for operators that have obligations to reduce GHG. REPDs inspectors have sanctioning power in case the permits are not followed. REPD also carry other tasks – elements of the EU ETS implementation are only a part of all their activity.

State enterprise Energy Agency deals with the National Energy Strategy and Programme, as well as other programs that are imposed to increase energy efficiency and the use of renewable energy sources – leading to GHG emission reductions.

Lithuanian National Accreditation Bureau (hereinafter - NAB) gives certification for inspection bodies (independent verifiers). It is one of the functions of NAB according to mandates of legislation. *Independent verifiers* validate (or not) actual installation's emissions annually.

Other not budgetary but related institutions to the administrative arena were selected. The institutions (or private companies) do not carry any activities conditioning GHG emissions but play a major role when implementing the EU ETS in the state:

Lithuanian Environmental Investment Fund (hereinafter – LEIF) carries the function of administrator of National GHG Registry and was one of the leading institutions (together with the Ministry of Environment) establishing the EU ETS in the national arena.

The Center for Environmental Protection Policy is a non profit organization. The center works mainly in the environmental sector - provides consultancy and project administration services, prepares drafts of legislation, strategies and plans. The center has been involved in preparation of the GHG inventory report in Lithuania and studies on implementation of the UNFCCC.

COWI Lietuva is a private company which compounded the National allocation plans of GHG allowances (2005-2007 and 2008-2012) after the public procurement process, initiated by LEIF and the Ministry of Environment. The plans were formed following the requirements of Directive 2003/87/EC. The company is the main enterprise which undertakes studies of climate change, related to industry and GHG emissions. It also consults companies regarding different issues of implementation.

The Confederation of Industrialists (LPK) represents the rights of the members of the Confederation (production companies) and defends their interests in the govern-

mental, social and international structures (one industrial company from this sector was interviewed). It also seeks to create most favorable conditions for the development of economics, technical and social progress of Lithuanian enterprises.

Lithuanian District Heating Association (LDHA) represents the interests and rights of Lithuanian District Heat companies and other associated energy structures in the district heating sector (two companies of this sector were interviewed).

Bureau Veritas Lit Ltd holds the certification to verify GHG emissions of installations.

Actors in the industry arena. The biggest companies, according to their performance in Lithuania, were selected. All companies are included in the EU ETS and play a major role in energy and production industries in the state.

Lietuvos elektrinė (*Lithuanian Power Station)*, the main producer and distributor of electricity in Lithuania.

Vilniaus Energija (Vilnius Energy) supplies Vilnius city and some of its close smaller cities (Grigiškės, Salininkai and Trakų Vokė) with heating (according to the centralist system). The company belongs to the *Dalkia group*[212]. Litesko Ltd. – also belonging to *Dalkia group* – has branches in other regions of the country and provides heating for a bigger part of other cities in Lithuania.

Panevėžio Energija (Panevėžys Energy) supplies Panevėžys city with heating and electric power production (according to the centralist system). The company also has branches and energy production in other parts of Lithuania.

Achema is a leading manufacturer of nitrogen fertilizers and chemical products in Lithuania and the Baltics.

Generalizing actors to arenas, I refer to A. Smaling (2003) and inductive generalization[213]. In this case substantial statements received from a small number of interviewees are considered relevant to the whole arena. However in order to see what is common (or different) between one interview and another in the same arena, case-to case generalization is used[214].

2.5. A Study of Legislation and Documents

After the pre-study, a study of legislation was performed doing content analysis[215]. The boundary between these studies is tenuous. However the pre-study gave direction on the legislation area to a study of legislations.

The following tasks are foreseen to be carried out during this study:

- to collect and structure empirical data (related legislation) on each level of implementation;

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[212] Dalkia is a major energy services provider in Europe and the world.

[213] As quoted by Bitinas, B., Rupšienė, L. et al. *Kokybinių tyrimų metodologija*. Klaipėda 2008. P. 97. [Qualitative Research Methods, own translation].

[214] Ibid.

[215] Kardelis, K. *Mokslinių tyrimų metodologija ir metodai*. P. 224-231; Merriam, S. B. Qualitative Research: A Guide to Design and Implementation. San Francisco: Jossey-Bass, 2009. P. 152; Bitinas, B., Rupšienė, L. et al. *Kokybinių tyrimų metodologija*. 2008. P. 225-234.

- to determine spheres of legislation, directly or indirectly related with GHG emission reductions and permits issuance for operators;
- to identify a certain trend of legislation; and
- to identify institutions and mandates according to the laws and government acts.

Hence the main focus when analyzing legislation is to determine the structure of distribution of tasks and sphere of competence among higher institutions, institutions and other bodies. Here a clear top-down approach of distribution of tasks, responsibilities and power between institutions is observed. Legislation of supra-state level is taken for granted, as this has to be implemented on local ground according to the international treaties of cooperation. The following types of legislation are considered in the *international arena* (supra-state level):

- directives: the purpose when transposing them to national legislation is to implement objectives, but measures may be chosen by the state itself;
- regulations: full implementation; however national laws counts;
- resolutions: applied for a specific case for a specific state;

When it comes to the *national arena*, the following order of legislation issuance and mandates of high institutions are observed:

- Laws, adopted by High authority with legislative power – the President and the Seimas of the Republic of Lithuania - High (legislative) authority. This type of legislation has supremacy power and sets rules and trends for Government acts.
- Government acts: decisions, regulations, orders, procedures, etc. – adopted by the Government of the Republic of Lithuania – Executive authority. Government acts designate and elaborate on tasks and responsibilities for institutions in administrative arena (Environmental Protection Agency (EPA), REPDs, and related Public Enterprises). Orders occasionally provide conditions for public procurements and set obligations for appropriate state and public institutions.

After the study, the following linkages between legislation and arenas are considered:

Table 3. Linkages Between Arenas and Corresponding Legislation

Arena	Corresponding legislation
International arena	• The United Nations Convention On Climate Change; • The Kyoto protocol; • secondary legislation of the EU: related directives, regulations, resolutions.
National arena	• Laws: adopted by High authority with legislative power (The Seimas of the Republic of Lithuania); • The Government acts, other legal acts, adopted by the Seimas of the Republic of Lithuania and by the Government of the Republic of Lithuania (authority with legislative and executive power: decisions, strategies, regulations, orders, procedures, etc).

Relevant documents to the study were deliberated together with legislation in this study "in a support of a qualitative investigation"[216]. Those documents could be grouped as:

- international studies and related surveys on the implementation of the EU ETS, placed on The Directorate-General for Climate Action (DG CLIMA) website and other databases;
- memos of the European Commission;
- National reports of the country or related studies, concerning the implementation of climate change policy and measures in Lithuania, national reports on implementation of the 2003/87/EC (emission trading) directive in Lithuania. Related studies were done under the commission of the responsible authorities – the Ministry of Environment of the Republic of Lithuania, the Ministry of Foreign Affairs of the Republic of Lithuania, etc.

2.6. A Study of Semi-structured Interviews

The previous studies (the pre-study and the study on legislation and documents) helped to identify actors in each arena of the study. In depth interviewing was used as another data collection technique.

There are several forms of conducting interviews: person-to person (individual), group or collective formats. It is necessary to interview when we want to find out about past and current events that are impossible to replicate[217]. According to the structure, interviews can be highly structured (standardized), semi-structured or unstructured (informal)[218]. In the study semi structured interviews were carried out to receive more information on the actual implementation of top-down legislation. When it comes to the type and format of interviews, semi-structured interviews were chosen because it is possible "to obtain a deeper knowledge on empirical situation"[219] with the help of such a structure of interviews. The interviewees' reflection on certain aspects of the implementation of legislation was examined with the help of open questions. This helps to identify the divergence or similarities of certain aspects of implementation and elaborate on differences between different arenas.

Interviews were carried out in Lithuania in three sessions: September 22 – October 7, December 17 – 28, 2010 and February 28 – March 4, 2011. In total, 22 interviews from 40 minutes to an hour and a half were conducted in different arenas (national, administrative and industry)[220]. This gives an appropriate ground for identifying key and sometimes controversial points, discussed in presenting empirical data. Key aspects, identified during the analysis, might be the link in describing the nature of barriers between arenas of implementation.

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[216] Merriam, S. B. *Qualitative Research : A Guide to Design and Implementation*. 2009. P. 149.

[217] Ibid. P. 88.

[218] Ibid., P. 89-91. Also cf Bitinas, B., Rupšienė, L. et al.

[219] Wedin, L. Going Green: A Study of Public Procurement Regulation Doctoral dissertation, Lund University, 2009. P. 24.

[220] For more detail information about interviewees see ANNEX 5.

Interviews were carried out and transcribed afterwards in more than 200 pages. Relevant quotes are presented by personal translation afterwards.

The questions for interviewees were formed in such a manner in order to reveal features, indirectly linked to three dimensions, influencing norms to occur: will, knowledge and possibilities / restrictions[221] - as well as to identify the impacts on implementation of relevant climate change regulations in different arenas.

Table 4. Sample Questions on Different Arenas, Indirectly Linked with Dimensions that Influence Norms

Dimension / arena	National arena	Administrative arena	Industry
Possibilities/ restrictions	• What is the essence of international agreements – and the impact in the national legal system? • What are the main obstacles for energy / industry to implement rules?	• How national legislation related to GHG emission reductions change behavior at the administrative level? • What are the main obstacles for energy / industry to implement rules?	• How new rules, created by legislation to reduce GHG emissions, change behavior in management and production? What are the main obstacles to be overcome? • Why do you consider implementing measures for GHG reductions? What factors do you find mostly important in your case?
Will	• Would GHG emission reductions be achieved without international agreements?	• How do you see the willingness of the industrial sector to implement new rules in order to preserve nature?	• Would you implement any measures for GHG reductions if there would be not requirements set by the legal system?
Knowledge	• How could the consciousness level of society and the energy sector be increased?	• What is your opinion regarding new legal rules, enforcing preservation norms? Why are they needed?	• What knowledge do you find mostly important for implementing new rules?

The table presents the sample questions, leading to conversations about dimensions influencing norms. All questions are presented in annexes 2-4 (original, Lithuanian version is presented in annexes 7-9). I consider the study with semi-structured interviews as one study. Although the questions for representatives of three arenas are slightly different, they are however formed according to one theme.

[221] Hydén, H. Putting Law in Context - Some Remarks on the Implementation of Law in China. In *Contribution in Sociology of Law,* edited by Hydén, H., Wickenberg, P. Lund studies in Sociology of Law (29). Lund: Lund university, 2008. P. 153-154.

The following tasks were raised during the interview study:

- to find out about the understanding and essence of relevant international legislation, its impact on the national legal system and influence at the administrative level;
- to discover the main obstacles of implementation of legal rules, directing for reductions of GHG emissions;
- to identify any top-down power relations, which come with the hierarchical order of distribution of mandates between institutions;
- to find out about bottom-up process considering legislation, directing toward GHG emission reductions (interest representation).

A categorization method was used in order to conduct a meta-analysis of empirical data. After making the transcripts of interviews, I used analytical coding[222] for identifying patterns (themes in the transcription of the interview study). Coding was done with the help of colors, single words, numbers and spacers. The challenge was "to construct categories or themes that capture patterns that cut across"[223] data and to make it clear, that categories "are abstractions derived from the data, not the data themselves"[224].

According to Merriam, "devising categories is largely an intuitive process"[225] made by the researcher, but the study's purpose, researcher's orientations and knowledge also matters. Following the topics of the transcripts, the categories were classified with the help of the matrix presented below. The marking shows that the category is identified in the arena. The interviewees "may determine what is important – that is, some categories will appear to various audiences as more or less credible"[226].

Table 5. Scheme Matrix of Categories and Arenas

Interviewees / **Categories**	**National arena**			**Administrative arena**			**Industrial arena**		
	Interviewee	Interviewee	Interviewee	Interviewee	Interviewee	Interviewee	Interviewee	Interviewee	Interviewee
1st Category	X	X			X	X	X	X	
2st Category		X	X	X				X	X
3st Category		X	X		X	X	X	X	
4th Category	X	X			X	X	X	X	
5th Category	X		X	X		X	X		X

The following categories were identified: a small state (1); knowledge (2); threat of losing production (3); means for compliance (4); and standard of living and priorities (5).

In the study of interviews, categories describe the data and also interpret it.

222 Merriam, S. B. *Qualitative Research : A Guide to Design and Implementation.* P. 180.

223 Ibid., P. 181.

224 Ibid.

225 Ibid., P. 183.

226 Ibid., P. 187.

For supporting each category and its relevance with the research, additional documentation analysis was used, identified in the study of legislation and documents.

2.7. List of Material and Databases

- Legislation adopted in different arenas: 1) The UNFCCC, The Kyoto protocol, The EU secondary legislation (directives, regulations, resolutions); 2) national laws; 3) government acts: decisions, regulations, orders and rules;
- 22 Interviews in national, administrative and industry arenas;
- State reports and publications on implementation of climate change policies and measures (official reports on implementation; related studies, done under the commission of the responsible ministries);
- Official Memos of the EU Commission, explaining or elaborating on a piece of legislation or relevant policy;
- The EU Explanatory papers for the Member states;
- International studies and related surveys on the implementation of the EU ETS, placed on The Directorate-General for Climate Action website;
- Reports of the European Environmental Agency on Application of the Emissions Trading Directive by EU Member States.

Databases of legislation and implementation:

- Legal acts of the EU, available at: http://eur-lex.europa.eu/en/index. htm
- Legal acts of the Republic of Lithuania, available at: http://www3.lrs.lt/pls/inter/w2008_home. home?p_kalb_id=2
- Toshkov, Dimiter (n. d.) Implementation of EU Law: An Online Database of Existing Research, in cooperation with the Institute for European Integration Research at the Austrian Academy of Sciences, available at: www.eif.oeaw.ac.at/implementation
- Eionet Central Data Repository of the European Environmental Agency, database of national reports under European obligations, available at http://cdr.eionet.europa.eu/

2.8. Operationalizing the Research

As described in the above chapters, the study concerns the implementation of Kyoto targets in Lithuania. In order to elaborate on the research question, several dimensions are considered. Firstly, these are legal frameworks through which legal rules are distributed between arenas. Legal frameworks are created in order to achieve certain objectives – in the study these are related with GHG emission reductions – and comply with international (together with EU) obligations. In a simple way which I consider in the study, the legal framework can be systematically shown:

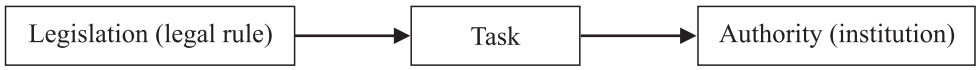

Figure 5. A Scheme of Legal Framework

Obviously, legislation may set a number of tasks and involve a number of authorities (institutions). Hooghe and Marks argue that MLG benefits from its flexibility as it allows "jurisdictions to be custom-designed in response to externalities, economies of scale, ecological niches and preferences"[227]. This argument explains why the implementation of the same EU legislation (directives) may differ in Member states. The same tasks can be achieved attracting different structures on national arenas. Hence, legal frameworks and institutional structures should be presented when elaborating on the first sub-research topic. The study of legislation reveals that as relevant tasks are considered during the study.

Different conditions may influence the implementation of legal rules and tasks. If we turn to different systems – the political and administrative systems interact with the economic, socio-cultural and natural systems – and vice versa. The administrative system has been created to complement the other systems in various aspects[228]. Bureaucracy in this aspect has to insure the successful implementation of relevant tasks. From the start it was stated that bureaucracy should achieve the aim and goal with the greatest possible efficiency and at the least cost of resources[229].

The political system also serves to implement other systems' needs. It has "power" as it serves to implement other systems' needs when creating legal rules. It is more purpose-bound as it is composed "to represent the collective interest, public interest in interpersonal relationships"[230]. Hence, systems accomplish different purposes, where the economic system's purpose is determined by the profit motive "and competition is dominant over other systems of action and their norms".

Actors of the study depend on different arenas and on different systems respectively. While evaluating most dominant driving forces, I aim to highlight differences (or similarities) between arenas.

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[227] Marks, G., Hooghe, L. Contrasting Visions of Multi-Level Governance. In *Multi-Level Governance*, ed. Bache, I., Flinders, M. 2004. P. 29.

[228] Hydén, H. *Normvetenskap*. Lund Studies in Sociology of Law, 1403-7246. Lund: Sociologiska institutionen, Univ., 2002.

[229] Woodrow, W. The Study of Administration. *Political Science Quarterly.* 1887, 2(2). (reprinted in 1947 with author's note).

[230] Hydén, H. *Normvetenskap*. Lund Studies in Sociology of Law, 1403-7246. Lund: Sociologiska institutionen, Univ., 2002.

3. THE LEGAL FRAMEWORK AND DISTRIBUTION OF POWER

In previous parts major steps of the dissertation have been undertaken in describing the theoretical framework of MLG and implementation. Methodological tools for further investigation have also been elaborated. Due to the research questions and the chosen approach of investigation, empirical data will be outlined in two chapters. The third part will elaborate on legal frameworks in order to present relevant international and EU legislation in relation to the United Nations convention of climate change (hereafter - the UNFCCC) – and its' Kyoto protocol focusing on GHG emission reductions requirements as well as subsequent effects on different arenas. Hence the first sub-research topic will be elaborated upon, that is a description and analysis of legal frameworks regarding reductions of GHG emission – and how they relate to each other. Legislation analysis is needed to follow the distribution of tasks and spheres of competence among arenas. With this, mandates and institutions will be distinguished.

The third part will start with a short description of international legislation (the UNFCCC and the Kyoto protocol) and will be followed by the climate law in the European Union. The implementation of the main directive at national and administrative arenas will be expounded – and the scheme of core tasks per institution will be presented.

The fourth part will present empirical data from interviews according to categorization.

3.1. The Background of International Agreements of Climate Change

The United Nations framework on climate change was adopted in 1992. This marked the beginning of the international response to climate change. The convention set a framework of actions in order to stabilize atmospheric concentrations of GHG[231]. The overall framework for intergovernmental efforts to tackle the challenge of climate change was initiated. With the UNFCCC it was recognized that, among other aspects states:

> Should enact effective environmental legislation, that environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply, and that standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries[232].

Besides, it was also recognized:

> The need for developed countries to take immediate action in a flexible manner on the basis of clear priorities, as a first step towards comprehensive response strategies at the global, national and, where agreed, regional levels that take into account all greenhouse gases, with due consideration of their relative contributions to the enhancement of the greenhouse effect[233]

[231] UNFCCC entered into force in 1994 and has 194 parties (IISD Reporting Services. Earth Negotiations Bulletin: COP 15 Final. Available at: http://www.iisd.ca/download/pdf/enb12459e.pdf; accessed online: April 10, 2010.

[232] United Nations Framework Convention on Climate Change, 1992. P. 2.

[233] Ibid., P. 3.

Hence, under the UNFCCC national governments should gather and share information on GHG emissions, as well as national response policies and best practices. National strategies should be initiated to address GHG emissions and to adapt to the expected impacts of climate change. Financial and technological support to developing countries should be anticipated and cooperation in preparing for adaptation to the impacts of climate change foreseen[234].

The Conference of the Parties (COP) – as the supreme body of the UNFCCC – was established by Article 7. The article states that COP is responsible to

> Keep under regular review the implementation of the Convention and any related legal instruments that the Conference of the Parties may adopt, and shall make, within its mandate, the decisions necessary to promote the effective implementation of the Convention[235].

Arrangements are made for COP by the Secretariat, which is established by Article 8. The Secretariat is also responsible for providing COP and its subsidiary bodies with services as required[236].

The UNFCCC was signed by Lithuania in Rio de Janeiro in 1992, together with 155 other countries[237]. The Parliament of Lithuania ratified the UNFCCC by law in 1995[238]. The convention is implemented through the National strategy for the implementation of the United Nations Framework Convention on Climate Change (hereinafter – Climate Change Strategy). The Climate Change Strategy is in effect until 2012[239], having been adopted in 2008 and revised in 2009[240]. The objectives of the strategy are to evaluate the impact of climate change on Lithuania‘s economy and environment – and to set measures for mitigation and adaptation to climate change impacts. The analysis of climate variations and trends; an evaluation of the impacts of climate variation in terms of long-term economic planning and management; as well as the provisions of adaptation measures – are discussed in the document. The Climate Change Strategy obliged the Ministry of Environment “to organize and coordinate the fulfillment of the National Strategy for the

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234 Information of the UNFCCC. Convention. *Essential background* [interactive]. Available at: http://unfccc.int/essential_background/convention/items/2627.php; accessed online: July 15, 2011.

235 United Nations Framework Convention on Climate Change. Article 7.

236 Ibid., Article 8.

237 Lietuvos Respublikos aplinkos ministerija. 2002 m. spalio 17 d. aiškinamasis raštas Nr. IXP-2003 Lietuvos Respublikos įstatymo „Dėl Jungtinių Tautų bendrosios klimato kaitos konvencijos Kioto protokolo ratifikavimo” [The Explanatory Paper of the Ministry of Environment of the Republic of Lithuania regarding the Draft of the Law of the Kyoto Protocol; own translation].

238 Lietuvos Respublikos Seimo 1995 m. vasario 23 d. Nr. I-812 nutarimas “Dėl Jungtinių Tautų bendrosios klimatos kaitos konvencijos ratifikavimo” [Decision of the Seimas of the Republic of Lithuania on Ratification of the UNFCCC; own translation]. Valstybės žinios [Official Gazette]. 1995, Nr. 18-413.

239 Lietuvos Respublikos Vyriausybės 2008 m. sausio 23 d. nutarimas Nr. 94. “Dėl Jungtinių Tautų bendrosios klimato kaitos konvencijos įgyvendinimo iki 2012 metų nacionalinės strategijos patvirtinimo” [Decision of the Government of the Republic of Lithuania “On Approval of the National Strategy for Implementation of the United Nations Framework Convention on Climate Change until 2012”; own translation]. Valstybės žinios [Official Gazette]. 2008, Nr. 19-685.

240 For horizontal and vertical implementation of the UNFCCC cf Bubnienė, R., doc. Rimkus, E., doc. Štreimikienė, D. ed. Klimato Kaitos Politikos Pagrindai. Vilnius: Kopa, 2006 [The Essentials of Climate Change Policy; own translation] and further reports on implementation.

Implementation"[241] of the UNFCCC. With this the Ministry of Environment remains the major institution for coordinating climate change regulations and impacts.

The IPCC indicates that the energy supply and industrial sectors carry out responsibility for major GHG emissions. Worldwide, energy supply made up to 25,9 % and industry 19,4 % of overall GHG emissions in 2004. Other indicated sectors are transport (13,1 %); residential and commercial buildings (7,9 %); agriculture (13,5 %); forestry (17,4 %; forestry includes de-forestation); and waste and wastewater (2,8 %)[242]. Presenting the law in context and taking into account energy supply and industry, especially estimating further requirements for implementation, the 3rd objective in projected measures of national Climate Change Strategy states to reduce the impact of the energy, industry, transport, agricultural and forestry sectors on the climate.

Hence, the UNFCCC set a framework of actions. Specific GHG emission reduction targets for countries were foreseen by the Kyoto Protocol, adopted in 1997 in Kyoto, Japan. Industrialized countries and countries in transition to a market economy committed to achieve reductions of GHG "by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012"[243], with specific targets varying from country to country. Overall commitments of the countries look as follows:

Table 6. Quantified Emission Limitations or Reduction Targets under the Kyoto Protocol[244]

Annex I Parties[a]	**Emission limitation or reduction (expressed in relation to total GHG emissions in the base year or period inscribed in Annex B to the Kyoto Protocol**[b]
Austria, Belgium, Bulgaria, Check Republic, Estonia, European Community, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lichtenstein, **Lithuania**, Luxemburg, Monaco, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland	- 8 %
United States of America[c]	- 7 %
Canada, Hungary, Japan, Poland	- 6 %
Croatia	- 5 %
New Zealand, Russian Federation, Ukraine	0
Norway	+ 1 %
Australia	+ 8 %
Iceland	+ 10 %

[a] this table does not contain an emission target for Belarus (- 8 %), Kazakhstan (XX %)

[241] Dėl Jungtinių Tautų bendrosios klimato kaitos konvencijos įgyvendinimo iki 2012 metų nacionalinės strategijos patvirtinimo. [Decision of the Government of the Republic of Lithuania "On Approval of the National Strategy for Implementation of the United Nations Framework Convention on Climate Change until 2012; own translation], point 2.

[242] IPCC, Climate Change 2007 Synthesis Report: Geneva, Switzerland 2007. P. 5.

[243] The Kyoto Protocol of the United Nation Framework Convention on Climate Change, Article 3.

[244] Kyoto Protocol Reference Manual on Accounting of Emissions and Assigned Amount, 2008. P. 13; also cf The Kyoto protocol, Annex B.

[b] countries with economies in transition have flexibility in the choice of base year
[c] country which has declared its intention not to ratify the Kyoto Protocol

The Kyoto Protocol provides the detailed guidelines and policy mechanisms that allow governments to take more specific and measurable actions to combat climate change, in line with the objectives of the Framework Convention[245]. Besides, the Kyoto protocol also details a series of rules and projected mechanisms, such as the Clean Development Mechanism (CDM) and the Joint Implementation (JI), through which country parties might collaborate to meet their emission-reductions requirements[246].

The Kyoto protocol was ratified by law in Lithuania in 2002[247].

With accepting responsibility of GHG emission reductions, the government has to face that international agreements and regulations of climate change will have an impact upon national policies, as well as the implementation of legal rules and various interests afterwards. A network of ideas and engagements as well as interactions is likely to come up. Personally I see that climate change and its regulatory regime is a complex issue, especially when obligations and new rules of the game change behavior and comprehension of daily routines in a comparably short period of time[248].

The essence of international treaties (the convention and the protocol) and their acceptance at national level are presented below:

Table 7. International Treaties

International treaty	Essence	Acceptance	Ratified in Lithuania by laws
The UNFCCC	The convention set a framework of actions in order to stabilize atmospheric concentrations of GHG	1992	1995 (Official Gazette, 1995, No. 18-413)
The Kyoto Protocol	Emission reduction targets were estimated. Industrialized countries and countries in transition to a market economy committed to achieve reductions of GHG "by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012", with specific targets varying from country to country. Flexible Kyoto mechanisms were introduced.	1997	2002 (Official Gazette, 2002, No. 126-5728)

Having presented shortly the background of the convention on climate change and the Kyoto protocol, the next chapter will review climate change law in the EU.

[245] Cf Okereke, C. T*he Politics of the Environment : A Survey*. London: Routledge, 2007. P. 201.

[246] The Kyoto Protocol of the United Nation Framework Convention on Climate Change; also see Article 6 (regarding JI) and Article 12 (regarding CDM) of the Kyoto protocol.

[247] Jungtinių Tautų bendrosios klimato kaitos konvencijos Kioto protokolo ratifikavimo įstatymas [Law on Ratification of the Kyoto Protocol of the UNFCCC; Own translation]. Valstybės žinios [Official Gazette]. 2002, Nr. 126-5728.

[248] Evaluating time criteria, we find that the climate change being a global problem was recognised only in 1980s

3.2. Climate Change Law in the European Union

The following parts will provide a short description of relevant EU law and its relation with national legislation. Focusing on institutional performance, a short overview on rules about Lithuania's positions and coordination of EU affairs, coordination and transposition of EU legislation will be overviewed. The second part (chapter 3. 2. 2) will present a topic-specific legislation – the climate change law of the EU.

3.2.1. European Union Law and its Transposition into National Legislation

The Kyoto protocol was ratified by the EU in 2002. The EU (European Community) also obliged to reduce GHG emissions by 8 % in the period of 2008 – 2012, comparing to 1990. However, in order to effectively combat climate change, the EU anticipates much higher ambitions for GHG emission reductions. This is embraced in the EU legislation. Before starting to elaborate on climate change law in the EU, which is obligatory for the member states, it is worthwhile to describe shortly how the EU law system works – and how it affects institutional performance in the member states.

When joining the EU, after initial formative period all states have to accept the Union's existing laws and obligations, so called the *acquis communautaire*. This is the key difference of the EU comparing it with other "international organizations" - the EU law "is applicable in all member states, which supersedes national law areas where the EU has "competence", and which is backed up by rulings from the Court of Justice"[249].

Depending on the type of EU legislation, the nature of its implementation is determined in the national legal system[250]. The national institutional system has to be readjusted accordingly. So a long process for potential EU members starts before the date of their official accession – and continues after membership[251].

The EU law "derives from three main sources"[252]. Firstly, there are 8 treaties: "Paris, the two treaties of Rome, the Merger Treaty, the Single European Act, Maastricht, Amsterdam and Nice"[253]. Secondly, the treaties give ground for secondary legislation, which mainly have come in five forms. These are: regulations, directives, decisions, recommendations, and opinions. The latter ones are "adopted by the EU institutions under Article 249"[254] and constitute secondary legislation. Hix (2005) indicates that

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[249] McCormick, J. *Understanding the European Union : A Concise Introduction*, 3rd ed., The European Union Series New York: Palgrave, 2005. P. 83.

[250] Information of the Ministry of Foreign Affairs of the Republic of Lithuania. Coordination of the EU affairs in Lithuania. *Lithuania's membership in the EU* [interactive]. Available at: http://www.euro.lt/en/lithuanias-membership-in-the-eu/coordination-of-eu-affairs-in-lithuania/implementation-of-eu-law-in-lithuania, accessed online: March 2, 2010.

[251] Bomberg, E., Peterson, J. and Stubb, A. *The European Union : How Does It Work?* The New European Union Series, 99-3272170-0. Oxford: Oxford University Press, 2008. P. 75.

[252] As quoted by Hix, S. *The Political System of the European Union*. The European Union Series Basingstoke: Palgrave Macmillan, 2005. P 115.

[253] McCormick, J. *Understanding the European Union : A Concise Introduction*. P. 83.

[254] Nugent, N. *The Government and Politics of the European Union*. The European Union Series. Basingstoke: Palgrave Macmillan, 2006. P. 285; also cf Hix, S. 2005.

Regulations "have general application and are binding on both the EU and the member states"[255]. They are applied directly and

> Do not need to be turned into national law. <…> Directives are binding in terms of goals, but it is left up to the member states to decide what action they need to achieve those goals. <…> Decisions are also binding, but are usually specific in their intent, and aimed at one or more member states, at institutions, or even at individuals. <…> Recommendations and opinions have no binding force. They are sometimes used to test reaction to a new EU policy, but they are used mainly to persuade or to provide interpretation on the application of regulations, directives and decisions[256].

The third source of EU law comes from four principles: principles of administrative and legislative legality; economic freedoms; fundamental human rights; and political rights[257].

In discussing the status of EU law, terms of direct effect and primacy are applicable. Direct effect or direct applicability "refers to the principle whereby certain provisions of EU law may confer rights or impose obligations on individuals that national courts are bound to recognize and enforce"[258]. Primacy or supremacy refers to the principle that if there is an inconsistence between European and national law, the EU law is applied[259]. The member states are obliged to revoke legislation, which contradicts with the EU law, even if the legislation is not applicable or implemented[260].

A system of EU coordination has been established in order to transpose the EU laws into national legislation. Accordingly, Lithuania's positions on different questions are prepared and coordinated within Lithuania, as well as in the EU. Detailed rules for this process are laid down in resolution of the Government of the Republic of Lithuania on Coordination of European Affairs (Official Gazette, 2004, No 8-184)[261]. It affects ministries, government institutions and subordinated institutions to ministries, that participate in the process of acceptance and the implementation of relevant decisions made at EU institutions[262]. Cooperation and the creation of working groups from coherent institutions are foreseen in the rules. The Working group of Environmental protection, for example, consists of members from 9 ministries and 10 other subordinated institutions or services. The Ministry of Environment has the role of the responsible institution in this work-

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255 Hix, S. *The Political System of the European Union*. P. 116.

256 McCormick, J. *Understanding the European Union : A Concise Introduction.* P. 83; also cf to Hix, S. 2005, P. 116 and Nugent, N. 2006. P. 285-287; *Europos Sąjungos Teisė* [The Law of the European Union; own translation]. 5 ed., Routelage-Cavendish Teisės Brošiūrų Serija. Vilnius: Eugrimas, 2007. P. 26-30; Vitkus, G., ed. *Europos Sąjunga: Encikopedinis Žinynas*. 3rd ed. Vilnius: Eugrimas, 2008. [The European Union: Encyclopedic Reference Book; own translation].

257 Hix, S. *The Political System of the European Union*. P. 116-117.

258 Nugent, N. *The Government and Politics of the European Union*. P. 292. Also cf to Vitkus G., P. 306; *Europos Sąjungos Teisė* [the Law of the European Union; own translation]. P. 32-35.

259 Vitkus, G., ed. *Europos Sąjunga: Encikopedinis Žinynas [The European Union: Encyclopedic Reference Book; own translation]*. P. 323. Also cf to Nugent, N. *The Government and Politics of the European Union.* P. 292; and to *Europos Sąjungos teisė*. P. 61-64.

260 *Europos Sąjungos Teisė. Routelage-Cavendish Book Series* Vilnius: Eugrimas, 2007. P. 63.

261 Lietuvos Respublikos Vyriausybės 2004 m. sausio 9 d. nutarimas Nr. 21. "Dėl Europos Sąjungos reikalų koordinavimo" [Decision of the Government of the Republic of Lithuania "On Coordination of European Affairs"; own translation]. Valstybės žinios [Official Gazette]. 2004, Nr. 8-184 (new edition Valstybės žinios [Official Gazette]. 2005, Nr. 57-1950).

262 Ibid., general provisions.

ing group[263]. Hence Article 38 states that "state institutions or institutions according to competence are responsible for the transposition of the EU law (*acquis communautaire*) into national legislation and its implementation"[264]. The Department of European Law is responsible for the coordination of transposition of *acquis communautaire* and its implementation. The timing for transposition of the EU legislation is envisaged which can not be longer that a month later than when the transposed EU legislation comes into force[265] if no other conditions for transposition are estimated.

The rules of the resolution also estimate the procedure of preparation of positions on the suggestion to accept EU legislation or other EU documents, which are discussed in different groups of EU institutions. Government plays the role of coordinator.

The rules also estimate the reporting on implementation of the EU legislation to EU institutions – and the coordination procedure if the EU legislation is trespassed and the case is given to the court.

Means and measured for fulfilling the aim of the legislation can be incorporated in a number of national strategic documents[266]. The implementation of the UNFCCC and relevant EU legislation regarding GHG emission reduction makes a good example for this, as it is done by vertical and horizontal implementation of legislation[267].

3.2.2. Directive 2003/87/EC Establishing Emission Trading Scheme and Other Main Aspects of the Climate Change Law in the EU

The ambitions of the EU are much higher comparing with the obligations of the Kyoto protocol. The European Community targets to reduce GHG emissions by 20 % below 1990 up to 2020 and at least 50 % below 1990 levels by 2050[268]. The member states are provided with a framework of actions to deal with sustainability and cross-boarder effects of phenomena that "can not be dealt with the national level alone"[269].

In order to implement Kyoto requirements from the start, the EU initiated the first European Climate Change Program (2000 – 2004) as it was necessary to design a strategy for the implementation of the Kyoto Protocol. The programme was a help to identify

[263] Representatives from ministries included in the working group are from ministries of Energy, Finance, Social Security and Labour, Transport and Communication, Health, Foreign Affairs, Economy and Agriculture. Among subordinated institutions and services Environmental Protection Agency should be mentioned as it has relevant obligations in further analysis.

[264] Nutarimas Dėl Europos Sąjungos reikalų koordinavimo, P. 38; [Decision on Coordination on European Affairs; own translation].

[265] Ibid., P. 42.

[266] Cf Nacionalinių pajėgumų vertinimas globaliame aplinkosaugos valdymo kontekste: projekto ataskaita, 2006. [Assesment of National Capacity in the Context of Global Environmental Governance: Project Report, own translation], P. 39; also see Lithuania's Report on Demonstrable Progress in Line with Decisions 22/Cp. 7 and 25/Cp. 8, 2008.

[267] Ibid., Appendix 8, P. 4-15.

[268] Decision No 406/2009/EC of the European Parliament and of the Council on the Effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020. [2009] OJ L 140/136, p. 2; also cf to European Commission. *EU Action against Climate Change: Leading Global Action to 2020 and Beyond.* 2009.

[269] Com(2011) 112 Final. A Roadmap for Moving to a Competitive Low Carbon Economy in 2050, 2011. Brussels, 8. 3. 2011.

"the most environmentally effective and most cost-effective policies and measures"[270] to take at the EU level in order to reduce GHG emissions. The first ECCP also dovetailed the EU's Sixth Environmental Action Programme (2002 – 2012) which included climate change among its' 4 top priorities, as well as the EU's Sustainable Development Strategy. The second European ECCP was launched in 2005 at a major stakeholder conference in Brussels. It examines "further cost-effective options in order to reduce GHG emissions in synergy with the EU's 'Lisbon strategy' for increasing economic growth and job creation"[271].

The assessment of ECCP implementation distinguishes eight common and coordinated policies and measures that should deliver GHG emission reductions in the EU. Among mentioned are the EU ETS Directive; the Renewable Directive; fuel quality and CO2 reductions from cars; the Directives on the energy performance of buildings; energy taxation; and the promotion of co-generation (combined heat and power). The use of flexible Kyoto mechanisms is expected also to deliver GHG emission reductions in the EU[272].

Hence, the EU adopted a wide range of legislation, forming the climate change law in the union. However Directive 2003/87/EC *on establishing emission trading scheme* plays the key role in the climate change law. It sets obligations for the national authorities as well as for operators to reduce GHG emissions and introduces emission trading as an economically effective means for achieving the targets. The European Commission itself describes the EU ETS:

> Launched at the start of 2005, the EU ETS is the world's first international company-level 'cap-and-trade' system of allowances for emitting carbon dioxide (CO_2) and other greenhouse gases. <…>
> The system, established through binding legislation proposed by the European Commission and approved by the EU Member States and the European Parliament, is based on four fundamental principles.
> - It is a 'cap-and-trade' system
> - Participation is mandatory for business in the sectors covered
> - It contains a strong compliance framework.
> - The market is EU-wide but taps into emission reduction opportunities in the rest of the world by accepting credits from emission-saving projects carried out under the Kyoto Protocol's Clean Development Mechanism (CDM) and Joint Implementation instrument (JI). The EU ETS is also open to establishing mandatory cap-and-trade systems in the third countries that have ratified the Kyoto Protocol[273].

In addition the European Commission states, that:

> At the heart of the EU ETS is the common trading 'currency' of emission allowances. One allowance gives the right to emit one tone of CO_2. Member States currently required to draw up national allocation plans for each trading period setting out how many allowances each installation will receive each year. Decisions on the allocations are made public[274].

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[270] European Commission. *The European Climate Change Programme: EU Action against Climate Change.* 2006. P. 5.

[271] Ibid., P. 9.

[272] European Commission. *EU Climate Change Action: Progress Towards Achieving the Kyoto Objectives.* 2009. P. 11.

[273] European Commission. *EU Action against Climate Change: The EU Emissions Trading Scheme.* 2008. p. 7

[274] Ibid. P. 9.

Green paper on GHG emissions trading within the EU presents emissions trading as a scheme where the companies are allocated allowances for their emissions of GHG "according to the overall environmental ambitions of their government, which they can trade subsequently with each other"[275]. It is stated that:

> These emission allowances are sometimes called 'quotas', 'permits or caps. The total of all these allowances allocated to all companies included in the scheme represents the overall limit on emissions allowed by the scheme. It is this overall limit that provides the environmental benefit of the scheme. One main attraction of emissions trading is that it provides certainly of environmental outcome[276].

The concept of permits is used in environmental policy, especially when technical standards are applied in the field of waste, water and air pollution.

> Such regulation includes the Integrated Pollution Prevention Control (IPPC) Directive. <…>
> The key economic rationale behind emissions trading is to use market mechanisms to ensure that emissions reductions required to achieve a pre-determined environmental outcome take place where the cost of reduction is the lowest[277].

Legislation on *GHG Monitoring and Reporting; National Allocation Plans for 2005-2007 and 2008-2012*; *Registries*; *Auctioning*; *Effort Sharing; Carbon Capture and Storage; Benchmarking; and Aviation* is either directly linked with the Directive 2003/87/EC or has a great role in the climate change law. This legislation is shortly described in the tables below: [278]

Table 8. Main EU ETS Legislation

Title of legislation	Essence / period, by which the legislation should be implemented in the Member states	Explanation
Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, **establishing a scheme for greenhouse gas emission allowance trading** within the Community	This Directive establishes a scheme for GHG allowance trading within the Community in order to promote reductions of GHG emissions in a cost-effective and economically efficient manner[278]. Implementation in the Member states – by 31 December 2003 at the latest.	The main emission trading directive (initial) and one of the main directives of climate change law in the EU

[275] Com (2000) 87 Final. Green Paper on Greenhouse Gas Emissions Trading within the European Union, 2000. Brussels, 8. 3. 2000.

[276] Ibid., part 3, *What is emission trading*?

[277] Ibid.

[278] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community. [2003] OJ L 275/32, Article 1.

Table 8. Main EU ETS legislation (continued)

Title of legislation	Essence / period, by which the legislation should be implemented in the Member states	Explanation
Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, **in respect of the Kyoto Protocol's project mechanisms**	Amendments were done in respect of the Kyoto Protocol's project mechanisms. Use of CERs and ERUs from project activities in the Community scheme was foreseen, when "Member States may allow operators to use CERs ad ERUs from project activities in the Community scheme up to a percentage of the allocation of allowances to each installation, to be specified in its national allocation plan for the period"[279]. Implementation in the Member states – by 13 November, 2005	Amendments to the Directive 2003/87/EC
Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so **as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community**	Amendments in respect to include aviation activities in the scheme for GHG emission allowance trading within the Community starting from 2012[280]. Implementation in the Member states – before 2 February 2010	Amendments to the Directive 2003/87/EC
Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC **so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community**	The Directive "lays down provisions for assessing and implementing a stricter Community reduction commitment exceeding 20 %"[281] of GHG emission reductions, "to be applied upon the approval by the Community of an international agreement on climate change" leading to GHG emission reductions exceeding those required in Article 9, as reflected in the 30 % commitment endorsed by the European Council of March 2007"[282]. Implementation in the Member states – by 31 December, 2012.	Amendments to the Directive 2003/87/EC and its extension

Directive **2003/87/EC** which is amended by **Regulation (EC) No 219/2009**, states that in order to implement the directive:

[279] Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms. [2004] OJ L 338/18. Article 1.

[280] Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community. [2009] OJ L 8/3.

[281] Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community. [2009] OJ L 140/63. Article 1.

[282] Ibid.

> The Commission shall adopt a Regulation for a standardised and secured system of registries in the form of standardised electronic databases containing common data elements to track the issue, holding, transfer and cancellation of allowances, to provide for public access and confidentiality as appropriate. <…> That Regulation shall also include provisions concerning the use and identification of CERs and ERUs in the Community scheme and the monitoring of the level of such use[283].

However before launching emission trading scheme in the EU, establishment of such registries was foreseen in all member states. Article 19 of Directive **2003/87/EC** states**:**

> Member states shall provide for the establishment and maintenance of a registry in order to ensure the accurate accounting of the issuance, holding, transfer and cancellation of allowances[284].

Hence each Member State[285] has its national ETS registry. The registry records national allocation plans and allowances that are assigned to the Member State – and allocated to each country's operator that participates in the EU ETS system. The registry has a number of different account types, where allowances and Kyoto units are held. With the help of registries, transfers of these allowances and units are performed between the account holders. Registries also have records on actual and verified CO_2 emissions from each installation – and provide information on compliance status of installations and operators. According to the definition of Directive **2003/87/EC,** installation means:

> A stationary technical unit where one or more activities listed in the Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution[286].

The national registries are connected to the Community Independent Transaction Log (CITL), which verifies automatically all transactions and records in the registry. In addition, registry systems should provide public access to relevant environmental information about installations, allocated GHG allowances and actual GHG emissions. Hence, "specific reports should be made public on a regular basis to ensure that the public has access to information held within the integrated system of registries, subject to certain confidentiality requirements"[287].

The revision of Directive 2003/87/EC gives ground for centralization of the ETS operations and a single European Union registry. The following registry will replace national registries in the Member States and will be operated by the Commission.

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[283] Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009 adapting a number of instruments subject to the procedure referred to in article 251 of the Treaty to Council Decision 1999/468/EC with regard to the regulatory procedure with scrutiny — adaptation to the regulatory procedure with scrutiny. [2009] OJ L 87/109. Part 3 (Environment), p. 3. 6.

[284] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community, Article 19.

[285] Also Norway, Iceland and Liechtenstein.

[286] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the community and amending Council Directive 96/61/EC, Article 3 (e).

[287] Comission Regulation (EC) No 994/2008 of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council. [2008] OJ L 271/3.

The development of the regulations for registries is presented in the table below:

Table 9. Implementation of the EU ETS and Development of Regulations on Standardized and Secured Systems

Title of legislation	Essence / entry into force	Explanation
Regulation (EC) No **2216/2004 of 21 December 2004 for a standardised and secured system of registries** pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council	This Regulation lays down general provisions, functional and technical specifications, operational and maintenance requirements concerning the standardised and secured registries system consisting of registries[288], purpose of which is to record the issue, transfer and cancellation of allowances. Entry into force – the following day of its publication in Official Journal of the EU.	Implementation of Directive **2003/87/EC** (Article 19) - initial regulation on registries. To be repealed from January 2012 and replaced by new regulation on registries.
Decision of **13 November 2006 on avoiding double counting of GHG reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol** pursuant to Directive 2003/87/EC	The decision sets provisions to avoid double counting of allowances and Kyoto units and for the "implementation of Article 11b(3) and (4) of Directive 2003/87/EC"[289].	Provisions for implementation of Directive 2003/87/EC
Regulation (EC) No **916/2007 of 31 July 2007** amending Regulation (EC) No 2216/2004 for a standardised and secured system of registries pursuant to Directive 2003/87/EC	Amendments done necessary to implement connectivity and other associated changes regarding the International transaction log (operated by the UNFCCC). This is done in order to ensure proper connectivity as well as registration, issuance, national and international transfers of the Kyoto units (EUAs, CERs, AAUs)[290]. Enter into force – the 3rd day of its publication in Official Journal of the EU with indicated articles on from February 1, 2008 or January 1, 2009.	Amendments to Regulation 2216/2004

[288] Commission Regulation (EC) No 2216/2004 of 21 December 2004 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council. [2004] OJ L 386/1.

[289] Commission Decision 2006/780/EC of 13 November 2006 on avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Directive 2003/87/EC of the European Parliament and of the Council. [2006] OJ L 316/12. Article 1.

[290] Commission Regulation (EC) No 916/2007 of 31 July 2007 amending Regulation (EC) No 2216/2004 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council. [2007] OJ L 200/5.

Table 9. Implementation of the EU ETS and Development of Regulations on Standardized and Secured Systems (continued)

Title of legislation	Essence / entry into force	Explanation
Regulation (EC) No **994/2008 of 8 October 2008** for a standardised and secured system of registries pursuant to Directive 2003/87/EC	Further improvements on operational and maintenance requirements and communication of the registry systems. Enter into force - the following day after its publication in the Official Journal of the EU; Articles 2 to 88 shall apply from 1 January 2012.	Amendment to Regulation 2216/2004
Regulation (EU) No **920/2010 of 7 October 2010** for a standardised and secured system of registries pursuant to Directive 2003/87/EC	Revision done after EU ETS expansion and registries' centralization – a ground for establishment of a single European registry[291]. Enter into force - the following day after its publication in the Official Journal of the EU. Articles 2 to 76 and the Annexes shall apply from 1 January 2012.	New regulation for registry systems

In addition to Directive 2003/87/EC and its implementation through standardized and secured systems of registries, there are some other aspects of the climate change law in the EU that should be described. It is important to mention monitoring and reporting of GHG emissions which each installation has to perform. "Member States shall ensure that each operator of an installation or an aircraft monitors and reports the emissions from that installation during each calendar year"[292]. Commission Decision on monitoring and reporting set "quidlines for the monitoring and reporting of greenhouse gas emissions from the activities listed in Annex I to Directive 2003/87/EC"[293] that are presented in Annexes of this Decision. The legislation replaced previous Decision 2004/156/EC on monitoring and reporting and was applied from January 1, 2008.

Besides monitoring and reporting of GHG emissions from installations and aircrafts, Member States are also obliged to monitor overall countries' GHG emissions according to the Kyoto Protocol, as well as to deliver inventory reports, covering all sectors of GHG sources.

Decisions on the Member States efforts to reduce GHG emissions and other legislation related to Directive 2003/87/EC are presented below:

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[291] Commission Regulation (EU) No 920/2010 of 7 October 2010 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council. [2010] OJ L 270/1.

[292] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community. Article 14(3).

[293] Commission Decision 2007/589/EC of 18 July 2007 establishing guidelines for the monitoring and reporting of GHG pursuant to Directive 2003/87/EC of the European Parliament and of the Council. [2007] OJ L 229/1. Article 1.

Table 10. EU Legislation on Efforts of Member States to Further GHG Reductions, on Carbon Leakage and Benchmarking

Title of legislation	Essence / entry into force	Explanation
Decision No 406/2009/EC of 23 April 2009 of the European Parliament and of the Council **on the effort of Member States to reduce their GHG emissions** to meet the Community's GHG emission reduction commitments up to 2020	Provisions set for assessing and implementing a stricter Community reduction commitment exceeding **20 %** in the period of 2013-2020 and up to **30 %** upon approval of international agreement on climate change, as endorsed by the European Council of March 2007[294].	Related to overall climate change policy in the EU and contribution of each Member State regarding GHG emission reductions.
Decision No 2010/2/EU of 24 December 2009 **determining**, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, **a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage**	The decisions estimates sectors and subsectors which are 'deemed to be exposed to a significant risk of carbon leakage' due to the requirements of GHG reductions[295].	Partial implementation of Directive 2003/87/EC – legislation compiled according to 14-17 paragraphs of Article 10a of Directive 2003/87/EC[296]
Decision No 2011/278/EC of 27 April 2011 **determining** transitional Union-wide **rules for harmonised free allocation of emission allowances** pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council[297]	The decision contains the rules (including the benchmarks) to be used by the Member States to calculate the annual number of allowances to be allocated free of charge to ETS installations in their territories from 2013 onwards[298].	Partial implementation of Directive 2003/87/EC - legislation compiled according Article 10a of the Directive 2003/87/EC

Table 10 shows the latest legislation influencing GHG emission reductions in the Member States. Decision No 406/2009/EC is related to the total Community's responsibility regarding overall GHG emission reductions in the EU and the contribution of each Member State. According to the decision, reductions shall be achieved through common but differentiated responsibilities. The minimum contribution of Member States to meet GHG emission reductions for the period 2013-2020 is foreseen. Decisions 2010/2/EU and

[294] Decision No 406/2009/EC of the European Parliament and of the Council on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020. [2009] OJ L 140/136. Article 1.

[295] The list is presented in the annex of the Commission Decision No 2010/2/EU determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage, [2010] OJ L 1/10 and is foreseen for annual update.

[296] Ibid., Article 1.

[297] Commission Decision No. 2011/278/EC of 27 April 2011 determining transitional union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council. [2011] OJ L 130/1.

[298] Explanatory Paper of the Commision on the Draft Commission's Decision on Free Allocation Rules for the Emissions Trading Scheme ('Benchmarking Decision'). Available at: http://ec.europa.eu/clima/policies/ets/benchmarking/docs/explanatory_paper_en.pdf, accessed online: April 10, 2011.

2011/278/EC are directly linked with the implementation of Directive 2003/87/EC, as they are compiled according to the relevant articles (14-17 and 10a) of the directive.

Decisions 2010/2/EU should be elaborated upon. Possible adverse effects of high requirements for industry in the EU were recognized. The list of sectors and subsectors that might be attracted by carbon leakage was determined. The risk of accompanying climate policies in general goes with the potential shift in production to those countries where production is less regulated.

After the objective description of climate change legislation at international and at EU arenas, the next chapter will overview shortly its implementation in Lithuania. The focus will be done on how legal frameworks pertaining to different arenas are related with each other – and what institutions are involved in the implementation.

3.3. National Implementation: New Rules, Supremacy, Transposition and Institutions Involved

The study of domestic legislation concerning regulations of climate change and especially GHG emission reductions for the industrial sector has a top-down (vertical) flow. According to the EU law each member state must ensure the implementation and domestic enforceability of the EU legislation after it is formally adopted by EU institutions. The timing for incorporation of the EU legislation into national laws is usually estimated in certain EU legislation[299]. The step flow of implementation from international and the EU arena to industrial arena in this study also exists.

As it was stated in previous chapters, the UNFCCC and the Kyoto protocol was ratified in Lithuania by laws. Coherent European legislation is chosen to describe the impact of associated legal rules for GHG emissions reduction in industry. This is a trend in the EU legislation, launching emission trading scheme (the EU ETS) in Europe[300]. Considering the obligations of the Kyoto protocol and the EU requirements for GHG emission reductions, the trend sets direct responsibilities and obligations for the member states, enforcing preservation norms of the natural system and natural resources. The legislation establishes rules for GHG emission limitations and foresees sanctions and their placement in case of non-compliance with those rules. The legal rules are mainly used in order to preserve nature. They also identify main actors and their obligations, which in turn have an influence on the administrative system and its institutions.

The responsibility of the implementation of the EU legislation is mainly placed on the government of the country. If a member state does not transpose or implement provisions of a certain directive, the European Commission may initiate the so-called EU law infringement procedure (Art. 226 of the EC foundation treaty)[301]. Due to this

[299] Cf Nutarimas Dėl Europos Sąjungos Reikalų Koordinavimo [Resolution on Coordination of the European Affairs], 2004 [Decision on Coordination of European Affairs; own translation], p. 42 and Tables 8, 9, 10.

[300] The trend is described more detaily in previous chapters.

[301] Information of the Ministry of Foreign Affairs of the Republic of Lithuania. Coordination of the EU affairs in Lithuania. *Lithuania's membership in the EU* [interactive]. Available at: http://www.euro.lt/en/lithuanias-membership-in-the-eu/coordination-of-eu-affairs-in-lithuania/implementation-of-eu-law-in-lithuania, accessed online: March 2, 2010.

obligation for governments, the provisions for implementing the EU legislation and GHG reductions in a concrete case have to be foreseen in domestic law.

In order to understand the features of domestic environmental legislation and its course, it is worth mentioning the decision of the reconstructive Seimas of the Republic of Lithuania on National Strategy of Environment Protection (hereinafter - Strategy; *Official Gazette*. 1996, No. 103-2347). Before that, as Ragulskytė-Markovienė writes, goals of a planned economy had a preference to environmental protection[302]. The environmental management reform was started in 1990, when the department of environmental protection was established[303]. The law on environment protection was adopted in 1992 (Official Gazette, 1992, No. 5-75) by the Reconstructive Seimas of the Republic of Lithuania. In 1996 the Strategy set future principles of environmental policy that were sustainable, as well as continuous sustainable development and its assessment; the integration of environmental policy; the precautionary principle; the polluter (consumer) pays principle; prevention; implementation of best available technique; subsidiary principle; division of partnership and responsibility; and publicity of information.

Initial legislation for environmental protection and the Strategy for the implementation of the UNFCCC until 2012 (Official Gazette, 2008, No. 19-685) is presented below.

Table 11. Initial Legislation Adopted by High Authority with Legislative Power Regarding Environmental Protection and Implementation of the UNFCCC

Title of legislation	Essence	Explanation
Law on Environmental Protection (Official Gazette, 1992, No. 5-75)	This Law regulates public relations in the field of environmental protection, establishes the principal rights and duties of legal and natural persons in preserving the biodiversity, ecological systems and landscape characteristic of the Republic of Lithuania[304]. It also established the system of State Administration of Environmental Protection (the Government, the Ministry of Environment, other authorized stated institutions), rights and duties of citizens and legal and natural persons, regulations of economic activities, system of monitoring, state control of environmental protection and legal responsibility[305].	The ground for new system of environmental law in the state. The law replaced the previous Law on nature protection of April 22, 1959[306].

[302] Ragulskytė-Markovienė, R. Aplinkos teisė: Lietuvos teisės derinimas su Europos Sąjungos reikalavimais. Vilnius: Eugrimas, 2005. p. 107 [Environmenal Law: The Coordination of Lithuanian Law with the EU Requirements; own translation].

[303] Ibid., P. 108.

[304] Aplinkos apsaugos įstatymas [Law on Environment Protection]. Valstybės žinios [Official Gazette]. 1992 Nr. 5-75. Article 2.

[305] Ibid., cf chapters II, IV, V, VII of the law.

[306] Ragulskytė-Markovienė, R. *Aplinkos teisė: Lietuvos teisės derinimas su Europos Sąjungos reikalavimais*. P. 108.

Table 11. Initial Legislation Adopted by High Authority with Legislative Power Regarding Environmental Protection and Implementation of the UNFCCC (continued)

Title of legislation	Essence	Explanation
Decision on State Strategy of Environmental Protection (Official Gazette, 1996, No. 103-2347	Strategy set future principles of environmental policy: sustainable as well as continuous sustainable development and its assessment, integration of environmental policy, the precautionary principle, the polluter (consumer) pays principle, prevention, implementation of best available technique, subsidiary principle, division of partnership and responsibility and publicity of information[307].	Principles of environmental policy and measures to implement them are foreseen.
Decision on Strategy for Implementation of the UNFCCC until 2012 (Official Gazette, 2008, No. 19-685)	The objectives of this document is to evaluate climate change impact on Lithuania's economy, environment and to set measures for mitigation and adaptation to the climate change impacts. Climate variations analysis and trends, evaluation of the climate variation impacts and long-term economic planning and management as well as the provisions of adaptation measures are discussed in the document[308].	Implementation of the UNFCCC: objectives, tasks and measures for implementation of the UNFCCC until 2012 are set.

According to the Law on International Treaties (Article 11, part 2), the provisions of the treaty of the Republic of Lithuania shall prevail and if the difference exists between previously established rules, new legal rules will be established with the treaty. Provisions of the national laws shall be in accordance to the provisions of the EU legal acts[309].

In 2008 the Resolution of the Government of Lithuania on Conception of climate change law (Official Gazette, 2008, No. 16-558) was adopted[310], which followed by the law afterwards. In the assessment note the aim of the law was indicated – to regulate public relations in the area of climate change management; to indicate measures, rights and duties for implementation of the UNFCCC and the Kyoto protocol, regarding the

[307] Lietuvos Respublikos Seimo 1996 m. rugsėjo 25 d. Nutarimas Nr. I-1550 "Dėl Valstybinės Aplinkos apsaugos strategijos patvirtinimo" [Decision of the Seimas of the Republic of Lithuania "On State Strategy for Environmental Protection"; own translation]. Valstybės žinios [Official Gazette]. 1996, Nr. 103-2347. Part 5.

[308] Lietuvos Respublikos Vyriausybės 2008 m. sausio 23 d. nutarimas Nr. 94 "Dėl Jungtinių Tautų bendrosios klimato kaitos konvencijos įgyvendinimo iki 2012 metų nacionalinės strategijos patvirtinimo" [Decision of the Government of the Republic of Lithuania "On Approval of the national strategy for implementation of the United Nations Framework Convention on Climate Change until 2012"; own translation].

[309] Lithuania's Fifth National Communication under the United Nations Framework Convention on Climate Change. January, 2010. p. 69. Available At: Http://Unfccc.Int/National_Reports/Annex_I_Natcom/Submitted_Natcom/Items/4903.Php, Accessed Online: September 30, 2010.

[310] Lietuvos Respublikos Vyriausybės 2008 m. sausio 23 d. nutarimas Nr. 71 "Dėl Lietuvos Respublikos Klimato kaitos įstatymo koncepcijos patvirtinimo" [Decision of the Government of the Republic of Lithuania "On Approval of Conception of Climate Change Law"; own translation]. Valstybės žinios [Official Gazette]. 2008, Nr. 16-558.

persons engaged in economic activities resulting in GHG emissions[311]. Hence in 2009 the Seimas of the Republic of Lithuania adopted the Law on Financial Instruments for Climate Change Management (Official Gazette, 2009, No. 87-3662). This Law stipulates the rights, duties and liabilities of persons engaged in economic activities resulting in GHG emissions, as was noted in the assessment note. Consequently the law became the main document influencing economic activity and exploitation norms. It also set spheres of competence of state institutions/authorities and bodies[312], which is important for an administrative system.

Table 12. Law on Financial Instruments for Climate Change Management and Resolution on Mandates for its Implementation

Title of legislation	Essence / entry into force	Explanation
Law on Financial Instruments for climate change management (Official Gazette, 2009, No. 87-3662)	The Law stipulates the rights, duties and liabilities of persons engaged in the economic activities resulting GHG emissions as well as the sphere of competence of state institutions and bodies. It also foresees economic sanctions and their placement.	The law implements: • Directive 2003/87/EB and 2009/29/EB; • Registry regulations 2216/2004 and 994/208; • Decision No. 406/2009; • EU legislation regarding fluorinated gases[313]
Decision on Mandates to Implement the Law on Financial Instruments for Climate Change Management (Official Gazete, 2009, No. 135-5884)	Mandates mainly for the Ministry of Environment, also for the Ministry of Environment together with other ministries are foreseen when implementing the Law.	Clarifies list of institutions with mandates to implement the Law.

As stated in table 12, the mandates are given to several ministries (authority with executive power) in order to implement the main law on climate change in Lithuania. The following institutions are mentioned:

- The Ministry of Environment – deeply involved, main coordinator of issues with other ministries;
- The Ministry of Economy – involved when there are concerning issues or according to mandate to carry out relevant function, administration of JI and CDM projects;
- The Ministry of Energy – involved when there are concerning issues of coordination, administration of JI and CDM projects;
- The Ministry of Agriculture – involved when there are concerning issues of coordination, administration of JI and CDM projects;

[311] Lietuvos Respublikos aplinkos ministerija. Lietuvos Respublikos Klimato kaitos įstatymo sprendimo projekto poveikio bazinio vertinimo pažyma, V. 1, 2008 [Assesment Note of the Ministry of Environment of the Republic of Lithuania on the Draft of the Climate Change Law"; own translation], 2008.

[312] Klimato kaitos valdymo finansinių instrumentų įstatymas [Law on Financial Instruments for Climate Change Management]. Valstybės žinios [Official Gazette]. 2009, Nr. 87-3662.

[313] The EU legislation regarding fluorinated gases is not included in further analysis.

- The Ministry of Transport and Communication – involved when there are concerning issues of coordination or according to mandate to carry out relevant function (for example – regarding the aircraft operators), administration of JI and CDM projects);
- The Ministry of Finance – involved when there are concerning issues of coordination[314].

Hence for achieving targets of GHG emissions reduction and setting legal rules, the main national law at present is the Law on Financial Instruments for Climate Change Management. However earlier in 2003 and 2004 government acts (orders and procedures of responsible ministers) were adopted. The orders set a strategy for Joint implementation projects under the Kyoto protocol and launched an emission trading scheme in order to implement the Directive 2003/87/EC on establishing a scheme for greenhouse gas emission allowance trading within the Community. Up to present times appropriate changes in national legal system are made to correspond with the EU legislation[315].

The Government of the Republic of Lithuania issues government legal acts (orders, procedures) for the implementation of laws, resolutions and strategies in the administrative arena (see Table 3). Below is the explanatory list of main considered legislation which further implements requirements for GHG emission reductions:

- Order on Procedures on the Issuance, Revision and Revocation of the Integrated Pollution Prevention and Control Permits (according to the IPPC directive):

The order sets rules for issuance, renewal and cancellation of permits. Each person must have a permit if its activities have an influence upon the environment. EU allowances (referring to the permission to emit 1t of CO2 equivalent) must be inscribed in the IPPC according to the rules. Such a permit is named a GHG permit[316]. IPPC permit issuance as such is anticipated in the Law on Environmental Protection.

- Order on the Procedures for the Allocation and Trading of GHG EU Allowances:

Implementation of provisions of 2003/87/EC directive. An emission trading scheme was introduced at national arena; responsible institutions with assignments for them were set; and the issuance of permits for operators was determined. The preparation of national allocation plans was foreseen[317].

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[314] Lietuvos Respublikos Vyriausybės 2009 m. lapkričio 4 d. nutarimas Nr. 1443 "Dėl Įgaliojimų suteikimo įgyvendinant Lietuvos Respublikos Klimato kaitos valdymo finansinių instrumentų įstatymą" [Decision of the Government of the Republic of Lithuania "On Mandates to Implement the Law on Financial Instruments for Climate Change Management"; own translation]. Valstybės žinios [Official Gazette]. 2009, Nr. 135-5884 .

[315] Relevant state legislation which has been adopted until May, 2011 is considered.

[316] Lietuvos Respublikos aplinkos ministro 2005 m. birželio 29 d. įsakymas Nr. D1-330 „Dėl Aplinkos ministro 2002 m. vasario 27 d. įsakymo Nr. 80 „Dėl Taršos integruotos prevencijos ir kontrolės leidimų išdavimo, atnaujinimo ir panaikinimo taisyklių patvirtinimo" pakeitimo" [Order of the Minister of Environment "On Procedures on the Issuance, Revision and Revocation of the Integrated Pollution Prevention and Control Permits", new edition]. Valstybės žinios [Official Gazette]. 2005, Nr. 103-3829.

[317] Lietuvos Respublikos aplinkos ministro 2005 m. lapkričio 11 d. įsakymas Nr. D1-542. „Dėl aplinkos ministro 2004 m. balandžio 29 d. įsakymo Nr. D1-231 „Dėl Šiltnamio dujų apyvartinių taršos leidimų išdavimo ir prekybos jais tvarkos aprašo patvirtinimo" pakeitimo" [Order of the Minister of Environment "On Procedures of the Allocation and Trading of the EU Allowance", Replaced 2004 Edition]. Valstybės žinios [Official Gazette]. 2005, Nr. 137-4948.

- National Allocation Plans (2005-2007[318], 2008-2012[319])

Implementation of provisions of 2003/87/EC directive. With these plans the total quantity of CO_2 emissions that the Member State granted to their companies (operators) was approved. The list of installations was included in the plan as well. Hence, the activity of each appropriate installation is foreseen to be monitored and verified.

- The procedure for operators to conduct monitoring and submit annual reports on actual GHG emissions

This procedure estimates the obligation for operators to conduct monitoring and keep accounts of greenhouse gases and submit reports thereon. The operators that emit GHG in their activity are considered.

- Procedures for allocations of EUAs (allowances to emit GHG) for new entrants (operators) in the market.

Rules and methods for allocation of EUAs from the reserve, which was approved together with the National allocation plan, are estimated. EUAs of installations which do not carry any activity are foreseen to be transferred back to the reserve. With this each new operator has to consider environmental requirements (GHG limitations) before starting production.

- Procedure for implementation of JI and CDM projects and usage of Kyoto units.

Implementation of 2004/101/EC directive. Implementing those ERUs (emission reduction units) could be generated and traded afterwards (use of the Kyoto mechanisms)[320].

- Rules of Climate change committee and the order on the list of the Committee.

The purpose of the Committee is to coordinate questions regarding national policy of climate change management and implementation.

- Orders for operators on submitting reports, estimating income from emission trading and it's appliance for greening technology and environmental measures.
- Procedure for Preparation of Assigned Amount Unit (AAU) Purchase and Transfer Transactions as well as establishment criterion for AAUs purchases.

With this the procedure for arrangement and process of Purchase and Transfer transactions of AAUs, which is the property of the Republic of Lithuania, is estimated. Hence, it is of state interest to participate in emission trading, gain income and distribute it accordingly. AAUs are units, estimated by the Kyoto protocol, meaning that one

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[318] Lietuvos Respublikos aplinkos ministro 2004 m. gruodžio 27 d. įsakymas Nr. D1-686 "Dėl Nacionalinio apyvartinių taršos leidimų paskirstymo 2005–2007 metams plano patvirtinimo" [Order of the Minister of Environment "On Approval of National Allocation Plan for 2005-2007"; own translation]. Valstybės žinios [Official Gazette]. 2005, Nr. 6-166.

[319] Lietuvos Respublikos aplinkos ministro ir ūkio ministro 2007 m. lapkričio 19 d. įsakymas Nr. D1-609/4-477. "Dėl Nacionalinio apyvartinių taršos leidimų paskirstymo 2008–2012 metams plano patvirtinimo" [Order of the Minister of Environment and Minister of Economy "On Approval of National Allocation Plan for 2008-2012"; own translation]. Valstybės žinios [Official Gazette] 2007, Nr. 120-4946.

[320] Lietuvos Respublikos aplinkos ministro 2010 m. birželio 3 d. įsakymas Nr. D1-470. "Dėl Kioto Protokolo bendrai įgyvendinamų ir švarios plėtros projektų vykdymo tvarkos aprašo ir kioto vienetų, gaunamų vykdant Kioto Protokolo bendrai įgyvendinamus ir švarios plėtros projektus, naudojimo tvarkos aprašo patvirtinimo" [Order of the Minister of Environment on Implementation of JI and Projects and the Usage of Kyoto Units; own translation]. Valstybės žinios [Official Gazette]. 2010, Nr. 66-3304.

AAU is equal to one ton of carbon dioxide or to carbon dioxide equivalent – and may be emitted in the territory of the state within a period defined under international arrangements. Responsible institutions involved in the transactions are designated and the use of funds of special programme for climate change is estimated.

The report on *Assessment of National Capacity in the Context of Global Environmental Governance* (2006)[321] gives the grounding of legislation through which the UNFCCC is implemented from the start. Further reports of implementation of UNFCCC distinguish horizontal and vertical legislation to be implemented. It is noted that the convention involves a wider arena of actions than the Kyoto protocol.

In addition, some other strategies or resolutions should be mentioned in relation to the implementation of the UNFCCC. Those are:

- Resolution on National Strategy for Sustainable Development[322]:

Main objectives of the sustainable development strategy are to: coordinate environmental protection, economic and social development concerns. It also has to ensure a clean and healthy environment; effective use of natural resources; the overall economic welfare of society; and strong social guarantees. According to economic, social and eco-efficiency indicators it is anticipated to achieve EU-15 countries 2003 year average level; according to environmental pollution indicators - to comply with the EU allowable standards, as well as implement requirements of international conventions limiting environmental pollution and input into the global climate change during the implementation period of the Strategy (until 2020).

Legislation, which is related with the energy sector's arena:

- Decision on National Energy Strategy[323];
- Decision on National Energy Strategy Implementation Plan for 2008-2012[324];
- Decision on National Strategy For Development Of Renewable Energy Sources[325];

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321 Nacionalinių pajėgumų vertinimas globaliame aplinkosaugos valdymo kontekste: projekto ataskaita. Vilnius: Daigai, 2006 [Assesment of National Capacity in the Context of Global Environmental Governance: Project Report; own translation].

322 Lietuvos Respublikos Vyriausybės 2003 m. rugsėjo 11 d. nutarimas Nr. 1160 "Dėl Nacionalinės darnaus vystymosi strategijos patvirtinimo ir įgyvendinimo" [The Strategy for Sustainable Development and Implementation]. Valstybės žinios [Official Gazette]. 2003, Nr. 89-4029; Aktuali redakcija: Valstybės žinios. 2011, Nr. 41-1949.

323 Lietuvos Respublikos Seimo 2007 m. sausio 18 d. nutarimas Nr. X-1046. „Dėl Nacionalinės Energetikos Strategijos Patvirtinimo" [Decision of the Seimas of the Republic of Lithuania "On National Energy Strategy"]. Valstybės žinios [Official Gazette]. 2007, Nr. 11-430. This is the fourth national energy strategy, previously strategies were adopted in 1994, 1999, 2002.

324 Lietuvos Respublikos Vyriausybės 2007 m. gruodžio 27 d. nutarimas Nr. 1442. "Dėl Nacionalinės energetikos strategijos įgyvendinimo 2008–2012 metų plano patvirtinimo" [Decision of the Government of the Republic of Lithuania "On National Energy Strategy Implementation Plan for 2008-2012"]. Valstybės žinios [Official Gazette]. 2009, Nr. 144-6391. Aktuali redakcija: Valstybės žinios, 2011, Nr. 113-5317.

325 Lietuvos Respublikos Vyriausybės 2010 m. birželio 21 d. nutarimas Nr. 789 "Dėl Nacionalinės atsinaujinančių energijos išteklių plėtros strategijos patvirtinimo" [Decision of the Seimas of the Republic of Lithuania on National Strategy for Development of Renewable Energy Sources]. Valstybės žinios [Official Gazette]. 2010, Nr. 73-3725.

- Order "On Implementation Measures for National Strategy For Development Of Renewable Energy Sources"[326];
- Law on Renewable Energy[327].

Analysis of legislation forms the step in the research, when the influence of main climate change agreements on national legal system, regulations and the administrative arena is designed, spheres under national laws and regulations covered and structure for implementation of functions investigated. The relation of the core directive of climate change law in the EU (2003/87/EC) and its implementation, a scheme of key tasks and institutions will be described more detail in the next chapter.

3.4. Implementation of the EU Emissions Trading Scheme: Scheme of Key Tasks and Institutions

State law and administrative law are linked to political / administrative systems[328], which have their own motion of actions. In this context

> When individuals add duties on collective directions of actions <…> the political system gets the character of actions. To the extent that the social system is large enough to require a separation between decision making and executive functions, the assigned tasks must be directed to the executive function[329].

Directive 2003/87/EC set requirements for appropriate administrative changes in order to designate the authority (or authorities) to implement rules of the directive[330]. It means assigning relevant tasks for institutions at national arena in order to implement provision's of the legislation.

Defining governance in a general sense, according to UNDP[331] governance is

> the exercise of economic, political and administrative authority to manage a country's affairs at all levels… it comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences[332].

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326 Lietuvos Respublikos energetikos ministro 2010 m. birželio 23 d. įsakymas Nr. 1-180. "Dėl Nacionalinės Atsinaujinančių energijos išteklių plėtros strategijos įgyvendinimo priemonių plano patvirtinimo" [Energy Minister's Order "On Implementation Measures for National Strategy for Development of Renewable Energy Sources"]. Valstybės žinios, 2010, Nr. 78-403.

327 Lietuvos Respublikos atsinaujinančių išteklių energetikos įstatymas [Law on Renewable Energy Sources]. Valstybės žinios [Official Gazette]. 2011, Nr. 62-2936.

328 Hydén, H. Normvetenskap, Lund Studies in Sociology of Law, 1403-7246. Lund: Sociologiska institutionen, Univ., 2002.

329 Ibid., P. 30.

330 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community. Article 18.

331 United Nations Development Programme.

332 Hall, A. W. Global Experience on Governance, in *Governance as a Trialogue: Government-Society-Science in Transition*, ed. Turton, A. R., et al. Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2007. P. 30.

Hence in addition to administrative authorities – economic and political authorities have to be involved. When implementing Directive 2003/87/EC in several phases, the Member States should consider the following key tasks:

- prepare National Allocation Plans (NAPs);
- identify, obtain data and consult the installations that are covered by the scheme;
- decide on banking, and new entry and closure rules;
- prepare their permitting procedures;
- provide guidance on monitoring and verification and establish the relevant institutions;
- prepare and set up national allowance registries[333].

The implementation of the EU ETS has several steps. The phases are related with the pre-Kyoto, Kyoto and subsequent periods. Respectively sometimes on the EU level these periods are called first trading period (NAP I for 2005-2007 period is developed) and second trading period (NAP II is developed for 2008-2012)[334]. Hence the periods are linked with preparation and requirements of NAPs, which are coordinated and approved by the Commission[335]. The first trading period had an approach and "considerable benefits in terms of 'learning-by-doing' that would ensure that the Community was better prepared for the start of international emissions trading from 2008 under the Kyoto Protocol"[336]. Comparing NAP I with NAP II and the total number of allowances, this number per country was decreased for NAP II (2008-2012). Subsequent periods (from 2013) will introduce new changes in relation to more centralized EU ETS as "under the revision of the EU ETS that will take effect in 2013, a single EU-wide cap on emission allowances will replace the current system of 27 national caps implemented through national allocation plans"[337].

Referring to Directive 2003/87/EC, several key tasks of its implementation can be distinguished. The reporting obligation requires informing the Commission on the responsibilities of competent authorities regarding the key tasks, presented in the table below:

[333] As quoted by Skjerseth, J. B., Wettestad, J. *EU Emissions Trading: Initiation, Decision-Making and Implementation*: Ashgate Publishing Company, 2008. Also cf to Wettestad, J. European Climate Policy: Toward Centralized Governance? *Review of Policy Research.* 2009, 26(3), P. 311-28.

[334] European Commission. *EU Climate Change Action: Progress Towards Achieving the Kyoto Objectives*. 2009. P. 12.

[335] National allocation plans for 2005-2007 and 2008-2012 periods were approved by national legislation, see chapter 3.3.

[336] Com(2000) 87 Final. Green Paper on Greenhouse Gas Emissions Trading within the European Union, 2000. Brussels, 8. 3. 2000, p. 4.3.

[337] European Commission. *EU Action against Climate Change: The EU Emissions Trading Scheme.* Luxembourg: Office for Official Publications of the European Communities, 2008. P. 17.

Table 13. Responsibilities of Competent Authorities in Charge on the Following Tasks to be Reported to the Commission Regarding Implementation of the Directive 2003/87/EC[338]

Task	Coding	Task	Coding
Issuance of permits	T1	Issuance of ERU as a host country	T9
Allocation of allowances	T2	Approval of the use of CERs and ERUs for compliance	T10
Issuance of allowances	T3	Administration of new entrance reserve	T11
Validation of monitoring methodology	T4	Information to the public	T12
Receiving and supervising verified emission reports	T5	Auctioning	T13
Accreditation of verifiers	T6	Administration of opt-ins	T14
Registry administration	T7	Administration of pooling	T15
Compliance and enforcement	T8		

In order to describe each task, I will use legal references and explain in more detail thereafter. Article 4 of the Directive 2003/87/EC states that:

> Member States shall ensure that, from 1 January 2005, no installation carries out any activity listed in Annex I resulting in emissions specified in relation to that activity unless its operator holds a permit issued by a competent authority in accordance with Articles 5 and 6, or the installation is excluded from the Community scheme pursuant to Article 27. This shall also apply to installations opted in under Article 24[339]

Some exceptions are possible as stated in the article, but in general each installation which participates in the EU ETS has to obtain GHG permits. According to the EEA report (2006) "the Member States have taken several measures to ensure that these requirements are met. In at least ten of the Member States (Belgium, Denmark, France, Lithuania, <…> Sweden, Slovakia and Slovenia) emissions permits will only be granted if the operator submits a detailed monitoring and reporting plan"[340]. In case there is more than one competent authority involved in the permitting procedures, then states report if measures are coordinated between institutions under legal provisions of the country. An EEA report (2009) states that usually "cooperation between the concerned competent authorities is regulated by law, regulation or ministerial order"[341] (the description above refers to *Issuance of permits* **T1**). In addition is should be stated that Directive 2003/87/EC interplays with integrated pollution prevention and control (IPPC)

[338] The table is compiled referring to Lithuanian National Report on the Implementation of Directive 2003/87/EC, available at: http://cdr.eionet.europa.eu/lt/eu/emt/envsgsuig, accessed online July 30, 2011.

[339] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community. Article 4.

[340] EEA Technical report No 2/2006. Application of the Emissions Trading Directive by EU Member States – reporting year 2005. P. 20.

[341] EEA Technical report No 13/2008. Application of the Emissions Trading Directive by EU Member States – reporting year 2008. P. 20.

directive (96/91/EC) as both legislation encompass permitting for installations. In order that IPPC "permits should not include CO_2 emission limits for installations which are covered by the EU ETS"[342], Directive 2003/87/EC was amended accordingly[343].

Allocation of allowances **(T2)** is directly linked with NAP I and NAP II, which is covered by Article 9 of the Directive 2003/87/EC: "For each period referred to in Article 11(1) and (2), each Member State shall develop a national plan stating the total quantity of allowances that it intends to allocate for that period and how it proposes to allocate them"[344]. The method of allocation, allocation and issuance of allowances are stated in Articles 10 and 11. However with expansion of the EU ETS, new rules will be applied from 2013.

> From 2013 onwards, Member States shall auction all allowances which are not allocated free of charge in accordance with Article 10a and 10c. By 31 December 2010, the Commission shall determine and publish the estimated amount of allowances to be auctioned[345].

Following new rules, Member States shall also "publish and submit to the Commission by 30 September 2011, the list of installations covered by this Directive in its territory and any free allocation to each installation in its territory"[346] calculated according to the rules of Article 10a(1) and 10c. In phase I and II of the EU ETS *issuance of allowances* **(T3)** was done according to the NAP I and NAP II approved for the states. During the 1st phase, the allocation and issuance of allowances in Lithuania was done according to the principle that the total quantity of the allowances for installations was split by 40 % in 2005, 30 % in 2006, 30 % in 2007. During the 2nd phase, the total amount for installations was split by equal parts.

According to Article 14(3) of Directive 2003/87/EC, member states have "to ensure that each operator of an installation reports the emissions from that installation during each calendar year". It also is applied for aircrafts starting from 2012. Hence monitoring and reporting plays a fundamental role to track the situation of installation's allocated allowances and actual GHG emissions. According to EEA (2006) "the emission report will determine the amount of allowances which have to be surrender for each year and thereby establish whether an operator is able to sell emission rights or acquire more". As for the monitoring methods to be used, they should be included in GHG permits and "determined on the basis of the monitoring and reporting guidelines by relevant competent authorities in each Member State"[347]. The description above refers to *validation of monitoring methodology* **T4.**

The verification of operator's emission is carried out by the independent verifiers. EEA report (2009) states that "independent verifiers are accredited or accepted by ac-

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342 EEA Technical report No 2/2006. Application of the Emissions Trading Directive by EU Member – reporting year 2005. P. 21.

343 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community. Article 26.

344 Ibid., Article 9.

345 Ibid., Article 9, Article 10.

346 Ibid., Article 11.

347 EEA Technical report No 2/2006. Application of the Emissions Trading Directive by EU Member States – reporting year 2005. P. 23.

creditation bodies in accordance with national rules in almost all Member States"[348]. It is the obligation of the Member State to insure that the reports submitted by operators and aircraft operators <…> are verified in accordance with the requirements set in Annex V of Directive 2009/29/EC[349]. The following description refers to *receiving and supervising verified emission report* **T5** and *accreditation of verifiers* **T6**.

The member states have to report on *Registry administration* **(T7)** in order to ensure the proper work of a registry. The registry is established in order to ensure the accurate accounting of the issuance, transfer and cancellation of allowances as described in chapter 3.2.2.

Compliance with the Directive and its enforcement in the states is related to legal provisions regarding penalties for infringements, foreseen in national provisions **(T8).** Those are applied for operators in case of incompliance. EEA report (2009) states that "exceeding the emission limit indicated in the national allocation plan or the infringement of the rules for greenhouse gas trading attracts a fine in Lithuania"[350]. Penalties of infringements of national provisions in Lithuania vary from 289 to 579 EUR for operating without permit, from 145 to 289 EUR for infringements of monitoring and reporting obligations, from 43 to 87 EUR for omission to notify changes[351].

Issuance of ERU (emission reductions units) *as a host country* **(T9)** refers to carrying out Joint implementation projects under Kyoto protocol in Lithuania. When implementing JI projects, ERUs are issued that can be used for operators' compliance purposes, also for national and international emission trading. EEA report states that ERUs "will only be issued after the start of the first commitment period of the Kyoto protocol"[352]. The same applies for using CERs (certified emission reduction units), which are 'generated' when carrying out the clean development mechanism of the Kyoto protocol. However procedures and requirements for *approval of ERUs and CERs for compliance* **(T10)** have been foreseen by national authorities.

NAP I and NAP II estimates a certain number of allowances to be allocated for new entrants. A new entrant is described as:

> New entrant' means any installation carrying out one or more of the activities indicated in Annex I, which has obtained a greenhouse gas emissions permit or an update of its greenhouse gas emissions permit because of a change in the nature or functioning or an extension of the installation, subsequent to the notification to the Commission of the national allocation plan[353].

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348 EEA Technical report No 13/2008. Application of the Emissions Trading Directive by EU Member States – reporting year 2008. P. 54.

349 Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community. Article 15.

350 EEA Technical report No 13/2008. Application of the Emissions Trading Directive by EU Member States – reporting year 2008. P. 71.

351 Ibid., P. 72.

352 EEA Technical report No 2/2006. Application of the Emissions Trading Directive by EU Member States – reporting year 2005. P. 35.

353 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community. rticle 3; also see Article 7 regarding changes relating to installations.

This means including new installations that are not on the NAP I and NAP II lists in the EU ETS. The *administration of 'new entrants' reserve* **(T11)** should be ensured by the Member states and reported to the Commission as well.

Article 17 of 2003/87/EC foresees the access of information to the public. It states, that:

> Decision relating to allocation of allowances, information on project activities in which a Member State participates or authorizes private or public entities to participate, and the reports of emissions required under the greenhouse gas emissions permit and held by the competent authority, shall be made available to the public in accordance with Directive 2003/4/EC.

Responsibilities of competent authorities related to information to the public should be reported to the Commission **(T12)**.

Auctioning of allowances **(T13)** could be carried out in the Member states if it was foreseen in national legislation of NAP I and NAP II. In Lithuania the auction of allowances was carried out in 2007. This method is used when required allowances for operators or other persons are obtained in the auction. Auctioning will be greatly applied with the start of the new phase from 2013, as described with the task of allocation of allowances T2 above.

As for administration of pooling **(T15)**, national report of 2010 indicates that no pooling is foreseen in 2008-2012.

Lithuania's report to the Commission on implementation of the Directive 2003/87/EC in 2010 indicates 10 responsible institutions (competent authorities). According to previous reports, this number has increased. National as well as EEA overall report of 2006 (reporting year – 2005) indicate 4 competent authorities in Lithuania. This shows the increase of number of competent authorities, although the need of this is questionable.

Table 14. List of Competent Authorities in State and Administrative Arenas Implementing the Directive 2003/87/EC in Lithuania (reporting year – 2010)[354]

Competent authority	Abbreviation
The Ministry of Environment of the Republic of Lithuania	MoE
The Ministry of Economy of the Republic of Lithuania	MoEc
The Ministry of Transport and Communications of the Republic of Lithuania	MoTand C
The Ministry of Agriculture of the Republic of Lithuania	MoA
The Ministry of Energy of the Republic of Lithuania	MoEn
Lithuanian Environmental Investment Fund under the Ministry of Environment of the Republic of Lithuania	LEIF
National Accreditation Bureau under the Ministry of Environment under the Ministry of Environment of the Republic of Lithuania	NAB
Eight Regional Environmental Protection Departments under the Ministry of Environment of Lithuania	REPD
Environment Protection Agency under the Ministry of Environment	EPA
Independent verifiers	Iv

[354] Source: Lithuanian National Report on the Implementation of Directive 2003/87/EC, p. 2. 1.

Ministries of the Republic of Lithuania are listed in the table because they are responsible for relevant tasks regarding implementation of the Directive 2003/87/EC. Obligations are also imposed according to the Resolution on Mandates to implement the Law on Financial Instruments for Climate Change Manageent. This was described in chapter 3.3.

Information below presents coded information about Lithuania, linking key tasks in implementation of the EU ETS with competent authorities (institutions). The last column shows the position of the industry – whether it is related with institutions task when carrying its activity.

Table 15. Coded Information Regarding Key Tasks of Implementation of the EU ETS and Competent Authorities in State and Administrative Arenas in Lithuania[355]

Key task / Arena	National (II)	Administrative (III)	Industry (IV)
T1		REPD	Involved
T2	MoE, in conjunction with MoEc, MoT&C, MoA and MoEn		
T3		REPD, LEIF	Involved
T4		REPD	Involved
T5		REPD, LEIF	Involved
T6		NAB	
T7		LEIF	Involved
T8		REPD, LEIF, Iv	Involved
T9		LEIF	
T10		LEIF	Involved
T11	MoE, MoEc, MoT&C	LEIF	May be involved
T12	MoE	LEIF, REPD	Involved
T13 (note: not applicable in 2010)	MoE	LEIF	
T14	MoE		May be involved
T15 (note: no pooling in 2008-2012)	MoE		

Further implementation of Directive 2003/87/EC on national arena will be scrutinized in chapter 3.5.

3.5. Relation Between the EU Emission Trading Scheme and Domestic Legislation: Role of Institutions and Industry

National legislation which is related to the implementation of climate change policy has an interdisciplinary and intersectoral manner, especially after the Law on Financial Instruments for Climate Change Management has been adopted. However the

[355] Compiled using relevant information from National report to the Commission on implementation of the Directive 2003/87/EC in 2010 (p. 2. 1; 2. 2) and adding industry.

European legislation for emission trading is chosen as the starting point for evaluating the implementation chain on the institutional (state and administrative) and industrial (industry and energy) arenas.

The chosen legislation trend is related to Lithuania's obligation to reduce overall GHG emissions from industry, participating in the EU ETS. The legislation enforces the implementation of its objectives on state, administrative and industrial arenas and directly regulates the activity of industrial sector.

The European emission trading scheme is based on Directive 2003/87/EC, which entered into force on 25 October 2003; and has been amended by directives 2004/101/EC, 2008/101/EC and 2009/29/EC; and regulation 219/2009[356] so far[357]. This trend of legislation is of my interest when analyzing new rules for action on different arenas.

Directive 2003/87/EC set new rules for the Member states regarding GHG emission reductions. Grubb and Neuhoff state that the EU ETS was launched to cap CO_2 emissions from heavy industry[358]. Certain activities like the production of energy; cement clinker; lime;, manufacture of glass including glass fibre with a melting capacity exceeding 20 tones per day; etc; are listed in the annexes of Directive 2003/87/EC and 2009/29/EC, extending the EU ETS. These activities are affected as they "were forced" to obey new rules (preservation norms). With the directive, limitations are set on installations' activity. Companies running installations are obliged to limit their GHG emissions depending on the GHG permit each installation is issued. Thus exploitation norms are affected. Evaluating activity and calculating foreseen reduction of emissions, allowances are allocated for installations by authorities for free[359]. However exceeding the amount given, additional allowances are to be obtained (purchased in the market). Hence, a price for carbon has been set. Rules that operators (any person who controls installation of certain activity) have to keep with are reinforced by different sanctions, such as "name and shame" lists (publishing a name of non-compliant operator publicly on the website). Setting penalties is another way to reinforce legal norms, which is used if an operator is not compliant with new requirements.

Public involvement and information spread is outlined in the legislation. With the directive a new market tool, 'emission trading' has been introduced, responsibilities for national institutions (authorities) developed and other actors, involved in the system has been outlined (operators, other legal and non-legal persons involved in emission trading such as traders and verifiers).

Implementation on national level

When implementing the directive, an emission trading scheme was introduced in Lithuania by the *Procedure of the allocation and trading of EU allowances*[360]. It was approved by

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[356] Directorate-General for Climate Action (DG CLIMA). *Emission Trading System (EU ETS)* [interactive]. Available at: http://ec.europa.eu/clima/policies/ets/index_en.htm, last accesses online: July 26, 2011.

[357] See chapter 3.2.2.

[358] Grubb, M., Neuhoff, K. Allocation and Competitiveness in the EU Emission Trading Scheme: Policy Overview. *Climate Policy Special Issue*. 2006, (6/1) p. 8. Available at: http://www.econ.cam.ac.uk/rstaff/grubb/prevemp.htm; date of access: March 30, 2010.

[359] The amendments made by Directive 2009/29/EC eliminate such possibility as great amount of allocations will have to be auctioned, cf chapter 3.2.2.

[360] Lithuania's Report On Demonstrable Progress In Line With Decisions 22/CP. 7 and 25/CP. 8, p. 16. The latest amendments to legislation were made in February, 2010.

the Minister of Environment in 2004. Responsible institutions with assignments for them were set and issuance of permits for operators was determined.

The concept of operator, whose activity is affected by the order, is firstly defined in Directive 2003/87/EC:

> 'Operator' means any person who operates or controls an installation or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated[361].

According to the Law on Financial Instruments for Climate Change Management, an operator owns and (or) controls installations emitting GHG and according to Laws has economic lever in order to solve technical functionality matters of installations or aircraft operators[362]. Thus, activity of industrial arena (industry and energy) is regulated.

Following the chain of implementation and looking at the administrative arena, which intervenes between state and industry, there are adequate administrative institutions with determined responsibilities and key tasks. These are Regional Environmental Protection Departments (REPD), which are responsible for issuance of permits, their correction or revocation[363]. For enforcing the law and legal norms, economic sanctions for exceeding allowed amount of GHG emissions as well as other impermissible activity related to GHG emissions are foreseen to be imposed on operators by REPD inspectors[364].

Following provisions of Directive 2003/87/EC and the Procedure for the Issuance and Trading in GHG Emission Allowances, Lithuania's National Allocation Plan for GHG Emission Allowances for the period from 2005 to 2007 (NAP I) was prepared and harmonized with the European Commission in 2004[365]. The second National Allocation Plan for the period 2008-2012 (NAP II) was approved at the end of 2007. With these plans the total quantity of CO_2 emissions that the Member State granted to their companies (operators) was approved. The list of installations was included in the plans as well[366]. Hence, the activity of each appropriate installation was foreseen to be monitored and verified. However approving national allocation plans and setting new rules for operators, limiting GHG emissions, brings conflict at the first instance.

With implementing Directive 2003/87/EC, responsibilities and new tasks (as permit issuance, monitoring and verification of activities, registration of CO_2 allowances) were set for state and public institutions. On the other hand, limitations of activity were foreseen for operators. Limitations should be treated as preservation norms that are

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361 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a scheme for greenhouse gas emission allowance trading within the Community, Article 3 (f).

362 Klimato kaitos valdymo finansinių instrumentų įstatymas [Law on Financial Instruments for Climate Change Management], part 1, article 2.

363 Ibid., part 3, article 7.

364 Ibid., part 6, article 14.

365 Lithuania's Report On Demonstrable Progress In Line With Decisions 22/CP. 7 and 25/CP. 8, P. 16.

366 At present the procedure for preparation and adaptation of National Allocation Plan as well as operators' list of the EU ETS is determined in The Law on Financial Instruments for Climate Change Management, part 3, article 6.

created due to the political and administrative systems. The implementation of GHG emissions limitations are related with the restriction on the exploitation of nature and may have effect on, or indeed cause, conflicts.

Directive 2004/101/EC was adopted on 27 of October in 2004. It amended Directive 2003/87/EC *in respect of the Kyoto Protocol's project mechanisms.* With this the emission trading scheme was linked with Kyoto mechanisms as the Member States could use the units generated when implementing flexible mechanisms:

> Member States may allow operators to use, in the Community scheme, certified emission reduction (CERs) from 2005 and emission reduction units (ERUs) from 2008. The use of CERs and ERUs by operators from 2008 may be allowed up to percentage of the allocation to each installation, to be specified by each Member State in its national allocation plan[367].

New possibilities for the emission trading scheme were presented and responsibilities as a result of signing the international agreement (Kyoto protocol) were implemented accordingly. CERs and ERUs could replace or in some instances extend allowances, issued for operators regarding their activity – and may be used for compliance purposes.

Implementation on national level

The directive was partially implemented with rules for JI projects[368] (while implementing JI projects, ERUs could be generated and traded afterwards). With this, a new type of activity became open for project participants and new cooperation between entities across countries could emerge. The Law on Financial Instruments for Climate Change Manageent foresees implementation and administration of such projects. The Main responsibility is assigned to the Ministry of Environment, working together with other assigned institutions[369].

NAP II has foreseen the percentage of use of CERs and ERUs for compliance status of installations. This provision envisages the possibility of an economically reasoned market tool in the carbon market which may be of business interest. However turning to existing exploitation of nature, the tool doesn't promote reductions of GHG emissions in actual locations where GHG emissions emerge.

New rules for air traffic were set with ***Directive 2008/101/EC***, which amended Directive 2003/87/EC so as *to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community.* It was done in order to mitigate the

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[367] Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms, p. 5.

[368] Lietuvos Respublikos aplinkos ministro 2010m. birželio 3d. įsakymas Nr. D1-470. "Dėl Kioto Protokolo Bendrai įgyvendinamų ir švarios plėtros projektų vykdymo tvarkos aprašo ir kioto vienetų, gaunamų vykdant kioto protokolo bendrai įgyvendinamus ir švarios plėtros projektus, naudojimo tvarkos aprašo patvirtinimo" [Order of the Minister of Environment on Implementation of JI and CDM Projects of the Kyoto Protocol and the Usage of Kyoto Units; own translation]. The order replaced edition of 2005.

[369] Klimato kaitos valdymo finansinių instrumentų įstatymas [Law on Financial Instruments for Climate Change Management], part 4, article 11.

climate impacts of aviation"[370] and it means that operators engaged in aviation activities should follow the permit system of GHG emissions as well (aviation was not included in Directive 2003/87/EC from the first instance).

Implementation on national level

Provisions for inclusion of aviation activities are contained in The Law on Financial Instruments for Climate Change Management and also in The Order On Aviation Inclusion Into Emission Trading Scheme. The order was adopted in 2009 and set new obligations for aircrafts and public institutions. The issuance of permits for aviation is determined in the revised Procedures of the Allocation and Trading of the EU Allowances, a new edition of which was adopted in 2010. In September 2009 the Minister of Environment together with the Minister of Transport and Communication approved requirements for aircraft activities which should be included into the EU ETS. The monitoring plans of concrete aircraft operators were approved in January, 2010 by the Minister of Environment.

Directive 2009/29/EC was adopted on 23 of April, 2009. It amended Directive 2003/87/EC so *as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.*

Following improvements and extension of the EU emission trading scheme, Procedures of the Allocation and Trading of the EU Allowances were revised (a new edition of 2010)

The chosen legislation is related with reduction targets of GHG emissions. It also introduces some alternatives and economically effective ways of how this may be achieved. However what response is triggered when introducing new rules and how are the requirements implemented on local ground in reality? Is the dialog held between different arenas?

The next step when analyzing the second set of empirical data (information gained from interviews), is to gain interests and driving forces on each arena (national, administrative and industrial).

[370] DG CLIMA. *Reducing emissions from the aviation sector.* [interactive]. Available at: http://ec.europa.eu/clima/policies/transport/aviation/index_en.htm, accessed online: March 2, 2010; date of access: 2010-03-02.

4. PRESENTATION OF EMPIRICAL DATA

This part will present the empirical data from interviews in three arenas in Lithuania: national, administrative and industrial. Categories were formed when identifying themes during the interviews in these arenas. Most categories come from the interview questions and responses as well as intuitively capturing patterns. Interestingly, these are topical issues related to the implementation of climate change policy and regulations regarding GHG emission reductions. Different views will help to elaborate on different notions (understanding) between arenas and contribute to a better implementation. Interviewees are coded according to arenas (National arena – N, Administrative arena - A and A^{I}, Industrial arena – I). For ethical reasons and in order to simplify further analysis the interviewees are also coded with numbers (a code indentifies the arena and an interviewee in that arena; codes are put in angle brackets after each quote [N1, A2, $A^{I}3$, I4, etc.]). Insubstantial information in the quote is marked by symbols <…> and omitted. Explaining words from the conversation are shown in italics and placed into brackets ( ).

Chapters bellow will present five main categories: a small state (1); knowledge (2); threat of losing production (3); means for compliance (4); and standard of living and priorities (5). Quotes from the interviews will support the categories and will present corresponding attitudes in each arena. A short summary about each arena will be given. A scheme of presenting data is displayed bellow:

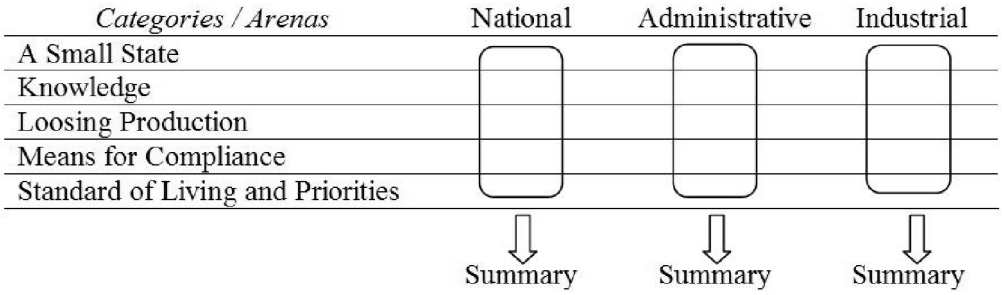

Figure 6. Structure of Presentation of Empirical Data Summary of Lithuania

4.1. National Arena

4.1.1. A Small State

"Lithuania, having signed the Kyoto protocol (and also the UNFCCC) accepts obligations with the world to reduce climate change". [N6]

"We have to coordinate the EU legislation with our national legislation and transpose the EU legal acts <…> into national laws or government acts". [N5]

"Copenhagen agreements are not obligatory. It was agreed to accomplish objectives, however it is not legally binding. The negotiations will be continued in Cancun. There are a number of important questions to be agreed upon in order to sign a legally binding agreement in Africa. Without waiting for it, the EU adopted a Climate Change package where GHG emissions reduction targets are estimated". [N1]

"If the state wants to trade with Japan, it has to be part of World Trading Organization. <…> And if the state wants to participate in emission trading, it has to be among UNFCCC countries". [N3]

"Nothing will change if only Lithuania will reduce. However it is a little bit different – we are concerned about economic growth, but not about GHG emission reductions". [N1]

"I would separate energy and transport. These are specific issues as we do not have fossil fuels. 99 % of resources are imported, which are mainly oil and natural gas. The situation becomes sophisticated as the matter becomes the matter of energy security supply". [N4]

"The situation is that the EU upholds ambitious objectives anyway. Even though limits to GHG emissions were lowered for countries in transition, the European Commission targets are ambitious". [N1]

"Politically targets for GHG emission reductions may be adopted, but if it these are not sustained by laws, resolutions, orders or regulations at state level, then obligations will just remain a slogan". [N4]

"Higher "decisions" impose certain regulations, which we could not make ourselves. It's even better to be part of the EU (considering the environmental aspect). As we have 2 superior arenas – international and the EU. Being part of the EU makes us go forward". [N3]

"Our energy sector producers do not produce that much. It is much bureaucratic bother to ask for stipulations". [N1]

"Lithuania is small. What is problematic to small states is that they have little influence, but they are influenced greatly. They are influenced by all phenomena that happen in the world, starting with the ecological problems and ending with migration and diseases". [N3]

4.1.2. Knowledge

"It will be problematic to allocate obligations for the transport, agriculture, household, and waste sectors – those that are not covered by the EU ETS. <…>. It is much

more difficult to estimate and allocate obligations in these separate sectors, estimate their potential, and evaluate the most effective and suitable means. <…>. It is not clear how to choose the most effective means". [N1]

"Investments should be made in order to raise awareness". [N5]

"Opinions about GHG emissions in general should be more progressive <…> but we do not have wholesale enlightenment". [N1]

"Issues around GHG emission reductions require the raising of awareness. Green movements in Sweden have existed for 70 years already, and this level of awareness was achieved over many preceeding decades". [N4]

"We should start from kindergartens, schools and universities <…>. Disciplines should be introduced into school and university programmes". [N5]

"Companies started to think about corporate social responsibility and their company's image, asking such questions as: "why do they live? Why do they act like that?" <…> People started to talk about these issues because they are important". [N3]

"I think there should be more information and education. In addition to the Ministry of Environment, this responsibility should be undertaken also more by municipalities". [N1]

4.1.3. Threat of Losing Production

"There is such concept and phenomena as "leakage", when production is shifted to developing countries. Very easily (companies mentioned) can move to Russia or Belarus and produce where they won't need to meet high European standards. But this means that there is no income to the state's budget and people will loose their jobs". [N4]

"Essentially there is a vested interest that production would not shift from Lithuania to the third countries, not mentioning concrete companies". [N2]

"It is thought what to do with "leakage" – and we come back to the international questions again. <…> We can accept commitments to reduce (GHG emissions) by 30 %, 80 % and 90 %. However in this case the production will move to the third countries". [N4]

"These are instances where best available techniques are not always used. Energy is consumed more in order to produce the same amount of production. This is very important – it means either the competiveness is not right or the costs are high". [N4]

"The expenses are less, the competiveness increases and you can sell the product more easily. <…>. However, you cannot do it in one day, investments are needed. You

cannot simply undertake this quickly; it is a whole process – technology, access to new technological innovations". [N1]

"You can't make barriers for competitiveness in the EU". [N4]

"No Lithuanian company will be able to compete when benchmarks for pollution indices will be estimated according to the best available techniques in the EU. <…> Because there are different technological processes". [N4]

"Lithuanian producers probably would not move production to China or India. But they would definitely consider (and even effect) a move to the other side of the river Nemunas from where they might sell electricity to Lithuania" [N4]

4.1.4. Means for Compliance

"Normally all electricity producing companies should obtain EUA in the EU auctions from 2013. Due to Ignalina's closure, the state's companies, producing electricity, will be able to reduce their GHG gradually". [N1]

"The forecast does not foresee big growth *(of energy consumption from renewable energy sources)* in the private sector. However it is desirable to achieve 80 % *(of energy consumption)* from renewables *(in this sector)* and up to 60 % in central heating. It would be a big growth in the change from fossil fuels to renewables. <…> Saving is the second aspect". [N6]

"Having little resources, means should be estimated that are really effective". [N1]

"It is because of the economic recession. Companies face financial difficulties. They are recovering slightly now. However, money is needed in order to invest in the modernization of technologies to achieve higher standards. Everything refers to the crediting policy of banks". [N1]

"There was enough GHG emission allowances allocated for Lithuania. More than it was needed. Knowing that there will be no free GHG emission allowances from 2013 and instead of selling these and making investments into the best available techniques in production (*practice and technology*), they did not do that – did not implement those technologies". [N3]

"We represent the sector in the Commission. However if a company comes and asks for more GHG emission allowances, we can not do that if it is against the provisions of the directive". [N4]

"There is bureaucracy. This is a new sphere and bureaucratic apparatus is not flexible". [N3]

"Financial incentives, regulations and sanctions for "bad behavior" should be developed in order for people to see opportunities". [N3]

"The stipulations do not appear automatically. Certain commitments in the plans for investments and modernizations have to be presented". [N1]

"That the actual efforts and the associated costs are distributed in a fair and equitable manner". [N4]

4.1.5. Standard of Living and Priorities

"No one has heard about a person who would object to the result when we talk about the housing renovations. However when you see prices… People do not have money, credits should be taken". [N4]

"Some states have more ambitious aims and agitate Lithuania to join these objectives. Studies are made and we see that Lithuania might accept higher objectives regarding the use of renewable energy sources, but for that a resolution should be adopted. <…> It should be political will. If we want to change something, there should be political will and agreement. It is natural that such agreements should exist in Seimas and Government". [N6]

"No one objects to have new installations, but they say: "we do not have resources for that"". [N4]

"There is a price for heating. This is tangible and understandable". [N4]

"Essentially it would be possible to build solar cities. However consumers are not capable of paying the prices. That's why a sustainable solution should be looked for in order to harmonize wind, biomass and solar (*energy).* [N6]

"According to Copenhagen accords we have to make payments for developing countries. This is comical when we do not have resources ourselves. But we have to make payments in order for other countries to implement climate change programmes. <…> [T]his is problematic of climate change negotiations". [N3]

"We have other, bigger problems according to people comparing with GHG emissions". [N4]

4.1.6. Summary

Several notions from the above statements are likely to have an impact for further research and sub-research topics. Obviously, the national arena points to dependency on the international arena, where the state (Lithuania) has to accept the rules of the

game. It is mentioned that Lithuania is influenced by most of phenomena that the big states face – labor problems, emigration, etc. However, general Lithuanian contribution to global GHG emissions is rather small – and the state's priority is the growth of the economy. Irrespectively, the international arena helps the state to go forward with setting targets and environmentally friendly obligations.

The role of national legislation is pointed. In spite of international agreements, a legal framework has to be set in the national arena as political will is not enough. Besides, education and wholesale enlightenment is emphasized. However, the importance of historical routs and historical conditions is also underlined.

A potential shift of production is acknowledged. Views from the national arena tell that it will be difficult for older companies to compete in the EU market after pollution benchmarks are set on the EU arena. Old technologies and different technological processes will be the reason for that. However, timely investments to cleaner technologies and the use of renewables are mentioned as an opportunity and way out.

Summarizing the views about standards of living and priorities, proper intentions of the companies are collated to the lack of resources.

4.2. Administrative Arena

4.2.1. A Small State

"If we go along with the international global community at all, we have to undertake the same steps in order to reduce GHG emissions. <…> we have to play the game according to the same rules". [A4]

"There are legal acts and we must fulfill them". [A5]

"Apparently the production of electricity for local producers is limited". [A4]

"Political will is needed". [A3]

"Lithuania is a small open economy state, which has a great influence from external environment (surroundings) and infrastructure. Both financial and market change and economic development tendencies have a great influence on Lithuania. Every change in the surroundings has an influence <…> from the East and from the West". [A6]

"We almost do not consider legislation which is not foreseen in the EU. If a "bottom-up" approach is taken, a question arises as to "why we run in front of the train?" [A4]

Public enterprises or companies with mandates (A^I)

"If Lithuania cuts its emissions, but not the USA, it will not survive in the global economy at all". [A^I5]

"We would never have this system (the EU ETS) if it weren't for the EU. <…> if it weren't for the EU, there would be neither a promotion of renewable resources, nor allowances, nor promotion for individual consumers who reduce GHG emissions". [A^I1]

"There is a limited attitude which starts from thinking that we are small, disadvantaged and that we need to get more money from the EU". [A^I1]

"We have to respect the EU, however we have to discuss with them too. They may be tendentious and overweighed sometimes". [A^I4]

"Do companies want to comply with the EU rules? There was a big resistance at the beginning. It is the same when a new rule is accepted suspiciously. Everyone accepted it as a heavy burden". [A^I6]

4.2.2. Knowledge

"It is a long process; children should be educated since they are little <…> in kindergartens, at schools". [A3]

"We have understood that fossil fuel costs and we started to economize". [A4]

"There was more alarm from our side; however after several conversations with the Ministry of Environment, everything became clear". [A5]

"Our knowledge is quite limited. We have been instructed about tasks however we have had no training. <…> Only at the beginning, when we were introduced to climate change issues. Just a couple of other training sessions followed…" [A3]

"It was a new activity which had to be credited to someone without any additional human and financial resources. This has a huge influence. <…> and the level of knowledge is of significant importance". [A2]

"They scrutinize the matter as they have to spend some time and even though they have questions…" [A3]

"We learned from each other <…>. Companies are very pleased when we sometimes tell where the mistakes are and what should be changed". [A1]

"During the 1st trading period (2005-2007) no-one understood what to do, and the "top-down" approach was followed. But it was different during the 2nd period; it was "bottom up" already". [A4]

"This is the field where they (companies) trust consultants, and consultants might not always have that knowledge perhaps... <…> could consultations be provided by

the state? I do not know. It might be cheaper, however only a few companies need it, as large companies have got competent workers already". [A1]

Public enterprises or companies with mandates (A^I)

"We started in 2005. I have noticed that awareness has increased considerably since 2008, when the 2nd phase began. Operators even ask such questions that force us to improve. We address those questions to a higher arena. Hence, there is a feedback". [A^I6]

"We learned from each other, it was very difficult". [A^I2]

"You should know all industry processes and estimate operational processes which emit GHG". [A^I2]

"If we limit GHG emissions, we limit the consumption of all other resources. We should economize resources in order to save them for future generations". [A^I5]

"Operators from their side (improve knowledge more and) move forward - and we do not have it on state level. Then we must think about how to solve these questions in practice". [A^I6]

4.2.3. Threat of Losing Production

"After 2015, I hardly imagine how our old power objects will meet such low marginal values. You can hardly imagine how much they have to be reduced". [A3]

"In order to survive after 2015, companies have to do a lot. There is not much time for that". [A3]

"Dependency on Russia makes a great influence" [A4]

"I would support the Seimas asking whether all money earned *(from the EUA trade)* were invested effectively in order to get a maximum profit?" [A4]

"It is more of market regulation, business relationship – "I can do it and you cannot". My technology equipment is better, so you also have to have it in order to remain competitive". [A5]

"Economic decisions are made when saving and rationalizing the economy from the viewpoint of expense". [A6]

"Old technologies... New technological solutions have to be made. On the other side, we are dependent on one sort of fuel (gases). We have it today but there is no guarantee that we will have it tomorrow". [A5]

Public enterprises or companies with mandates

"Unknown factors are considered. For example, BAT should be taken into consideration and evaluated in the setting of benchmarks; however there is no determination of what that is. <…> the EU tries to find "optimal" solutions which will force companies to make reductions (in GHG emissions) but without overestimation". [A^I6]

"No entrepreneur will green its enterprise if he becomes less competitive. He will green if his goods will become more marketable". [A^I1]

"Old technologies… economic issues, expensive fuels <…>. No one wants to produce less if they have production". [A^I2]

"Pollution is a big problem. However can the hit be so sudden? We expressed our doubts. The suggestion was to proceed deliberately and more slowly. We cannot accept (requirements) so suddenly". [A^I4]

"All industry endeavours to achieve modernization, and not primarily because pollution should be reduced. Firstly, an industry must be modernized in order to compete and survive in the market". [A^I4]

4.2.4. Means for Compliance

"A company *(name mentioned)*, which has boiler plants in our region, installs a boiler of bio-fuel each year. CO_2 emissions are 0 in this case". [A2]

"We have to look that the company would solve questions concerning GHG emission reductions. That it would invest. But we should not ask and check where they put the money. The companies do not need to be asked where they put the money but what they have done in order to reduce GHG emissions. Not at all talking about how much profit they have made". [A4]

"It is good that they *(companies)* change *(technologies)* and use bio-fuels <…>. Companies have to pay taxes. GHG emission reduction requirements are also an incentive to use bio-fuels or miscellany. <…> they made their choice, altered their technologies used and pollution is slightly decreasing". [A3]

"We remind *(companies)* that <…> you should think about means in order to reduce GHG emissions, as the time will come when allowances will have to be purchased only in auctions". [A2]

"If they *(companies)* will have bigger emissions, they will have to buy [allowances]; it is a loss" [A3]

"We do not have a legal power *(mechanism)* which would allow us to require the implementation of the means, reducing GHG. <…> constrainedly, we can not demand to implement the means". [A2]

"The national allocation plan has given its input. If Lithuania had roughly *(a consumption of)* 3,5 mln fuel-oil twenty years ago, now it has only 400 400 tones. We have reduced its *(fuel-oil)* consumption 9 times and it is a great achievement". [A6]

"*(Companies)* pay higher taxes and then they feel directly that they have to do something". [A2]

"Our companies are looking for possibilities to reduce emissions, *(companies mentioned)* have big power property and do not have possibilities to reduce GHG emissions and change fuel. <…> The only sanction is to buy allowances; they are punished because they have additional expenditures". [A6]

Public enterprises or companies with mandates

"Companies "think", they change technology [companies mentioned] <…> they also estimate how to produce energy more cheaply". [**A^{I}**2]

"During 20 years we have reduced pollution because the industry has shrinked which used energy suppliers". [**A^{I}**4]

"Mostly I like companies that are included into national allocation plans and manage to participate in other flexible mechanisms. In this way they reduce CO_2 and other gases together". [**A^{I}**6]

"At the beginning many [companies] earned using the system <…>; had they invested earlier, they would have savings at present". [**A^{I}**2]

"If we have a question on our agenda, we definitely make a proposal; if we criticize the Prime Minister, we always have our proposals <…> industry is represented". [**A^{I}**4]

"After the switch to clean fuels, companies can sell their allowances and get profit and redo other installations for cleaner production. It is a system created". [**A^{I}**3]

"We had to represent companies in order that the allocation would be correct between sectors". [**A^{I}**3]

"Lobbying is quite strong. <...> There is pressure". [**A^{I}**5]

"There was a pollution tax earlier. However there was no limitation. Companies used to pay constantly. A big limitation is applied now as a company feels financial consequences if the allowed emission amount is exceeded". [**A^{I}**6]

"They [penalties] are efficient just because they are estimated theoretically. <…> It is enough for them *(companies)* to know and the penalties perform their task". [**A**^{I}6]

"There is lot of good issues when pollution is decreased. Gas import is decreased, more employment is created, and living conditions become better. There are a lot of subsidiary benefits". [**A**^{I}1]

"A company fulfills what is profitable for it. If it can reduce pollution and earn from it, this is what will be done. It is unlikely for a company to reduce pollution if it does not have financial motives". [**A**^{I}1]

4.2.5. Standard of Living and Priorities

"A mean is planned. It is also suitable for this purpose – GHG emission reductions – however there are other reasons that are more important for the company to implement *(instead of GHG emission reductions)*. We know that the company chooses its priorities". [A2]

"Nevertheless, Lithuania as a small country and as a support provider already should estimate symbolic funds in the budget and <…> sponsor developing countries in order to solve climate change problems". [A6]

"Obviously it reflects social issues, such as heating for citizens – whether it will get more expensive or less expensive, etc…" [A2]

"It induces the increase of prices". [A3]

"Let us take our energy – it does want [to invest into cleaner technologies] because the State price and Energy control commission does not allow increasing prices voluntarily". [A4]

"It would be great that actions would be made voluntarily. Unfortunately, life is based on economy". [A2]

Public enterprises or companies with mandates

"Pollution has to be reduced. There is a compromise – one wants to have many things without polluting the environment. There are technologies; scientists should work towards a compromise. <…> Sustainability becomes a reality when a good life is ensured and the environment is preserved". [**A**^{I}1]

"Someone else from society pays – an electricity consumer or a tax payer at last. It depends on the form of support *(subsidy)*". [**A**^{I}1]

"If we take industry we can not eliminate social affairs. We have a social responsibility concern". [**A^{I}**4]

"The energy prices are very high comparing to our average income. Hence the average resident does not easily make ends meet, he counts and saves. Simultaneously energy consumption is decreased". [**A^{I}**5]

"What is more important I think that it would not be needed new resources but to re-allocate the existing ones" [**A^{I}**5]

"A product price will increase. <…> I think that we will have to pay mostly as bottom-line consumers. Probably the state will not be able to compensate something". [**A^{I}**6]

"We have a very "short" attitude". [A^{I}1]

4.2.6. Summary

Due to the type of actors in the administrative arena, responses are divided into two sections. The first section reflects on the interviewees from strictly state (budgetary) institutions. The second reflects on views from public institutions, companies with mandates and associations. The groups are separated as differences between them are captured that will be presented below.

Summarizing the responses, it is marked that the administrative arena emphasizes dependency on the international community, whose rules have to be accepted. The influence of the international arena, financial and market change, and economic development tendencies are pointed as influencing factors. Referring to possibilities it is stated that the EU has to be respected but the state should also discuss its positions.

Considering knowledge, some sub-categories of knowledge were captured. The patterns refer to knowledge about climate change and education, knowledge of how to implement legal rules and technical knowledge. While budgetary institutions stress education, learning and how to implement legal rules, institutions with mandates point to the importance of technical knowledge and the difficulties at the beginning. Cooperation in the form of knowledge exchange at the start of the EU ETS is mentioned. Improvements in companies' knowledge is stated.

Referring to opportunities that can be used, technological solutions are anticipated. These are the use of bio-fuels, participation in flexible mechanisms and the EU ETS trade. Industry representation is also mentioned, effected through unions such as the Confederation of Industrialists and The Lithuanian District Heating Association, etc

4.3. Industrial Arena

4.3.1. A Small State

"The EU goes in front as "a standard-bearer" and invites everyone to follow their example. The EU target is to reduce GHG by 20 % up to 2020" [I3]

"Norms come from Europe. Regarding those norms – the country is still "late to board the train". [I2]

"When the state is obligated to participate in the EU ETS and the installation is included into the list, nothing can be bypassed". [I3]

"The rules are only transposed – however the initiative is not supported". [I4]

"Most probably we are too small that we could express our claims, boycott or whatever means to take <…> that those dispensations *(in the EU requirement)* would be done for Lithuania". [I2]

"Who promotes the new rules? The Western countries". [I4]

"Big countries are not interested in making a split with Russia and awaking similar conditions. Hence when political-economical interests of the countries emerge, the big ones forget the small". [I2]

"It is difficult because of the change of positions and absence of a long term strategy. Without a long term strategy, short term tasks are estimated in the state. Legislation is often changed – and the change is not forecasted. This situation forces companies to make rapid decisions that influence the increase of investments <…>. It is difficult to plan and there are no opportunities to attract investments". [I4]

"I think big concerns dictate conditions to Europe through lobbyism. They supply technologies and promote laws. Lobbyism occurs in many cases". [I2]

4.3.2 Knowledge

"Every sensible person would say that GHG emissions need to be reduced when scientists make relevant studies about the phenomenon of climate change. The reductions need to be achieved". [I1]

"It was difficult to associate the link of Kyoto targets and national responsibilities with the companies at the beginning". [I3]

"They *(international company mentioned)* provided extremely good help as the biggest companies came to those meetings. <…>. Institutional work followed afterwards". [I3]

"Persons definitely need to obtain knowledge. Closer communication with state institutions or companies with mandates should be established". [I3]

"We tried to do everything on our own: we prepared the monitoring plan, read the directives and other legal acts". [I2]

"Almost daily correspondence was performed with *(consultant's company name)* as it was not clear what information or material was requested". [I3]

"For understanding the new complex system, time, information and knowledge was required. This had to be explained to chief managers". [I3]

"The system *(the EU ETS)* leads to GHG emission reductions. However how to do that reductions would be attractive and you would want to implement it?" [I1]

"The legislation database should be transparent and available to everyone" [I2]

"Institutions do not always get a handle of what is needed according to the document. However they require that from us. There is a lack of dialogue here**"** [I3]

4.3.3. Threat of Losing Production

"(*A company***)** is a giant with wooden legs". [I3]

"It seems that Europe is displacing its own production – not only energy production, but metal production and even simple sewing companies have been moved to Belarus. Because it is cheaper to produce there, some taxes are not in place, etc. And entrepreneurs consider such situations". [I2]

"We are talking about carbon leakage and contemplate if limitations do not "kill" the industry. Price for CO_2 is of great importance as well. If we keep silent about the issue now, there will be no production in the future". [I3]

"The EU starts to talk about carbon leakage when production *(energy production)* is shifted to close countries – to Belarus or Russia" [I2]

"There is no serious competiveness (internal)". [I2]

"Not all technologies can be changed". [I3]

"Lithuania is behind what concerns the use of equipment. It is as an island on the map and is treated as a secondary market. <…> *(Because of the ownership of installations that provide heating to the centralist heating systems)*, political decisions have great influence regarding their modernizations". [I4]

4.3.4. Means for Compliance

"It is obvious that allowances are linked with the use of bio-fuels. It is a particular promotion scheme to use local renewable resources". [I1]

"We follow the situation. And we fully understand that there are good opportunities to do something when we get allowances for free and may get financial benefits from GHG emission reductions. So why would not we use it and get ourselves prepared for the future? We are not going to close down". [I3]

"Everything turns to investments. You can do whatever you want. However it matters how much it costs. It is worth doing it though". [I1]

"The EU ETS makes its input. The money received from the EUA trade can be successfully invested into further GHG emissions reductions". [I1]

"Again, starting from 2008, norms have been tightened. In order to be able to work after 2008, big investments were made into environmental protection". [I2]

"We regularly meet our EU parliament members and write letters. But not as a company, through the Association". [I3]

"We write letters to the Ministries of Economy, Energy, and Environment and tell that there is a lack of allowances. We should have more and that the electricity price will get higher. However there is no strong feedback. Companies' interests are not represented strongly" [I2]

"The EU shows clearly which direction it is going to follow. This is along the path of renewable energy; increasing energy efficiency; the use of more clean fuel; etc". [I3]

4.3.5. Standard of Living and Priorities

"We can do it (reduce GHG emissions). But there is another side to it – the heating and electricity price for consumers". [I1]

"Saving is very important, as well as an increase in profits. Even if pipes are warmed, savings can be achieved. This is a long term perspective. The company is big and we do not intend to close down". [I3]

"Everything should be done smartly in order not to raise the price for the consumer. Here is the essence I think". [I1]

"We naturally have to assess ourselves that electricity is getting more expensive, from 4 to 8 cents". [I2]

"The consumer decides everything. Even if there is an obligation to do it [reduce GHG emissions], he tells that you do wrongly. The most important is not to increase the price". [I1]

"A consumer pays everything. And this is everywhere". [I2]

"It is possible to produce ecological products *(name mentioned)* that would cost 100 times more. However who would buy these? Consumers prefer cheaper products, such is the morality". [I3]

4.3.6. Summary

Summarizing quotes from the industrial arena, the responses point to a slightly different approach. The interviewees refer to concrete numbers (obligations). Also they refer to the impact and consequences of industry's activities and possible price increase to the consumers. The interests of big countries are mentioned. An internal long term strategy is missing and the change of official positions is marked.

Subsequently, the perception of climate change legislation is noted as an important factor. Public opinion and the equal availability of legislation are stressed. However, the possibility to get additional information from consultants is also highlighted. At the beginning of the EU ETS, primary information from consultants and the possibility to meet big companies was greatly appreciated. The collaboration with institutions is marked but unfortunately the competence of the latter is slightly criticized.

The industry company is named as "a giant with wooden legs" when talking about requirements and changes. It means that big companies are not flexible and need long term planning. Old technologies and technological processes are also mentioned as a part of current activities. High benchmarks for pollution are referred to as a cause for a possible industry shift to other countries outside the EU. The industrial arena claims that everything should be done smartly in order not to raise a price for the consumer. However mostly the final consumer pays.

5. ANALYSIS AND RESEACH FINDINGS

The theoretical background of this dissertation, as well as the research methodology and empirical data (legislation frameworks and interviews), have been elaborated on in previous parts. This part will link MLG theory together with legal frameworks and investigated arenas. The analysis will start with theoretical discussions and will be followed by the response to MLG and legal rules on different arenas analyzing categories. The analysis of categories will elaborate on the most dominant driving forces in each arena.

The results of the dissertation will be analyzed according to the scheme which is presented below:

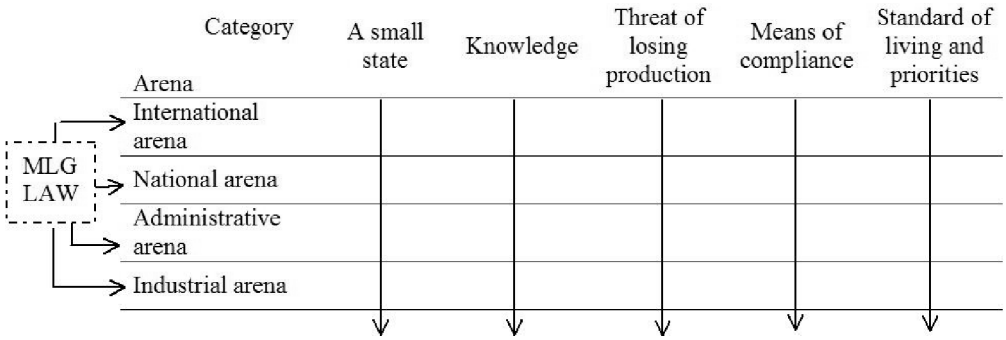

Figure 7. Interlinkages of MLG and Legal Frameworks with Arenas and Categories

5.1. Theoretical Perspectives of Analysis on the Implementation of the Kyoto Targets in the Context of Multi-level Governance

The MLG perspective together with the investigation of legal frameworks has been applied in order to follow the implementation of the Kyoto Targets in Lithuania. Although MLG has different approaches of analysis, in the study MLG is understood as the EU governance system, where authoritative decisions are made across different multiple territorial levels. Firstly, it is revealed that hierarchical top-down order and the formal implementation of legal rules involves four arenas. These are the international, national, administrative and industrial arenas where power relations are distributed among different actors. Vertical interactions between arenas play a big role in governance, as well as the implementation of legal norms and distribution of tasks for administrative structures. Each arena has its own powers and tasks to be fulfilled. The results of the policy implementation of GHG emission reductions show that requirements are set (legitimized) in the international arena. This begins a top-down process of policy implementation and vertical interactions of MLG. Requirements have to be further implemented in finding ways to meet the commitments of the state. Industrial activity is the source of GHG, hence the sector is most directly affected by state obligations. Yet the industrial arena has its own driving forces that influence the actions it takes. Horizontal as well as vertical interactions

between arenas and actors occur. Horizontal interactions in the study involve the participation of non-state and non-administrative structures. These include the Lithuanian District Heating Association (LDHA); The Confederation of Industrialists (LPK); private consultation company (Cowi Lietuva); and independent verifiers. However vertical interactions play a more significant role in a formal, top-down flow of implementation.

The EU has ambitious targets regarding GHG emission reductions, up to 2020 and afterwards, which Member States have to implement. Considering the obligations of the UNFCCC and its implementation, the EU fulfills the function of "safeguard" to Member States – the implementation of the EU legislation is legally binding and followed by sanctions against the Member States in case of not compliance.

The dissertation reveals that in the national arena both the Seimas and the Government of the Republic of Lithuania have political and legislative power concerning achieving GHG emission reductions. Results show that the Committee of Environment Protection at the Seimas of the Republic of Lithuania and the Ministry of Environment of the Republic of Lithuania are the key institutions in the national arena. The presentation of legal frameworks also shows that the actions of these institutions are coordinated with the appropriate structures in the same arena. Laws and government acts are adopted – requirements to achieve GHG emission reductions are legitimized and tasks are distributed among institutions in other arenas. Administrative structures (institutions) of the administrative arena in this case receive tasks in order for the overall objectives of the country to be implemented. Key institutions are Regional Environmental Protection Departments and the Environmental Protection Agency that coordinates the work of REPDs; the Lithuanian Environmental Investment Fund; and the National Accreditation Bureau. Horizontal interactions involve the participation of State enterprise Energy Agency, independent verifiers, and private consultation companies.

The tasks in the administrative arena are met as formal enactments. Although the tasks are defined as clear objectives, their implementation still requires appropriate knowledge and capability.

Results show that implementation of the EU ETS has been developed in several stages – considering development of legislation in the international and national arenas, the institutional framework in national and administrative arenas – and more tightened requirements for the industrial arena. Results show that the first stage of the EU ETS was accompanied with difficulties in understanding tasks and how they had to be implemented in the administrative and industrial arenas. Subsequent stages of the EU ETS (the process and development of national allocation plans and further developments of the EU ETS) set higher obligations for GHG emission reductions. In parallel, bottom-up processes started to take place. Comparing the stages of the EU ETS, results show that centralization of the overall system takes place towards the EU arena.

5.2. Interlinkages of MLG and Legal Frameworks with Arenas and Categories

5.2.1. A Small State

In 2002 when signing the Kyoto protocol in 2002, Lithuania was "classified" to the countries that were undergoing the process of transition to a market economy[371].

[371] Cf to Table 6.

Under the Kyoto protocol, countries classified with economies in transition are Belarus, Bulgaria; Croatia; the Czech Republic; Estonia; Latvia; Lithuania; Poland; Romania; the Russian Federation; Slovakia; Slovenia; Ukraine; and Hungary. Many of those (except Russia, Belarus and Ukraine) in the time being became a part of another union – the EU.

The core aspect concerning laws and regulations in the state when joining the EU is that since 2004, national legislation has to be harmonized with the EU's acquis communautaire: "We have to coordinate the EU legislation with our national and transpose the EU legal acts <…> into national laws or subordinated legal acts" [N5]. Climate change policy in the national arena is harmonized as well. Respectively, transformations in management are done.

The theme of a small country (the identified pattern) concerns issues related to the state as being a small country. These are, for example – supremacy of the European legislation, small industry and little impact for GHG emissions at a general scale.

Considering international practice and rights, possibilities to express interests and will is always foreseen on a global scale. Another question is how possibilities can be treated and used and what the obstacles a small country is facing. Interviews reveal possibilities and pressure, also benefits and difficulties because of the dependence on the EU.

National arena

Interviews in the national arena revealed positive features associated with belonging to the EU. Some internal problems can into play when decisions taken at the EU level impose certain regulations that would not otherwise have been invoked. It is considered a positive for Lithuania to belong to the EU, when environmental concerns are considered. As we have two superior arenas – international and the EU. "Being part of the EU makes us go forward" [N3]. Ratification of international conventions and protocols necessarily imposes obligations to the state: "Lithuania, having signed the Kyoto protocol (and also the UNFCCC) accepts obligations with the world to reduce climate change" [N6]. However, pressure from the EU was mentioned: "the situation is that the EU upholds ambitious objectives anyway. Even though limits to GHG emissions were lowered for countries in transition, the European Commission targets are ambitious" [N1]. However, possibilities to get some dispensations during negotiations were mentioned. As the view reflected, the benefit of negotiations should be evaluated before as there could be more bureaucratic "bother" in it. [N1]

Dispensations for Lithuania were considered before adopting certain decisions regarding GHG reductions. Some dispensations were also received for sectors emitting GHG which are deemed under risk of carbon leakage.

Little influence of a small state was emphasized: "Lithuania is small. What is problematic to small states is that they have little influence, but they are influenced greatly. They are influenced by all phenomena that happen in the world, starting with the ecological problems and ending with migration and diseases" [N3]. The impact of little GHG emissions was touched: "Nothing will change if only Lithuania will reduce. How-

ever it is a little bit different – we are concerned about economic growth, but not about GHG emission reductions" [N1].

In general participation in international agreements ensures economic cooperation: "If the state wants to trade with Japan, it has to be part of World Trading Organization. <…> And if the state wants to participate in emission trading, it has to be among UNFCCC countries" [N3].

Some views were related with GHG emission reductions and the change of fossil fuels in order to implement reductions. Political power together with legitimate process was stressed: "Politically targets for GHG emission reductions may be adopted, but if it these are not sustained by laws, resolutions, orders or regulations at state level, then obligations will just remain a slogan" [N4].

Administrative arena

Views in the administrative arena elevated the dependency "to international community": "If we go along with the international global community at all, we have to undertake the same steps in order to reduce GHG emissions. <…> we have to play the game according to the same rules" [A4]. Global responsibility regarding climate change was mentioned as well: "If Lithuania cuts its emissions, but not the USA, it will not survive in the global economy at all" [A^I5]. It was stressed that the problem should be solved globally.

Dependency on the external world was pointed out: "Lithuania is a small open economy state, which has a great influence from external environment (surroundings) and infrastructure. Both financial and market change and economic development tendencies have a great influence on Lithuania. Every change in the surroundings has an influence <…> from the East and from the West" [A6]. However, the positive impact on belonging to the EU was noted: "We would never have this system *(the EU ETS)* if it weren't for the EU. <…> if it weren't for the EU, there would be neither a promotion of renewable resources, nor allowances, nor promotion for individual consumers who reduce GHG emissions" [A^I1].

The administrative arena also marked political will and requirements for implementation: "There are legal acts and we must fulfill them" [A5]. However the bottom-up processes was understated: "We almost do not consider legislation which is not foreseen in the EU. If a "bottom-up" approach is taken, a question arises as to "why we run in front of the train?" [A4].

Interestingly, some criticism was expressed regarding an understanding of the concept of a small country. Criticism started with a "self-contained" view of being disadvantaged in some cases that should be compensated [A^I1]. Supremacy of the EU was acknowledged but not overestimated: "We have to respect the EU, however we have to discuss with them too. They may be tendentious and overweighed sometimes" [A^I4].

Industrial arena

The willingness of big states to collaborate (trade) with small countries was touched upon. Political will was mentioned: "It's mostly political decisions". According to the

industry, big concerns dictate conditions to Europe through lobbyism. They supply technologies and promote laws. Lobbyism occurs in many cases" [I2]. However the supremacy of legal rules was acknowledged: "When the state is obligated to participate in the EU ETS and the installation is included into the list, nothing can be bypassed" [I3].

Regarding gas issues and commenting on the politics of the matter, it was stated that: "Big countries are not interested in making a split with Russia and awaking similar conditions. Hence when political-economical interests of the countries emerge, the big ones forget the small" [I2].

The general view was that the state's companies were too small to change or influence the situation. Referring to the country, it was said that: "Most probably we are too small that we could express our claims, boycott or whatever means to take <…> that those dispensations *(in the EU requirement)* would be done for Lithuania [I2].

Critical views expressed were that initiatives were not supported: "The rules are only transposed – however the initiative is not supported" [I4]. The influence of other states was noted: "Who promotes the new rules? The Western countries" [I4].

Industry expressed their possibility to represent interests at the voting on the EU arena. However this was done turning to appropriate national associations firstly. Belonging to some bigger European associations or consortiums was pointed out [I3].

Comments on differences between the arenas

Differences between interviews in each arena show the point of departure for understanding either possibilities or restrictions. Views from the national arena presented more opportunities than restrictions. The pressure from the EU (international arena) was clearly pointed out, but also possibilities (dispensations) that the country had were identified. The state arena as well as the industrial arena pointed out gas recourses and reliance upon other countries. This was seen as a negative dependence.

The administrative arena identified belonging to the EU and the international community. The generalized view from the industry was their inability to influence policy on the EU arena.

5.2.2. Knowledge

The White paper of the European Commission stated that more knowledge on climate change impacts was needed in order to develop appropriate policies. Knowledge of legislation is required in order to implement necessary requirements. Technological knowledge is necessary in order to know how GHG emission reductions could be achieved technically.

Results from interviews below elaborate on the importance of knowledge.

National arena

Reflections from the national arena showed that people should be better informed about climate change. This could be done by means of education at school, public events

and media. It was stated that: "Investments should be made in order to raise awareness" [N5]. [N5] also stated that "We should start from kindergartens, schools and universities <…>. Disciplines should be introduced into school and university programmes". Some criticism to low present-day levels of climate change awareness was expressed. [N1] remarked that: "Opinions about GHG emissions in general should be more progressive <…> but we do not have wholesale enlightenment". The interviewee also stated that other institutions should demonstrate more actions: "I think there should be more information and education. In addition to the Ministry of Environment, this responsibility should be undertaken also more by municipalities" [N1].

A comparison with Scandinavian countries was undertaken. However, it was noticed that the situation greatly depends on historical conditions and the role of the "green movement" – it was mentioned that the green party is needed in the Seimas [N4]. Sweden was referred to as a sample where green movements started their activity about 70 years ago. Hence, Swedish society grew up with green ideas. [N2] noted that: "Issues around GHG emission reductions require the raising of awareness. Green movements in Sweden have existed for 70 years already, and this level of awareness was achieved over many preceeding decades".

The importance of more extensive knowledge in the state arena was also mentioned, especially for better understanding of the EU legislation for a wider number of people. It was also stated that some measures had already been foreseen when analyzing the principle of subsidiarity [N5]. This could allow the arena to participate in international debates more actively.

What regards to companies and their awareness, [N3] stated that: "Companies started to think about corporate social responsibility and their company's image, asking such questions as: "why do they live? Why do they act like that?" <…> People started to talk about these issues because they are important".

A concern about sufficient knowledge of political decisions was expressed. [N1] remarked that "It will be problematic to allocate obligations for the transport, agriculture, household, and waste sectors – those that are not covered by the EU ETS. <…> It is much more difficult to estimate and allocate obligations in these separate sectors, estimate their potential, and evaluate the most effective and suitable means. <…> It is not clear how to choose the most effective means".

Administrative arena

Reflections from the administrative arena stated that enlightment and increase of awareness of society is a long process. According to [A3], "It is a long process; children should be educated since they are little <…> in kindergartens, at schools".

It was stressed that universities and institutes should provide a bigger input into research and knowledge [A[1]5]. The research programs exist however they should be revised and slightly amended. The state arena should promote that. It was stated that the problem of climate change should be viewed as a complex one.

However another interviewee emphasized market rules: "a balance is more related to market regulation <…> these are market rules". Awareness was also marked: "We have understood that fossil fuel costs and we started to economize" [A4].

Regarding implementation of new requirements (initialization of the EU ETS), [A5] stated that: "There was more alarm from our side; however after several conversations with the Ministry of Environment, everything became clear" [A5]. However [A3] highlighted the necessity of additional information and possible training: "Our knowledge is quite limited. We have been instructed about tasks however we have had no training. <…> Only at the beginning, when we were introduced to climate change issues. Just a couple of other training sessions followed…" [A3]. [A2] reflected that: "It was a new activity which had to be credited to someone without any additional human and financial resources. This has a huge influence. <…> and the level of knowledge is of significant importance".

Vertical interactions and cooperation with other institutions and companies with mandates were stressed. It proves that bilateral learning and time is needed: "They scrutinize the matter as they have to spend some time and even though they have questions …" [A3].

Bilateral spread of knowledge between the administrative and industrial arenas was marked by [A1]: "We learned from each other <…>. Companies are very pleased when we sometimes tell where the mistakes are and what should be changed". [A^I2] remarked, that "We learned from each other, it was very difficult". [A1] also highlighted the importance of knowledge of technological processes.

The lack of consultations and vertical interactions were stressed: "This is the field where they *(companies)* trust consultants, and consultants might not always have that knowledge perhaps.. <…> could consultations be provided by the state? I do not know. It might be cheaper, however only a few companies need it, as large companies have got competent workers already" [A1].

Reflecting on the increase of knowledge during the time, [A^I6] stated that: "We started in 2005. I have noticed that awareness has increased considerably since 2008, when the 2nd phase began. Operators even ask such questions that force us to improve. We address those questions to a higher arena. Hence, there is a feedback". Referring to the EU ETS, [A4] remarked that: "During the 1st trading period (2005-2007) no-one understood what to do, and the "top-down" approach was followed. But it was different during the 2nd period; it was "bottom up" already ".

Industrial arena

Interviews in the industrial arena demonstrated sophisticated consent regarding the issue: "Every sensible person would say that GHG emissions need to be reduced when scientists make relevant studies about the phenomenon of climate change. The reductions need to be achieved" [I1]. The interviewee stated that the EU ETS led to GHG emission reductions, but additional knowledge and input was needed. "The system *(the EU ETS)* leads to GHG emission reductions. However how to do those reductions would be attractive and you would want to implement it?" [I1]. It was marked,

that time, information and knowledge was needed - "For understanding the new complex system, time, information and knowledge was required. This had to be explained to chief managers" [I3].

In order to obtain essential knowledge and understand requirements for the industry, the companies started to read initial legislation – the Kyoto protocol. But [I3] stated that: "It was difficult to associate the link of Kyoto targets and national responsibilities with the companies at the beginning". Only with the initialization of the EU ETS, the industrial arena started to show greater concern.

Talking about initial knowledge about the EU ETS, international companies provided the most memorable experience. During the initial phase (before the 1st National allocation plan was developed), "international company mentioned provided extremely good help as the biggest companies came to those meetings. <…>. Institutional work followed afterwards" [I3]. The interviewee revealed some criticism stating that: "Institutions do not always get a handle of what is needed according to the document. However they require that from us. There is a lack of dialogue here ". Additional companies got involved: "Almost daily correspondence was performed with *(consultant's company name)* as it was not clear what information or material was requested" [I3].

Regarding legislation, [I2] remarked that: "The legislation database should be transparent and available to everyone" [I2]. Talking about implementation of regulations, [I3] stressed that: "Persons definitely need to obtain knowledge. Closer communication with state institutions or companies with mandates should be established".

[I2] stated that "We tried to do everything on our own: we prepared the monitoring plan, read the directives and other legal acts". However the lack of information was stressed.

Some comments on differences between the groups (arenas)

Knowledge on climate change issues, understanding and knowing the legislation and technological knowledge was analyzed.

Views from the national arena made reflections on education, enlightenment and the raising of awareness in society. Issues on green movements and Scandinavian samples were noted. The importance of public awareness was highlighted.

Reflections in the administrative arena also stated the importance of education. However views highlighted the questions of competences, technical knowledge and new tasks of the system. The need of constant training for the public sector was emphasized in order to provide better services. Also a bilateral cooperation with institutions with mandates was pointed. The necessity of consultations to the industrial sector was highlighted. Reflecting to the EU ETS phases, the administrative arena stated that industry improved with their understanding greatly. Moreover, industry forced workers in the administrative area to move forward.

The industrial arena stressed the importance of clear requirements of legislation and technical knowledge. Initially companies had to read international legislations in order to understand the requirements. Views stated that much help was provided from the international arena, its events and consultants.

5.2.3. Threat of Losing Production

Industrial activity is influenced by ambitious requirements of the EU to achieve GHG emission reductions. Those companies that participate in the EU and global markets have to face serious competition. Too high requirements in order to green production may make industries transfer their production to countries where requirements are not that strict. The EC stated that "if other developed countries and major emitters of GHG do not participate in international agreements, this could lead to an increase in GHG emissions in third countries, where industry would not be subject to comparable carbon constraints ("carbon leakage") and undermine the environmental integrity and benefit of actions by the Union"[372]. Hence, the fact of carbon leakage was acknowledged and the list of sectors and subsectors that are deemed to be under a significant risk of carbon leakage from the EU was compiled.

In spite of this, issues of competitiveness, market regulations, old technologies and investments are alive in the Member States.

State arena

Deeper aspects and problems of climate change were elaborated in the national arena. The main concern that was expressed – was the interest to preserve production in the state, not separating any concrete industry. [N4] noted that: "There is such concept and phenomena as "leakage", when production is shifted to developing countries. Very easily (*companies mentioned*) can move to Russia or Belarus and produce where they won't need to meet high European standards. But this means that there is no income to the state's budget and people will loose their jobs".

General states' interests were also pointed out: [N2] "Essentially there is a vested interest that production would not shift from Lithuania to the third countries, not mentioning concrete companies".

Referring to distances, [N4] remarked that: ""Lithuanian producers probably would not move production to China or India. But they would definitely consider (and even effect) a move to the other side of the river Nemunas from where they might sell electricity to Lithuania".

The possibilities for achieving GHG emission reductions were looked at. Referring to the industrial conditions, the interviewee stated that: "These are instances where best available techniques are not always used. Energy is consumed more in order to produce the same amount of production. This is very important – it means either the competiveness is not right or the costs are high" [N4]. The interviewee highlighted different technological processes that should be renewed in order to meet requirements. Hence time, investments and competitiveness were concerned.

Mentioning the need of new technologies, time needed and the competitive situation, [N1] noted that: "The expenses are less, the competiveness increases and you can sell

[372] Commission Decision No 2010/2/EU Determining, Pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage.

the product more easily. <…>. However, you cannot do it in one day, investments are needed. You cannot simply undertake this quickly; it is a whole process – technology, access to new technological innovations".

Administrative arena

Mentioning the extension of the EU ETS and more tightened requirements, [A^I6] revealed an indetermination of new standards for benchmarking and their calculations: "Unknown factors are considered. For example, BAT should be taken into consideration and evaluated in the setting of benchmarks; however there is no determination of what that is. <…> the EU tries to find "optimal" solutions which will force companies to make reductions *(in GHG emissions)* but without overestimation".

Old technologies were mentioned as obstacles for new requirements and current production. [A5] remarked upon the need for new technological solutions and limitations: "Old technologies... New technological solutions have to be made. On the other side, we are dependent on one sort of fuel (gases). We have it today but there is no guarantee that we will have it tomorrow". [A^I2] argued that industry would hardly reduce its production willingly. The interviewee presented his view: "Old technologies… economic issues, expensive fuels <…>. No one wants to produce less if they have production".

Considering time and tightened requirements, [A3] questioned the possibilities – "After 2015, I hardly imagine how our old power objects will meet such low marginal values. You can hardly imagine how much they have to be reduced". It was stated that "In order to survive after 2015, companies have to do a lot. There is not much time for that" [A3]. [A^I4] also touched the time issue - "Pollution is a big problem. However can the hit be so sudden? We expressed our doubts. the suggestion was to proceed deliberately and more slowly. We cannot accept *(requirements)* so suddenly".

The fact of greening technologies was also related to market regulation and business relations. [A5] stated that: "It is more of market regulation, business relationship – "I can do it and you cannot". My technology equipment is better, so you also have to have it". Touching the issue of competitiveness and greening technologies, [A^I1] remarked that: "No entrepreneur will green its enterprise if he becomes less competitive. He will green if his goods will become more marketable". Market rules and priorities were also highlighted by [A^I4]: "All industry endeavours to achieve modernization, and not primarily because pollution should be reduced. Firstly, an industry must be modernized in order to compete and survive in the market".

Dependency on Russia was additionally highlighted by [A4]. The interviewee stated that: "Dependency on Russia makes a great influence". The concern about effective investments of income from the EU ETS was expressed:- "I would support the Seimas asking whether all money earned *(from the EUA trade)* were invested effectively in order to get a maximum profit" [A4]. The economically influenced decisions were also touched by [A6]. The interviewee stated that: "Economic decisions are made when saving and rationalizing the economy from the viewpoint of expense".

Industrial arena

Carbon leakage as such was understood in the industrial arena. [I2] commented on the situation in this way: "It seems that Europe is displacing its own production – not only energy production, but metal production and even simple sewing companies have been moved to Belarus. Because it is cheaper to produce there, some taxes are not in place, etc. And entrepreneurs consider such situations". [I3] revealed the issue of carbon leakage in comparison with the consequences and influences. The interviewee stated that: "We are talking about carbon leakage and contemplate if limitations do not "kill" the industry. Price for CO_2 is of great importance as well. If we keep silent about the issue now, there will be no production in the future".

The possibilities to transfer production and the EU impacted was marked by [I2] – "The EU starts to talk about carbon leakage when production (energy production) is shifted to close countries – to Belarus or Russia".

[I3] reflected about a big industry as being inflexible – "**(***The Company***)** is a giant with wooden legs". Not every such industry has possibilities to change: "Not all technologies can be changed". [I3]

The issue of competiveness was raised. It was stated that: "There is no serious competiveness (internal)" [I2]. Accordingly, [I4] remarked that: "Lithuania is behind what concerns the use of equipment. It is as an island on the map and is treated as a secondary market".

Some comments on differences between the groups arenas

Interviews revealed that issues of competitiveness, market regulations, old technologies and investments were alive in the Member States. The national arena reflected the interest of the state to keep the industry in its territory because of the income and higher employment. However views acknowledged that a threat of losing production was real – developing countries attracted production for lower standards, taxation system, etc.

Reflections in the administrative arena reflected on requirements for industries – requirements got tightened rapidly. Issues of market regulation, competitiveness and profitable solutions were touched. Incompatible status of technologies and greening them in order to get a place in the market was revealed. Time needed for technological change was considered.

Views in the industrial arena stated the possibility of industry transfer and revealed the limitations – time and technological possibilities. This would affect not only industry but income to state budget (in taxes) and unemployment as well.

5.2.4. Means of Compliance

Several coordinated policies and measures have been distinguished on the EU level in order to achieve GHG emission reductions. These are: GHG emission trading (the EU ETS); the use of renewable energy sources; energy performance of buildings; CO_2

reductions from cars, aircrafts. Hence, a wide range of possibilities could be explored when ambitious targets of GHG emission reductions are legitimated by the EU.

Results also identified different means for compliance to reduce GHG emissions – emission reductions might depend on implementation of legal rules, finding possibilities and also on external proceedings that might not be controlled (transformation of economy, its recession, etc.).

The EU ETS has been developed in several stages. The requirements got more stringent gradually – this made it possible to identify opportunities, meet requirements and find other advantageous solutions.

National arena

Interviews in the national arena touched issues regarding the stages of the EU ETS, requirements and dispensations for the country. [N1] stated that: "Normally all electricity producing companies should obtain EUA in the EU auctions from 2013. Due to Ignalina's closure, the state's companies, producing electricity, will be able to reduce their GHG gradually". The use of renewable energy sources was mentioned – an objective of the country was "it is desirable to achieve 80 % *(of energy consumption)* from renewables *(in this sector)* and up to 60 % in central heating. It would a big growth in the change from fossil fuels to renewables. <…> Saving is the second aspect" [N6].

However the right choice should be made and effectiveness of means should be considered: "Having little resources, means should be estimated that are really effective" [N1].

Investments in cleaner technologies and greening production were mentioned as another possibility of compliance with the rules. [N3] noted that: "There was enough GHG emission allowances allocated for Lithuania. More than it was needed. Knowing that there will be no free GHG emission allowances from 2013 and instead of selling these and making investments into the best available techniques in production (*practice and technology*), they did not do that – did not implement those technologies". The quote also noted that advantages were not taken at the right time. According to [N3], these were sanctions that lead to finding opportunities: "Financial incentives, regulations and sanctions for "bad behavior" should be developed in order for people to see opportunities".

An opportunity to represent industry's situation to the EC was mentioned. However the requirements of the EU legislation were emphasized. [N4] stated that: "We represent the sector in the Commission. However if a company comes and asks for more GHG emission allowances, we can not do that if it is against the provisions of the directive". Hence environmental needs and the supremacy of legislation are important. However, in general, input from a company side should be done in order to get alleviation. Referring to the exceptions in the EU legislation, [N1] remarked that "The stipulations do not appear automatically. Certain commitments in the plans for investments and modernizations have to be presented". Hence, making investments and greening technology is one of the means of compliance which might be influenced by external proceedings and other structures (financial policies, etc.). "It is because of the eco-

nomic recession. Companies face financial difficulties. They are recovering slightly now. However, money is needed in order to invest in the modernization of technologies to achieve higher standards. Everything refers to the crediting policy of banks" [N1].

Administrative arena

As in the national arena, views in the administrative arena also stated the importance of external proceedings. [**A**^{I}4] stated that: "During 20 years we have reduced pollution because the industry has shrinked which used energy suppliers".

Results from the administrative arena also showed that the arena was aware about other means and tried to warn the industry. [A2] stated that: "We remind *(companies)* that <…> you should think about means in order to reduce GHG emissions, as the time will come when allowances will have to be purchased only in auctions". However some limitations on the arena were marked: "We do not have a legal power *(mechanism)* which would allow us to require the implementation of the means, reducing GHG. <…> constrainedly, we can not demand to implement the means" [A2].

Another statement revealed that the result of achieving GHG emission reductions was mostly important. "We have to look that the company would solve questions concerning GHG emission reductions. That it would invest. But we should not ask and check where they put the money. The companies do not need to be asked where they put the money but what they have done in order to reduce GHG emissions. Not at all talking about how much profit they have made" [A4].

Financial input for companies in order to be compliant was realized in this arena. [A3] stated that: "If they *(companies)* will have bigger emissions, they will have to buy *(allowances)*; it is a loss ". This sanction was also emphasized by [A6], who stated that: "Our companies are looking for possibilities to reduce emissions; *(companies mentioned)* have big power property and do not have possibilities to reduce GHG emissions and change fuel. <…> The only sanction is to buy allowances, they are punished because they have additional expenditures" [A6]. [A2] stated that companies: "pay higher taxes and then they feel directly that they have to do something".

Positive outcomes of requirements were also estimated when technological means had been applied. "A company *(name mentioned)*, which has boiler plants in our region, installs a boiler of bio-fuel each year. CO_2 emissions are 0 in this case" [A2]. [A6] marked that: "The national allocation plan has given its input. If Lithuania had roughly *(a consumption of)* 3,5 mln fuel-oil twenty years ago, now it has only 400 400 tones. We have reduced its *(fuel-oil)* consumption 9 times and it is a great achievement".

An economical approach towards meeting requirements and being compliant was marked by [**A**^{I}2], who stated that: "Companies "think", they change technology *(companies mentioned)* <…> they also estimate how to produce energy more cheaply" [**A**^{I}2]. It was marked that: "A company fulfills what is profitable for it. If it can reduce pollution and earn from it, this is what will be done. It is unlikely for a company to reduce pollution if it does not have financial motives" [**A**^{I}1].

Hence, financial motives were mentioned. Regarding sanctions, it was revealed, that: "They *(penalties)* are efficient just because they are estimated theoretically. <…>

It is enough for them *(companies)* to know and the penalties perform their task" [**A**^{I}6]. Technological modernization was marked as an important mean: "After the switch to clean fuels, companies can sell their allowances and get profit and redo other installations for cleaner production. It is a system created" [**A**^{I}3]. However initial stage was marked when possibilities were not used. [**A**^{I}2] stated that: "At the beginning many *(companies)* earned using the system <…>; had they invested earlier, they would have savings at present" [**A**^{I}2].

Participation in flexible mechanisms of the Kyoto protocol was also appraised. [**A**^{I}6] remarked that "Mostly I like companies that are included into national allocation plans and manage to participate in other flexible mechanisms. In this way they reduce CO_2 and other gases together". Moreover, a company obtains Kyoto units that could be used for compliance purposes.

Interviewees in the administrative arena mentioned the representation of industry. It was stressed that when companies where represented and the government was criticized, alternative proposals were always prepared. [**A**^{I}3] stated that "We had to represent companies in order that the allocation would be correct between sectors". Hence, lobbying as such was identified as quite strong. [**A**^{I}5] noted, that "Lobbying is quite strong. <...> There is a pressure" [**A**^{I}5].

Industrial arena

Results from the industrial arena revealed that means of compliance were directed by the EU policies: "The EU shows clearly which direction it is going to follow. This is along the path of renewable energy; increasing energy efficiency; the use of more clean fuel; etc". [I3]. It was stated that the EU ETS scheme was also linked with bio-fuels. Its scheme was seen as an incentive to use local renewable resources [I1].

Industry in general understood the opportunities and means for compliance. [I3] noted that: "We follow the situation. And we fully understand that there are good opportunities to do something when we get allowances for free and may get financial benefits from GHG emission reductions. So why would not we use it and get ourselves prepared for the future? We are not going to close down".

Financial means as investments were emphasized. According to [I1], "Everything turns to investments. You can do whatever you want. However it matters how much it costs. It is worth doing it though". The EU ETS was marked as a good tool: "The EU ETS makes its input. The money received from the EUA trade can be successfully invested into further GHG emissions reductions" [I4]. [I2] also accepted that norms got tightened that caused great investments. It was stated that: "Again, starting from 2008, norms have been tightened. In order to be able to work after 2008, big investments were made into environmental protection" [I2].

Actions about the presentation of interests on all levels were named. [I3] stated that: "We regularly meet our EU parliament members and write letters. But not as a company, through the Association". However according to [I2], interests of companies were not represented efficiently. "We write letters to the Ministries of Economy, Energy, Environment and tell that there is a lack of allowances. We should have more and

that the electricity price will get higher. However there is no strong feedback. Companies interests are not represented strongly" [I2].

Comments on differences between the arenas

Views in the national arena about means of compliance touched issues regarding the stages of the EU ETS and the use of renewable energy sources. Economic recession was noted, investments into cleaner technologies were highlighted as well as external financial structures – banks. Industrial representation and compliance with the provisions of directives were noticed.

The administrative arena reflected on the use on renewable energy sources, change of fossil fuels, investments needed and the impact of the transformation of economy – an overall reduction in consumption. The operation of the EU ETS was stated as a possibility to get profit and redo installations for cleaner production. Sanctions and necessity to buy extra allowances as well as the taxation system were referred too. Industry representation and lobbying was touched upon by organizations, involved in vertical interactions.

The industrial arena highlighted issues of investments needed and possibilities of interest representation. The question of use of bio-fuels and the EU ETS was noted.

5.2.5. Standard of Living and Priorities

According to IPPC AR4 report, there are three major changes associated with global warming – changes in temperature, sea level rise and decrease of the Northern Hemisphere snow cover. Consequences that are caused by climate change impacts are not equal to all states. Considering direct impacts of climate change on standard of living, views and priorities regarding climate change may be prioritized differently.

National arena

Analyzing the category, views in the national arena brought up the issues of resources, sustainable solutions, global climate change problem as such and priorities.

Possibilities to adopt higher objectives regarding the use of renewable energy sources in Lithuania were acknowledged. However, the need of political will and agreement at a national level was also emphasized. [N6] stated that: "It should be political will. If we want to change something, there should be political will and agreement. It is natural that such agreements should exist in Seimas and Government".

However, results also stressed the lack of recourses and payments to developing countries. [N3] remarked that: "According to Copenhagen accords we have to make payments for developing countries. This is comical when we do not have resources ourselves. But we have to make payments in order for other countries to implement climate change programmes. <…> This is problematic of climate change negotiations" [N4].

The solvency and capability of people (as consumers) was touched upon. Essentially, it was stated that people as well as industry did want to make changes. However

when possibilities to change ended up with financial solutions, other priorities took place. [N4] noted that: "No one has heard about a person who would object to the result when we talk about the housing renovations. However when you see prices… People do not have money, credits should be taken". The same with the industry: "No one objects to have new installations, but they say: "we do not have resources for that"" [N4].

Possibilities and sustainable solutions were highlighted. [N6] remarked that: "Essentially it would be possible to build solar cities. However consumers are not capable of paying the prices. That's why a sustainable solution should be looked for in order to harmonize wind, biomass and solar (*energy)*".

Administrative arena

Views in the administrative arena touched investments and priorities of companies, the responsibility of the state towards global community and social issues in Lithuania.

Although the state is small, it should still think about symbolic funds for developing countries. [A6] noted that: "Lithuania as a small country and as a support provider already should estimate symbolic funds in the budget and <…> sponsor developing countries in order to solve climate change problems".

However it was remarked that social issues and public services (such as heating prices) are greatly influenced. [A2] said that "Obviously it reflects social issues, such as heating for citizens – whether it will get more expensive or less expensive…". [A3] also remarked that: "It induces the increase of prices". Additionally, [**A**$^{\mathbf{I}}$1] stated that: "Someone else from society pays – an electricity consumer or a tax payer at last. It depends on the form of support *(subsidy)*". [**A**$^{\mathbf{I}}$6] noted, that "A product price will increase. <…> I think that we will have to pay mostly as bottom-line consumers. Probably the state will not be able to compensate something". Hence the level of prices and income was touched upon, that indirectly influences consumption. [**A**$^{\mathbf{I}}$5] remarked that: "The energy prices are very high comparing to our average income. Hence the average resident does not easily make ends meet, he counts and saves. Simultaneously energy consumption is decreased".

Interviews in the administrative arena confirmed that the means for GHG emission reductions had been estimated. However the companies might not use them because of other priorities. [A2] remarked that: "A mean is planned. It is also suitable for this purpose – GHG emission reductions – however there are other reasons that are more important for the company to implement *(instead of GHG emission reductions)*. We know that the company chooses its priorities".

Considering required investments and the energy sector, [A4] stated that: "Let us take our energy – it does want *(to invest into cleaner technologies)* because the State price and Energy control commission does not allow increasing prices voluntarily". Hence, some control mechanisms were foreseen. However the power of economy was contrasted: "It would be great that actions would be made voluntarily. Unfortunately, life is based on economy" [A2]. Nevertheless, industrial responsibility was mentioned: "If we take industry we can not eliminate social affairs. We have a social responsibility concern". [**A**$^{\mathbf{I}}$4]

Industrial arena

The industrial arena highlighted the price of GHG emission reductions and where it may end up. Long term perspectives and saving were also emphasized.

The importance of the consumer, his choice and his participation was stressed. [I1] remarked that: "The consumer decides everything. Even if there is an obligation to do it *(reduce GHG emissions)*, he tells that you do wrongly. The most important is not to increase the price". [I3] stated that "It is possible to produce ecological products *(name mentioned)* that would cost 100 times more. However who would buy these? Consumers prefer cheaper products, such is the morality".

Nevertheless, it was stated that the price of a product was getting more expensive because of the GHG emission reductions that companies have to implement. [I2] remarked that: "We naturally have to assess ourselves that electricity is getting more expensive, from 4 to 8 cents".

Hence, industry has to find ways to meet requirements. According to [I2], a consumer pays expenses. In spite of that, [I1] remarked that "Everything should be done smartly in order not to raise the price for the consumer. Here is the essence I think".

Comments on differences between the arenas

Views in the national arena brought up issues of resources; sustainable solutions; climate change as a global problem; standard of living; and priorities. However reflections in the administrative arena touched investments and priorities of companies, the responsibility of the state towards the global community and also touched upon social issues in Lithuania. Respectively attitudes in the industrial arena highlighted the price of GHG emission reductions and where these might end up – increase of a final product price. Long term perspectives and saving were also emphasized in the industrial arena.

6. CONCLUSIONS AND SUGGESTIONS

The conclusions that are presented in this chapter on the implementation of Kyoto targets in Lithuania could only be reached analyzing theoretical aspects of multi-level governance (hereinafter MLG – referring to the dispersion of authoritative decision making and implementation across multiple arenas - in combination with this particular perspective of sociology of law (hereinafter – SoL). Such an interdisciplinary approach is scarce and allows finding novel solutions and approaches of MLG when implementing obligations to reduce GHG emission reductions. The analysis of scientific literature of MLG and the implementation of legislation lead to structuring the model for investigation that involves international, national, administrative and industrial arenas – where power relations are distributed among different actors. Hence, the model encompasses a top-down approach of MLG and implementation of legal rules. From this aspect MLG is seen with dominant vertical direct and indirect interactions between arenas. Horizontal interactions also emerge with the participation of state, non-state and non-administrative structures.

1. Description and analysis of legal frameworks regarding reductions of GHG and how they are related to each other

In order to describe legal frameworks regarding reductions of GHG, several kinds of international legal documents are considered in this dissertation. These are the UNFCCC, the Kyoto protocol and relevant secondary European legislation regarding GHG emission reductions that Member states have to transpose into national legal codes. The EU legislation has the role of "safeguarding" Member states (including Lithuania) in the implementation of the UNFCCC and Kyoto protocol. The EU sets higher quantitative obligations regarding GHG emission reductions. Moreover it also foresees relevant policies for achieving reductions. At the same time, the EU legal system is obligatory – sanctions are foreseen for not implementing EU legislation. Hence, more ambitious targets of GHG reductions are imposed upon the Member States. It has a positive outcome on the environment, as the results show that otherwise obligations would not take root in the Lithuanian state.

International legislation having been transposed into national legal code, the state's public administration is legitimized for the execution of relevant tasks in the national (as well as international) arenas. Analysis of legal frameworks shows that there are several frameworks created in order to achieve GHG reductions. Frameworks are associated with the relevant authority (institution) in the state that has either legislative or executive powers (the Seimas or the Government of the Republic of Lithuania). Hence, as it has been described in this dissertation – tasks are imposed to a number of relevant administrative structures (institutions) with the governmental legislation (or more rarely, directly with the EU legislation). The following implies task-specific jurisdictions – theory analysis of the dissertation points this feature to Type II MLG. Cooperation among institutions and actors from the same or different arenas are either legitimized (foreseen by the legislation) or appear in practice. Hence, cooperation conditions either vertical or horizontal direct and indirect interactions that also indicate features of MLG.

2. Evaluation of the most dominant driving forces and norms affecting actors on each level of policy implementation

To summarize driving forces that affect the actors on different arenas of policy implementation regarding GHG emission reductions in Lithuania, I start with the most dominant – the supreme legislation. In Lithuania this driving force is strong as the state needs to follow supreme legislation in spite of the fact that it is considered to be a small state. Dependency on natural resources (especially natural gases) of other countries indentifies restrictions. But there is a small possiblity that allows to have dispensation (derogation) from the rules of the EU legislation – and this implies possibilities for Lithuania. Thus obligatory implementation of the EU legislation drives actors in the national arena to design the legislation in line with the restrictions from the EU. Consequently actors in the administrative arena are restricted to implement tasks that are imposed on them by the legislation. They consider this as a norm. Regarding the industrial sector, in general this arena is restricted to following the rules, due to their inability to influence regulatory outcomes. Nevertheless, findings show that supreme legislation is a driving force for positive outcomes regarding GHG emission reductions in Lithuania.

Another driving force, perhaps of a less restrictive nature, but providing big opportunities, is knowledge. It implies awareness of climate change issues, understanding the necessity of changes, knowing legislation and having technological knowledge. The national arena reveals that early and successive education is a driving force for the raising of awareness in society. The administrative arena express that it is the norm for institutions to have competences and technical knowledge to fulfill relevant tasks. However, restrictions imply that new tasks are not always supplemented with adequate training or resources. Hence, there is a norm when administrative state institutions build official and non-official bilateral cooperation with non-state institutions (independent verifiers or public enterprises). Anyway, the industrial sector forces improvements, which is a driving force for the administrative arena. In general, if clear requirements on new legislation are made in the national arena and new technical training is provided to and from the administrative arena level, the industrial arena must benefit in this situation. Nevertheless this is not always the case.

A very powerful driving force is originated from the threat of losing production by the actors in different arenas. Legislation requirements force changes in technologies in order to produce environmentally friendly products and simultaneously achieve GHG emission reductions. The changes are connected with additional costs for renovations. Not changing may impose sanctions and may cause potential losses in the volume of production and profits. However, at first the industrial sector is forced to effect changes in order to make products competitive on the European market. Consequently, a driving force for the national arena is the interest of the state to keep the industry inside the country, as industrial production is directly connected state budget income and the wealth of citizens.

Another driving force which can be mentioned is connected with standard of living and preferences. It explains driving forces of actions (or inactions) against climate change impacts. Driving forces are usually interlinked with other external factors – living conditions, economic situation of the company or the overall situation in the state. The preferences of the families or their views can be changed considerably due to the growing concerns on the climate change issues. The change of preferences directly influ-

ences the industrial sector through the demand on different types of products. Hence, because of existent direct impacts of climate change and standard of living, views and preferences are prioritized differently.

3. Responses on policy implementation from the industrial sector

The reaction from the industrial sector gives an answer as to how requirements under legal rules to reduce GHG are implemented in practice. Requirements under legal rules condition industry to make changes in technologies in order to produce greener products. Hence, with this GHG emission reductions are achieved. The results of the dissertation show that industry is provided with the means to comply with requirements – these are the EU ETS; the use of renewable resources; and the use of Kyoto flexible mechanisms. However in order to implement these, the industrial arena emphasizes that more time and long-term planning are needed and also consistency of legislation at the national level should be maintained. Industry is described as "a giant with wooden legs" who demonstrates its inflexibility. Inability is expressed through outcomes – if changes are not possible to perform in old technologies, there is a risk of losing segments of industry in the state.

Responses from the industrial arena are also connected with expressing companies' concerns, needs and interests. It is done in several ways. Firstly, companies contact directly institutions in the administrative and national arenas. Secondly, the industrial sector affects national and international arenas with the help of associations. Moreover, in order to implement legal rules, companies often collaborate with national and international consultant companies. Hence, results of the dissertation indentify several types of interactions and interest representation – vertical and horizontal, direct and indirect interactions – also a feature of MLG. Responses from the industrial arena also reveal that big concerns in Europe impose rules through lobbyism, which shows power and capacity of big industries. In general, demanding requirements to achieve GHG reductions may set a higher price for the product itself – it is not a rule, however a high probability.

How does Lithuania, specifically the industrial sector, implement GHG reduction requirements under the Kyoto protocol and the European Union regulations?

> "Lithuania, having signed the Kyoto protocol accepts obligations with the world to reduce climate change"
>
> *Quotation from the interview*

> "No entrepreneur will green its enterprise if he becomes less competitive. He will green it if his goods will become more marketable"
>
> *Quotation from the interview*

It is now time to return to the main puzzle of how Lithuania, specifically the industrial sector, implements GHG reduction requirements. Having ratified the UNFCCC and the

Kyoto protocol and being one of the Member States of the EU, the state has international and European obligations. Using theoretical concepts of MLG, the research in the dissertation involves four arenas that create a system to investigate the policy implementation "from top to bottom". One of the findings of the research imply that rules regarding GHG emission reductions would not take root in Lithuania without the international convention and supreme legislation of the EU, which sets much higher requirements comparing with the Kyoto protocol. Hence, following international obligations, Lithuania transposes requirements to reduce GHG emission into national legislation – this being a state obligation. With the appropriate laws (Law on Financial Instruments for Climate Change Management and others) and subordinate legislation (the Resolution on Mandates to Implement the Law on Financial Instruments for Climate Change, Description of the Procedure of the Issuance and Trading in GHG Emission Allowances, etc.) are either created or affected. Respectively, legislation affects institutions. This builds an institutional structure (system) for policy implementation regarding GHG emission reductions, in the national and subsequently administrative arenas. Afterwards direct duty is transposed to the industrial sector which has to implement GHG emission reductions in practice. In spite of great GHG emission reductions due to external proceedings (transformation of economy after gaining independence, its recession, etc.), the state has to foresee a lot of relevant changes in its legislation due to the EU climate change laws. Respectively, changes and their requirements affect industrial activity. Although means for GHG reductions are provided (the EU ETS, the use of renewable resources, the use of Kyoto flexible mechanisms), in the industrial arena they are implemented, not from the start of the EU ETS when obligations were imposed, but out of continuity. The findings of the dissertation show that arenas have different priorities and driving forces that might explain the tension between arenas and future results of GHG emission reductions accordingly.

Recommendations and future outlook

The dissertation comes up with several suggestions from the MLG and SoL perspectives, on how Lithuania can meet GHG emission reduction requirements that are imposed by EU legislation.

Much more attention should be paid to overall awareness in society regarding climate change and its impacts through education and the raising of consciousness. Moreover, the implementation of legislation provisions or tasks should be supplemented with consecutive and adequate training in every arena as well as relevant resources (human and financial).

It would be meaningful to explore possibilities and costs to big industries to green their production in order to meet the increasing requirements of the EU. Besides, the costs of investments and their impact on final products and society should be elaborated upon. Hence, a dilemma in meeting environmental standards, preferences and consequences arise.

Possibilities of a small country to represent interests in the international arena should be discussed and become more active using vertical direct and indirect interactions between actors in the international arena.

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ANNEX 1. A Letter Explaining the Research to Interviewees Before the Interview

Mykolas Romeris University
Faculty of Policy and Management
Environmental Policy Department

Lund University
Faculty of Social Science
Department of Sociology of Law

Presentation of qualitative research project
September 20, 2010

TO WHOM IT MAY CONCERN

International climate change agreements have an influence on the national legal system, as well as on overall regulation and the administrative scheme. A difficult task is placed ground. Questions abound, such as: How is it going to be done? What institutions and what levels are affected and how? What response will be triggered? How do new rules change behaviour in order to preserve nature?

The research question, problem, research aim and tasks are formed in this dissertation in response to the above questions. The dissertation is titled: "Implementation of Kyoto targets in the context of sustainable Development"[373]. The following *research question* is raised: "How do small countries with economies in transition implement a regulatory regime towards GHG emission reduction requirements?" *The object* of the research is a system of state management, policy implementing insitutions and industry enterprises, which practically apply new legal rules. *The aim* of the research is to elaborate on norms at each level of policy implementation – and to determine criteria related to the implementation of regulations with requirements for GHG emission reductions.

Scientific novelty

The original contribution to science and public administration studies is based on the fact that the research is carried out in the approach of Sociology of Law (SoL). The implementation of new rules related to GHG reduction is analysed. A SoL approach is chosen in order to understand implementation, the impact of new legal rules and its interaction in society.

Scientific models applied

The problem of implementation of Kyoto requirements is analysed referring to the implementation chain of 4 levels (or arenas): supra-state (the EU arena), state (Lithuania), sub-state (administrative arena) and societal (industrial arena)[374].

[373] The title of the dissertation was specified to "The Implementation of Kyoto Targets in Lithuania from a Perspective of Multi-level Governance" during the time of preparation of the dissertation. The research question was revised to: "How does Lithuania, specifically the industrial sector, implement GHG reduction requirements under the Kyoto protocol and the European Union regulations?"

[374] The implementation chain is elaborated in Hyden's article (2006) "Implementation of International conventions As a Socio-legal Enterprise: Examples from the Convention on the Rights of the Child".

Each level will be analysed referring to the three dimensions that influence norms to occur: will, knowledge and possibilities (or restrictions)[375].

Case study

Lithuania as a sovereign political territory, with an economy in transition[376], is taken as the case study. The implementation of GHG emission reductions in countries with economies in transition is a sensitive question, as it is related with a growing economy and reflects economic values in society. Hence I consider how preservation norms of the natural system are reinforced and interacted with the management of business as usual in the industrial (energy) sector. Preservation norms here are related with obligations to reduce GHG emissions in the country.

The research is carried out in several phases, which are connected to each other:

1. analysis of related scientific literature as well as analysis of legal acts, reports and studies,
2. determination of empirical context of the scientific research and determination of method for collection of empirical data,
3. collection, analysis and summary of empirical data.

While preparing the dissertation, primary analysis of literature, primary analysis of empirical data (international agreements, European and national legal acts) is done and important documents for the research as well as criteria are selected.

For gathering important empirical data during next phase, from September 22nd to October 7th individual interviews are foreseen to be carried out. Referring to the scientific models applied and aiming to ensure the validity and reliability of the research, from 8 to 10 interviews on each level (state, administrative and industry) are foreseen.

The purpose of semi-structured interviews is to gather information for qualitative research about the essence of international agreements of climate change, their impact on national system, national interests when implementing GHG reduction targets, possible sanctions because of non-compliance with requirements, main obstacles for implementation of legal rules in energy and industry sectors.

The objective of making interviews on administrative level it is to estimate what impact national legal acts have on intermediate level, which is between state and society (energy – industry in a specific case). What functions are considered to be most important when strengthening preservation norms of nature? What are main obstacles for implementation of new rules?

Performing interviews on industry level where new rules are practically applied, it is foreseen to estimate what impact new rules have for management and activity of enterprises, how interests of energy / industry sector are represented and what are main obstacles for implementation of requirements.

Research ethics

When carrying out the research, ethics of the research will be strictly followed. All recorded data from the interviews will be treated as confidential between the interviewee and the reseacher. Generalized information from each level as well as research results will not be publicized without respondents‘ agreement.

[375] The concept of norm is elaborated upon by Swedish scientists Wickenberg, P., Hydén, H. and others.

[376] As specified in Annex B of the Kyoto Protocol.

I kindly ask to reply if you agree to participate in the research and what time is mostly suitable for you from September 22 to October 7?[377]

Attachements: Confirmation and recommendation letter of research supervisors prof. Imantas Lazdinis (Mykolas Romeris University, Vilnius, Lithuania) and prof. Karsten Åstram (Lund University, Lund, Sweden).

Sincerely,

Julija Naujėkaitė
PhD student at Mykolas Romeris University
Quest PhD student at Lund University

[377] As a study of semi-structured interviews was carried out in 3 sessions, relevant time period was written

ANNEX 2. General Questions to Interviewees in National Arena

1. What is the essence of international agreements and their impact on the national legal system?
2. What are sensitive issues for Lithuania as a country when implementing GHG reduction targets? Are there any specific national interests and why are they important?
3. What mandates do you consider the most important in implementing GHG reductions?
4. What are national commitments with regard to the implementation of objectives regarding GHG reductions? What sanctions would be applied for the country in case of non-compliance with new rules?
5. What is your personal opinion on setting preservation rules for industry (energy and industry)? Why is it needed? Would the reductions be achieved without international agreements?
6. What are main obstacles for the energy / industrial sector to implement rules?
7. How are industry interests represented and considered?
8. How could the consciousness level of society and the energy sector respectively be increased?

ANNEX 3. General Questions to Interviewees in Administrative Arena

1. How does national legislation related to GHG emission reductions change behaviour at the administrative level?
2. What tasks (mandates) which are assigned to you do you consider most important for achieving GHG reductions effectively?
3. What are the main factors determining the implementation of requirements at administrative level?
4. What is your opinion regarding new legal rules enforcing preservation norms? Why are they needed?
5. How do you see the willingness of the industrial sector to implement new rules in order to preserve nature? What are outstanding cases of successful implementation?
6. Are there any cases of incompliance with legal rules? In your opinion why do they appear? Are any sanctions applied?
7. What are main obstacles for the implementation of legal rules in the energy (industrial) sector? In your opinion why do they appear?
8. How is will / actual situation / interest of the energy (industrial) sector represented?

ANNEX 4. General Questions to Interviewees in Industrial Arena

1. How do new legal rules, created by legislation to reduce GHG emissions, change behaviour in management and production? What are the main obstacles to be overcome?
2. Why do you consider implementing measures for GHG reductions? What factors do you find most important in your case?
3. What do you think about new rules in general? Are they enough for preservation norms to be implemented?
4. How can you represent your interests at a high level (before national legislation is adopted or revised)?
5. What knowledge do you find mostly important for implementing new rules?
6. Would you implement any measures for GHG reductions if there were no requirements set by the legal system?

ANNEX 5. Information About Interviews: List of Interviewees and Interview Date

NATIONAL ARENA

1.	The Committee on Environmental Protection at the Seimas of the Republic of Lithuania	The Executive of the Committee	September 29, 2010
2.	The Ministry of Environment of the Republic of Lithuania, Department of Climate Change and Hydrometeorogy	Chief Specialist	October 15, 2010
3.	The Office of the Environmental Protection Committee at the Seimas of the Republic of Lithuania	Adviser	October 30, 2010
4.	The Ministry of Environment of the Republic of Lithuania, Department of Climate Change and Hydrometeorogy	The Executive of the Department	October 6, 2010
5.	The Ministry of Environment of the Republic of Lithuania	Minister's Adviser	October 6, 2010
6.	The Ministry of Environment of the Republic of Lithuania, Department of Climate Change and Hydrometeorogy	Chief Specialist	September 29, 2010

ADMINISTRATIVE ARENA

7.	Vilnius Regional Environmental Protection Department	Chief Specialist	October 5, 2010
8.	The Environmental Protection Agency	The Executive of the Environment Protection State Control Department	September 28, 2010
9.	Vilnius Regional Environmental Protection Department	The Executive of the Department	September 29, 2010
10.	The National Accreditation Bureau	Chief Specialist	September 30, 2010
11.	Panevėžys Regional Environmental Protection Department	The Executive of the Department	October 4, 2010
12.	State enterprise Energy Agency	The Executive of the Agency	September 28, 2010

ADMINISTRATIVE ARENA (NOT BUDGETARY INSTITUTIONS)

13.	Lithuanian Environmenmental Investment Fund	The Executive of the Climate Change Division	September 29, 2010
14.	Lithuanian District Heating Association	The Executive of the Association	March 1, 2011
15.	The Centre of Environmental Policy	Consultant	September 27, 2010
16.	Cowi Lietuva, Ltd	The Executive of the Environment and Energy Department	September 24, 2010

ANNEX 5. Information About Interviews: List of Interviewees and Interview Date (continued)

17.	Bureau Veritas Lit Ltd	The Executive of Techical Certifacion for Verifiers	October 10, 2010
18.	The Confereration of Industrialists	The Executive of the Confederation	September 27, 2010

INDUSTRIAL ARENA

19.	Concern Achema Group	Ecologist	October 1, 2010
20.	Vilnius Energy (Vilniaus energija)	Project Director (Vilnius energy); Exploatation Director (Litesko)	October 15, 2010
21.	Panevėžys Energy (Panevėžio energija)	Technical Director	December 29, 2010
22.	Lithuanian Power Station (Lietuvos elektrinė)	The Executive of the Company	March 1, 2011

ANNEX 6. A Letter Explaining the Research to Interviewees Before the Interview (Lihuanian Version as Presented Before the Interviews)

MYKOLO ROMERIO UNIVERSITETO
POLITIKOS IR VADYBOS FAKULTETO
APLINKOS POLITIKOS KATEDROS DOKTORANTĖS

LUNDO UNIVERSITETO (ŠVEDIJA)
SOCIALINIŲ MOKSLŲ FAKULTETO
TEISĖS SOCIOLOGIJOS KATEDROS
ATVYKSTANČIOS DOKTORANTĖS JULIJOS NAUJĖKAITĖS

MOKSLINIO KOKYBINIO TYRIMO PRISTATYMAS

2010 09 20
Lundas

Tarptautiniai susitarimai dėl klimato kaitos veikia nacionalinę teisę, valdymą ir administracinę sistemą. Nelengva užduotis tenka šalių vyriausybėms įgyvendinant tarptautinius įsipareigojimus ir tikslus ir pačioje šalyje. Kokiu būdu įmanoma įvykdyti tarptautinius įsipareigojimus? Kokioms institucijoms ir kokių valdymo lygių veiklai yra daroma įtaka? Koks grįžtamasis ryšys? Kaip naujosios taisyklės ir reikalavimai pakeičia elgseną vardan gamtos išsaugojimo?

Disertacijoje „Kioto protokolo įsipareigojimų įgyvendinimas darnaus vystymosi kontekste"[378] remiantis aukščiau minėtais klausimais, formuojama tyrimo problema, tyrimo tikslas ir uždaviniai.

Iškelta darbo problema – tarptautinio klimato kaitos režimo įgyvendinimas pereinančiose į rinkos ekonomiką valstybėse[379].

Tyrimo objektas – tarptautinių klimato kaitos susitarimų ir teisės aktų sąlygota valstybės valdymo, politiką įgyvendinančių institucijų ir praktiškai naujus reikalavimus taikančių įmonių sistema.

Tyrimo tikslas – įvertinant klimato kaitos politikos ir konkrečiai šiltnamio efektą sukeliančių dujų (toliau – ŠESD) mažinimo reikalavimus išnagrinėti normų (elgesio normų, standartų bei motyvų) sukūrimą skirtinguose politikos įgyvendinimo lygiuose bei nustatyti kriterijus, susijusius su teisės aktų įgyvendinimo efektyvumu.

Mokslinis naujumas

Mokslinis tyrimas naujas tuo, jog pasirinkta teisės sociologijos kryptis. Tyrimo metu nagrinėjamas naujų taisyklių, sąlygojančių ŠESD išmetimų sumažinimą, įgyven-

[378] Disertacijos rengimo metu disertacinio darbo tema patikslinta iš „Kioto protokolo įsipareigojimų įgyvendinimas darnaus vystymosi kontekste" į „Kioto protokolo įsipareigojimų įgyvendinimas Lietuvoje daugiapakopio valdymo kontekste".

[379] Disertacija rašoma anglų kalba, išskiriamas tyrimo klausimas: Research question: „How do small countries with economies in transition implement regulatory regime of climate change?" Disertacijos rengimo metu tyrimo klausimas patikslintas į „How does Lithuania, specifically the industrial sector, implement GHG reduction requirements under the Kyoto protocol and the European Union regulations?" [„Kaip Lietuva, konkrečiai pramonės sektorius, įgyvendina ŠESD emisijų mažinimo reikalavimus, nustatytus Kioto protokolu ir Europos Sąjungos teisės aktais?"]

dinimas. Problema nagrinėjama teisės sociologijos aspektu siekant suprasti naujų taisyklių poveikį ir grįžtamąjį ryšį vietiniame lygmenyje.

Taikomi moksliniai modeliai

Tyrime klimato kaitos įsipareigojimų įgyvendinimo problema nagrinėjama vadovaujantis keturių lygių sistema: viršvalstybiniu, valstybiniu, administraciniu ir taisykles sumažinti ŠESD išmetimus praktiškai įgyvendinančiu lygmenimis[380]. Tiriant kiekvieną lygmenį vadovaujamasi trimis teisės sociologijoje naudojamos dimensijomis, darančiomis įtaką *normos*[381]: motyvais ir norais, žiniomis, galimybėmis bei apribojimais.

Konkretaus atvejo tyrimas (case study)

Lietuva pasirinkta kaip suverini politinė teritorija ir kaip pereinanti į rinkos ekonomiką valstybė[382]. Reikalavimas sumažinti ŠESD išmetimus tokiose šalyse yra aktualus ir jautrus klausimas, kadangi reikalavimų įgyvendinimas dažniausiai susijęs su augančia ekonomika ir jos sukuriamomis vertybėmis visuomenėje. Tyrimo metu planuojama nustatyti, kaip stiprinamos gamtą saugančios normos ir kokią jos daro įtaką tiesiogiai naujus reikalavimus taikančių energetikos ir pramonės sektorių įmonių veiklai (valdymui).

Tyrime yra keli tarpusavyje susiję etapai:

1. su tema susijusios mokslinės literatūros, teisės aktų, ataskaitų ir atliktų studijų analizė,
2. mokslinio tyrimo imties bei empirinių duomenų rinkimo metodo nustatymas,
3. duomenų rinkimas, analizė ir apibendrinimas.

Rengiant disertaciją atlikta mokslinės literatūros, mokslinio tyrimo duomenų (tarptautinių susitarimų, Europos Sąjungos ir nacionalinių teisės aktų) pirminė analizė bei išskirti tyrimui svarbūs dokumentai ir kriterijai.

Kitame etape siekiant gauti svarbios ir detalios, vėliau nagrinėtinos informacijos, planuojama atlikti nuo 40 minučių iki 1 valandos individualiuosius interviu. Interviu planuojama imti nuo rugsėjo 22 d. iki spalio 7 d. Remiantis taikomais moksliniais modeliais ir siekiant užtikrinti atliekamo kokybinio tyrimo validumą ir patikimumą, planuojami 8–10 interviu valstybinėse ir administracinėse institucijose bei taisykles praktiškai įgyvendinančiose įmonėse.

Kryptingojo (iš dalies struktūrizuoto) interviu metu siekiama surinkti informacijos kokybiniam tyrimui apie tarptautinių susitarimų esmę ir įtaką nacionalinei sistemai, nacionalinius interesus įgyvendinant ŠESD mažinimo įsipareigojimus, galimas įsipareigojimų nesilaikymo sankcijas, pagrindines kliūtis įgyvendinant naujas taisykles energetikos ir pramonės sektoriuose.

Užduodant klausimus administracinių įstaigų atstovams, siekiama nustatyti, kaip su klimato kaita susiję nacionaliniai teisės aktai įtakoja tarpinio – tarp valstybinio ir praktiškai naujas taisykles įgyvendinančio – lygmens veiklą. Kokios funkcijos yra lai-

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[380] Anglų k. *supra-state, state, sub-state and societal levels*. Remiamasi švedų mokslininko prof. Hydén schema, pateikta 2006 m. straipsnyje apie tarptautinių konvencijų įgyvendinimą (Hydén, H. Implementation of International conventions As a Socio-legal Enterprise: Examples from the Convention on the Rights of the Child. 2006).

[381] Normos sąvoką apibūdina švedų mokslininkai doc. dr. Per Wickenberg ir prof. Hakan Hydén.

[382] Žr. Kioto protokolo B priedą.

komos svarbiausiomis stiprinant gamtos išsaugojimą ir kokios yra pagrindinės kliūtys įgyvendinant naujas ŠESD išmetimus mažinančias taisykles?

Užduodant klausimus praktiškai reikalavimus įgyvendinančių įmonių atstovams, siekiama nustatyti, kaip esančios taisyklės veikia įmonės valdymą ir veiklą, kaip atstovaujami įmonių interesai ir kokios yra pagrindinės kliūtys reikalavimų įgyvendinimui.

Tyrimo etika

Atliekant tyrimą bus griežtai laikomasi tyrimo etikos. Surinkta įrašyto interviu metu informacija yra konfidenciali, o apibendrinta kiekvieno tyrimo dalyvio informacija ir tyrimo rezultatai neviešinami negavus respondentų sutikimo.

Maloniai prašau atsakyti, ar sutinkate dalyvauti tyrime ir koks pokalbio laikas nuo rugsėjo 22 d. iki spalio 7 d. Jums tinkamiausias.

PRIDEDAMA. Mokslinio darbo vadovo prof. Imanto Lazdinio (Mykolo Romerio universitetas) ir konsultanto prof. Karsten Åström (Lundo universitetas, Švedija) patvirtinimo raštas (anglų k.)

Pagarbiai Julija Naujėkaitė

ANNEX 7. General Questions to Interviewees in National Arena (Lithuanian Version as Presented During the Interviews)

Klausimai tyrimo dalyviams, dirbantiems valstybinėse įmonėse

1. Kokia yra tarptautinių susitarimų esmė ir įtaka Lietuvos nacionalinei politinei / teisinei sistemai?
2. Kokios yra jautrios sritys Lietuvai įgyvendinant ŠESD išmetimo mažinimo tikslus? Ar yra specifiniai nacionaliniai interesai, kurių paisoma ir kuo jie svarbūs?
3. Kokias funkcijas jūs laikote pačiomis svarbiausiomis įgyvendinant reikalavimus sumažinti ŠESD išmetimus?
4. Kokie yra nacionaliniai įsipareigojimai įgyvendinant ŠESD išmetimus? Kokios sankcijos būtų taikomos valstybei, jei įsipareigojimai nebūtų vykdomi?
5. Kokia yra jūsų nuomonė apie ŠESD išmetimų mažinimo reikalavimus? Ypač energetikoje? Kokia reikalavimų esmė? Ar būtų nustatyti ŠESD išmetimų ribojimai be tarptautinių sutarčių? Ar matote skirtumus tarp ekonominių ir aplinkosauginių tikslų?
6. Kokios yra pagrindinės kliūtys (trikdžiai) energetikos / pramonės sektoriuose naujų taisyklių įgyvendinimui? Ar pastebite energetikos sektoriaus norą įgyvendinti reikalavimus?
7. Kaip energetikos (pramonės) sektoriaus interesai atstovaujami ir ar į juos atsižvelgiama?
8. Kaip galėtų būti didinamas sąmoningumo lygis visuomenėje ir energetikos sektoriuje?

ANNEX 8. General Questions to Interviewees in Administrative Arena (Lithuanian Version as Presented During the Interviews)

Klausimai tyrimo dalyviams, dirbantiems administracinėse įstaigose

1. Kokią įtaką nacionaliniai teisės aktai, reglamentuojantys ŠESD sumažinimą, daro administracinei veiklai?
   Kokią matote įgyvendinimo schemą?
2. Kokias užduotis (pavedimus) Jūs laikote pačiomis svarbiausiomis siekiant efektyviai įgyvendinti reikalavimus mažinti ŠESD išmetimus energetikos sektoriuje?
3. Kokie yra pagrindiniai faktoriai, lemiantys reikalavimų įgyvendinimą administraciniame lygmenyje?
4. Kokia yra jūsų nuomonė apie naujas taisykles, sukurtas gamtos išsaugojimui (turima omenyje ŠESD išmetimų mažinimą)? Ar / kam jos reikalingos?
5. Ar pastebite ir kaip pastebite energetikos (pramonės) sektoriaus norą (pasiryžimą) įgyvendinti naujas taisykles ir reikalavimus? Kokie yra pavyzdiniai reikalavimų taikymo atvejai?
6. Ar yra reikalavimų nesilaikymo pavyzdžių? Kodėl, Jūsų nuomone, jie atsiranda? Kaip taikomos nuobaudos? Ar pasiteisina ir yra efektyvios?
7. Kokios yra pagrindinės *kliūtys* reikalavimų laikymuisi energetikos (pramonės) sektoriuose? Kodėl, Jūsų nuomone, jos atsiranda?
8. Kaip atstovaujami energetikos (pramonės) sektoriaus *interesai*, esama padėtis ir pageidavimai?
9. Kokie yra nacionaliniai interesai įgyvendinant reikalavimus ir mažinant ŠESD?

ANNEX 9. General Questions to Interviewees in Industrial Arena (Lithuanian Version as Presented During the Interviews)

Klausimai tyrimo dalyviams, dirbantiems reikalavimus praktiškai įgyvendinančiose įmonėse (energetikos, pramonės):

1. Kaip nauji reikalavimai mažinti ŠESD išmetimus veikia įmonės valdymą ir gamybą? Kokios yra pagrindinės iškylančios kliūtys?
2. Kodėl jūs svarstote apie ŠESD išmetimus mažinančių priemonių įgyvendinimą? Kokie, Jūsų nuomone, svarbiausi veiksniai Jūsų įmonės atveju?
3. Ką jūs apskritai manote apie naujus reikalavimus? Ar jų pakanka siekiant sukurti ir įgyvendinti gamtos išsaugojimo normas?
4. Kaip jūs išsakote jums aktualias problemas (interesus, pageidavimus), kad į jas būtų atsižvelgta prieš patvirtinant naują įsakymą ar įstatymą, darant pakeitimus?
5. Kokios žinios, Jūsų manymu, yra svarbiausios įgyvendinant naujus reikalavimus?
6. Ar Jūs įgyvendintumėt priemones, mažinančias ŠESD išmetimus, jei to nereikalautų teisinė sistema?

Naujėkaitė, Julija

THE IMPLEMENTATION OF THE KYOTO TARGETS IN LITHUANIA FROM A PERSPECTIVE OF MULTI-LEVEL GOVERNANCE. Doctoral dissertation. – Vilnius: Mykolas Romeris University, 2011. - 144 p.

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International climate change agreements and the European Union legislation have an influence on different levels of governance, including national legal systems and administrative schemes. The following research question is addressed in the doctoral dissertation: "How does Lithuania, specifically the industrial sector, implement GHG reduction requirements under the Kyoto protocol and the European Union regulations?" Implementation of GHG emission reductions is analyzed from a perspective of multi-level governance and sociology of law. The research is carried out on four levels – supra-state; state; sub-state and societal. These are described as international; national; administrative and industrial arenas in the dissertation. Hence the implementation of climate change legal rules is based on authoritative decision-making across multiple territorial levels. In the dissertation, legal frameworks regarding reductions of GHG emissions are described - and the institutions along with their mandates are identified. There is a hierarchical top-down regulated implementation of legal rules and actors involved at different levels. A perspective based upon Sociology of Law makes it possible to relate the top-down implementation of legal rules to society. In the dissertation the most dominant driving forces and norms affecting actors on each level of implementation are evaluated, by interviewing respondents from state and administrative institutions and industrial companies. Responses on policy implementation from industrial sector are explored. Suggestions regarding GHG emission reduction requirements of the Kyoto protocol and the European Union legal acts are provided.

Tarptautiniai klimato kaitos susitarimai ir Europos Sąjungos teisės aktai veikia skirtingus valdymo lygmenis, įskaitant nacionalines teisės sistemas ir administravimo modelius. Disertacijoje iškeltas tyrimo klausimas – kaip Lietuva, konkrečiai pramonės sektorius, įgyvendina šiltnamio efektą sukeliančių dujų (toliau – ŠESD) emisijų mažinimo reikalavimus, nustatytus Kioto protokolu ir Europos Sąjungos teisės aktais. Reikalavimų mažinti ŠESD emisijas įgyvendinimas yra analizuojamas daugiapakopio valdymo perspektyvoje. Analizuojami keturi lygmenys – viršvalstybinis, valstybinis, subvalstybinis ir visuomeninis, kurie disertacijoje gretinami su tarptautine, nacionaline, administracine ir pramonės plotmėmis. Taigi klimato kaitos teisės aktų įgyvendinimas paremtas valdžios sprendimų priėmimo dispersija skirtinguose lygmenyse. Disertacijoje apibūdintos teisės sistemos, susijusios su ŠESD mažinimu, identifikuojant institucijas ir jų įgaliojimus. Remiantis teisės sociologijos perspektyva, hierarchinis teisės normų įgyvendinimo principas siejamas su teisės poveikiu (ir atsaku) pramonės sektoriuje. Atlikus kokybinį tyrimą imant interviu iš tyrimo dalyvių, kurie dirba valstybės ir administracinėse institucijose ir pramonės įmonėse, išnagrinėti ir įvertinti skatinantys veiksniai ir normos, veikiančios dalyvių elgseną kiekviename tiriamajame lygmenyje. Ištirtas pramonės sektoriaus atsakas politikos įgyvendinimo procese bei pateikti pasiūlymai dėl Kioto protokolo ir Europos Sąjungos teisės aktų reikalavimų mažinti ŠESD emisijas įgyvendinimo.

Julija Naujėkaitė
THE IMPLEMENTATION OF THE KYOTO TARGETS IN LITHUANIA FROM A PERSPECTIVE OF MULTI-LEVEL GOVERNANCE

Doctoral Dissertation

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Errata list (Dissertation)

Julija Naujėkaitė
The Implementation of the Kyoto Targets in Lithuania from a Perspective of Multi-level Governance

page 6	Table 12, title	**Resolution** should be **Decision**
page 7	LIST OF ABBREVATIONS	Should be inserted: AAU – Assigned Amount Unit CER – Certified Emission Reduction (Unit) ECCP – European Climate Change Programme ERU – Emission Reduction Unit IPCC - The Intergovernmental Panel on Climate Change
page 8	para. 1, line 4:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	para. 2, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	para. 2, line 11:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	para. 3, line 4:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	para. 3, line 6:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	para. 3, line 8:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	footnote 1, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 8	footnote 3, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 11	main research question	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 11	para. 6, line 3:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 38	Table 2, line 9:	Regional Environmental Departments should be Regional Environmental **Protection** Departments
page 42	para. 2, line 2:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 44	Table 3, line 3:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 48	para. 2, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 50	para. 1, line 7:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 50	para. 1, line 8:	**on** different arenas should be **in** different arenas
page 50	para. 2, line 3:	**at** national and administrative arenas should be **in** national and administrative arenas
page 50	para. 2, line 2:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 50	para. 4, line 1:	The United Nations **f**ramework on **c**limate **c**hange should be The United Nations **F**ramework on **C**limate **C**hange
page 53	para. 2, line 3:	**Framework Convention** should be **UNFCCC**
page 53	para. 2, line 3:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 53	para. 3, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 53	para. 5, line 1:	**convention** and the **protocol** should be **UNFCCC** and the **Kyoto Protocol**
page 53	para. 7, line 1:	**convention on climate change** should be the **UNFCCC**
page 53	para. 7, line 2:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 54	para. 2, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 55	para. 5, line 4:	**resolution** should be **Decision**
page 56	para. 2, line 2:	**resolution** should be **decision**
page 56	para. 2, line 3:	**Government** should be **The Government of the Republic of Lithuania**
page 56	para. 5, line 2:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 64	para. 3, line 1:	**at** international and **at** EU arenas should be **in** international and **in the** EU arenas
page 64	para. 5, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 64	para. 5, line 5:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 64	footnote 299, line 1:	**Resolution** should be **Decision**
page 66	para. 3, line 1:	**Resolution** should be **Decision**
page 66	para. 3, line 5:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 67	Table 12, title	**Resolution** should be **Decision**
page 68	para. 3, line 5:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 68	para. 4, line 2:	**resolutions** should be **decisions**
page 69	para. 13, line 4:	Kyoto **p**rotocol shold be Kyoto **P**rotocol
page 70	para. 2, line 5:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 70	para. 3, line 1:	**resolutions** should be **decisions**
page 70	para. 4, line 1:	**Resolution** should be **Decision**
page 75	para. 4, line 2:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 75	para. 4, line 5:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 75	para. 4, ine 7:	Kyoto **p**rotocol should be Kyoto **P**rotocol
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page 83	para. 6, line 2:	**resolutions** should be **decisions**
page 86	para. 5, line 3:	**resolution** should be **decision**
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page 100	para. 5, line 8:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 101	para. 3, line 4:	**resolutions** should be **decisions**
page 111	para. 2, line 1:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 115	para. 3, line 3:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 115	para. 3, line 6:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 117	main research question	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 117	1st quotation	Kyoto **p**rotocol should be Kyoto **P**rotocol
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page 118	para. 1, line 10:	**Resolution** should be **Decision**
page 130	footnote 373, line 4:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 137	Industrial Arena (table), line 20:	**e**negija should be **E**nergija
page 137	Industrial Arena (table), line 20:	**e**nergy should be **E**nergy
page 138	footnote 379, line 4:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 144	abstract, line 4:	Kyoto **p**rotocol should be Kyoto **P**rotocol
page 144	abstract, line 15:	Kyoto **p**rotocol should be Kyoto **P**rotocol