MASTER'S THESIS
INTERNATIONAL ADMINISTRATION
AND GLOBAL GOVERNANCE

Nation centered thinking and human centered work

A study of the conceptual understanding of, and the practical effects from, environmental security linkages in Moldova

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Number of words: 14416

August 2011

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Abstract

The study takes off from two major research gaps of environmental security and environmental securitization theories regarding the conceptual understanding of environmental security and the effects on awareness, financial resources and involved actors from linking environment and security. The aim is to develop the theories and to increase the knowledge of both the conceptual understandings of environmental security and how the linkage between security and environment affects the treatment of environmental issues. The study was conducted through semi-structured interviews with politicians and actors in organizations in Moldova and the results show that the conceptual understanding of environmental security differs from the practical environmental work. In other words -- the understanding foremost goes in line with national security and the practical work is focusing on the protection of the people and in more human security ways. The results also show that the effects from linking security and environment differ between different fields of environmental issues and that they do not fully support the theories of securitization. Further, the results indicate that the effects from a security linkage are not as state-centric as the securitization theories refer to.

Keywords: Environmental Security, Securitization, Moldova, National/Geopolitical Security, Human Security

Contents

1. Introduction

The notion of security has changed dramatically since the end of the Cold War, and new areas are today treated in traditional security manners. Environmental change and degradation, due to climate change and resource depletion, become more and more severe and increased attention is paid to environmental issues at all levels. In line with that environmental issues are higher prioritized and that the notion of security has changed, *Environmental security* is today a recognized concept that is growing bigger and gets established at political and institutional levels. Internationally, the UN Security Council discusses environmental security and how environmental degradation, climate change and resource scarcity affects security dimensions. In 2004, the first attempts to co-operate around linking environment and security were taken at international level when NATO together with departments of the United Nation went together in order to recognize environmental issues that threaten security in vulnerable areas (nato.int).

According to theories of security transformation and securitization, developed by the Copenhagen School in the 1990's, the act of turning environmental issues into security issues is socially constructed and securitization is a form of speech act of "doing security", mainly performed by the political elite. According to the Copenhagen School, the speech act of calling something a security issue leads to changed prerequisites for the issue. These changes can shortly be summarized with that securitization leads to higher prioritization of the issue and that the securitized issue is in the control of power elites and decision makers (Buzan et.al 1998). On the other hand, contemporary securitization theorists argue that the Copenhagen School has to be broadened and that the effects of environmental securitization are more comprehensive than according to the school (Balzacq 2011).

Both the opponents and the researchers behind the Copenhagen School state that it is essential to understand how securitization-moves affect the treatment of environmental issues in practice. The contemporary securitization theorists, focusing on securitization of the environment, thus call for more empirical knowledge on how the speech act of turning environmental issues to security issue affects the treatment of these issues (Balzacq 2011). In this study, the effects on the *awareness*, *financial resources* and *involved actors* of environmental issues when they are linked to security are investigated. Thus, the study contributes to filling the empirical knowledge gap of the effects from linking environmental issues to security.

At the same time, the conceptual *understanding* of environmental security is very broad and different actors might understand and use the concept differently, something that potentially also has impact on how the linkage between environment and security affects the treatment of

the issues (Greager 1996:113). This is the second research gap this study takes off from; how the concept *environmental security* is understood differently and how these different understandings may affect the way environmental issues are treated. Looking at definitions of environmental security from different scholars, it is clear that the way the concept is understood and looked upon ranges from being very state-centric and include the military to almost fully being a question of human security with focus on the survival and well-being of the population (Barnett 2001:110, Carius & Lietzmann 1999:12).

The study was conducted in Moldova in spring 2011. Moldova as a country is heavily dependent on its neighbors for resources such as freshwater and energy, and is also exposed to environmental hazards of frequent floods and droughts - aspects that theoretically puts the country in an environmental insecure position. The study was made trough semi structured interviews with politicians and actors in organizations involved with environmental issues, to find out how these people understand and work with environmental security.

1.2 Underlying research gaps and aim of the study

The study is based upon two central research/knowledge gaps of environmental security and the linkage between those two gaps. First of all, the ways the concept of environmental security is understood are many and diverse and there is no general knowledge of how the concept is understood and used. Secondly, both researchers within the Copenhagen School and the more contemporary scholars call for increased empirical knowledge on the effects from linking security to environment. More specifically, these effects regard the *awareness*, the allocated *financial resources* and the *involved actors* when it comes to environmental issues. Few empirical studies are made on how security is linked to environment at political and organizational level and how these linkages affect the environmental work. There are even fewer studies made where both the effects from the linking between security and environment *and* the conceptual understanding of environmental security are investigated together. At international level, there are arguments of that the labeling of environmental threats as security threats have increased the prioritization of the issues. But a more specific understanding of how the phenomenon of labeling environmental issues as security issues affects the treatment of the environment at a national level is limited.

The meaning of environmental security is very broad and stretches from national/geopolitical understandings to more people centered understandings of the link between security and environment. This diversity of how the concept is understood might also influence how the linkage between environment and security affects the outcome of environmental work. Looking at existing definitions of environmental security from different scholars, the diversity of the concept is great - something that potentially has implications on

how the linkage between security and environmental affects the treatment of environmental issues.

To sum up, the study investigates both the conceptual understanding of environmental security in line with national/geopolitical security and human security, and the effects on the awareness, financial resources and involved actors of environmental issues when they are linked to security. With a broader and more long term outlook, this knowledge is essential in order to study and understand the implications of environmental securitization on both the environment and the people. In this specific study, the aim is to contribute to the development of contemporary theories on environmental security and securitization and to increase the knowledge on how environmental security is understood and treated at national political and organizational level. More specific research questions that guide the study are presented after the next chapter on previous research and theoretical framework.

1.3 Outline of the study

The study is presented as follows; in chapter 2, the theoretical framework and the previous research that the study is based up upon is presented. This part includes theories on securitization of the environment and on environmental security as a concept, where the later is divided into national/geopolitical security and human security. At the end of this chapter, you find the research questions to guide the study. Chapter 3 presents the methodological framework for the study and the analytical tools used for the analysis. Thereafter, the result is presented divided firstly into the two research questions, and then into the categories of the analytical tool. At last, in chapter 5, you find the conclusions of the study and a discussion around what these conclusions mean and what further studies to make.

2. Previous research and theoretical framework

2.1 Securitization of the environment

Securitization can be seen as the most extreme form of linking a specific issue to security, and is the move of an issue from the political process to the security agenda. Not all issues that are being turned into security issues are securitized, but theories on securitization can help us understand how these issues might be treated. Securitization as a concept was developed in the 1990's by the Copenhagen school with researchers such as Buzan, Waever and Wilde[1], and these are still the main securitization scholars. However, contemporary researchers mean that

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[1] Their main work together is Security: A New Framework for Analysis (1998) Individual work of e.g. Weaver (1995) Securitization and Desecuritization,

the ideas of the Copenhagen School need to be broadened and that we have to look beyond only the theoretical perspective. Hereunder, both the securitization theories of the Copenhagen School and the more contemporary additions to these theories are presented.

According to the Copenhagen School, the process of securitization can be seen in a three step way, where the first step is the non-politicized, the second the politicized and finally the third step of securitization. At the non-politicized level, the issue is not a matter for state action and it is not included in the public debate. When it becomes politicized, it is managed within the usual political agenda and becomes part of public policy and of governmental decisions. The final step of securitization is when the issue is moved away from the political agenda trough a securitization actor, e.g. the government, political elite, military or civil society (Emmers 2007:110-1). When an issue is going through a securitization process and is being labeled as a security matter, it is usually given more recognition and will be stronger addressed by the state and hence more resources will probably be allocated to the issue - something that might not have happened if the issue was still on the second step of securitization and was still regarded as a politicized issue (Waever 1995, Emmers 2007). Securitization means a change in prioritization of issues and new areas become prioritized in line with their security transformation (Trombetta p. 589). This prioritization both means changes in the awareness of the issue and changes in financial allocation, according to the Copenhagen School. Thus, the three focus areas of this study are the effects of environmental securitization on *involved actors, awareness,* and *financial allocation.*

It is only certain *actors* that have the "ability" to securitize issues and this can only be done in certain situations, using certain language (Roe 2004:281-2). This view of constructed security where securitization is a form of speech act, is the main focus of the Copenhagen School. When the ideas of this School grew big in the beginning of the 1990's, it was right after the Cold War was over, and thus left room for broadening the security agenda to not only being a matter of military issues and sate security, but also to include people's security (Waever 1995). According to the Copenhagen School, something is a security problem when the elites declare it to be so (Weaver 1995), which leaves great room for decision making for the power holders where these always can try to securitize an issue in order to gain control over it. In this sense, securitization is a social process that is managed and determined by the political community and the power holders, rather than by individuals (Trombetta p. 588). The Copenhagen School bases its assumptions on that securitization is a form of speech act where these above mentioned actors turn an issue into a security matter by articulating it as an existential threat and these actors then claim special right to treat the issue by using extraordinary measures (Stritzel 2007, Emmers 2007:113, Roe 2004:281). Thus, actors able to make the speech act of securitization hold much power of what issues that are securitized and in which way this will be managed, and the process is dominated by powerful actors with privileged positions.

As mentioned, according to securitization theories, the linking of an issue to security implies changes in recognition and resource allocation. For this study, the focus is to investigate the effects on environmental issues when they are linked to security with an emphasis on *awareness* and allocated *financial resources,* except for the already mentioned investigation of the effects on the *involved actors*. The reason to investigate effects on awareness and financial resources are rooted in the theoretical assumptions that when something is labeled as a security threat, special recognition and treatment follows. This implies, theoretically, for example that the state can mobilize and take special powers to handle the threats of a securitized issue. Moreover, previous research shows that securitized issues are seen as more important than other issues and it has been argued that they should be higher prioritized and that more action and resources should be mobilized (Buzan et.al. 1998:21ff). On the other hand, both Buzan et.al. and Barnett state that there are possible negative side effects when issues such as the environment are securitized and that the securitization can be counterproductive and produce undesirable indirect effects (Buzan et.al.1998:71, Barnett 2001:25). However, these are all theoretical assumptions of the effects of securitization. Empirically, securitization scholars call for a broadened understanding of environmental securitization and the policy effects from linking environmental issues to security- something that this study takes off from as it aims at increasing the empirical knowledge of the effects on the awareness, financial resources and involved actors when environmental issues are being linked to security.

As mentioned above, theories of securitization in line with the Copenhagen School imply that all issues have the potential to be securitized, and that it is generally up to the power holders and political elite to decide what issues that are being security transformed. No matter what issue that is securitized, as soon as it under goes a security transformation, the logic of security, with all its implications, follows (Trombetta p. 588). Thus, when the environment is securitized it follows the same rational of security as other issues and is treated in new ways of e.g. higher prioritization, new actors and changed forms of management. It is in line with these arguments that contemporary securitization scholars question the Copenhagen School and mean that the effects of securitization of the environment are more comprehensive and that the theories need to be broadened (Balzacq 2011, Trombetta). Balzacq (2011) rises that one cannot divide the effects from environmental securitization into positive and negative effects, as has been done and that the effects need to be further studied in order to fully understand the implications of securitizing environmental issue. Another additional aspect to the traditional securitization theory is raised by Sjöstedt (in Balzacq 2011) who argues that securitization scholars have focused too much on the speech act and labeling of a security threat, and means instead that only calling something a security issue does not make it fulfill the criteria of securitization, but that policy action also is required (Balzacq 2011:213).

These policy actions, or more specifically the effects on awareness, financial resources and involved actors from linking environmental issues to security, are investigated in the study. Besides these effects on the treatment of environmental issues from linking them to security, the conceptual understanding of environmental security is studied as the way environmental security is understood potentially could have impact on how the security linkage affects the treatment of environmental issues. Below, the conceptual theories of environmental security are presented.

2.2 Environmental security – definitions and diversity

As mentioned above, there are calls for increased empirical knowledge on the effects from linking environmental issues to security, which is one of the research gaps this study aims at filling. At the same time, environmental security scholars often raise the conceptual unclearness of environmental security. This study engages in clarifying different understandings of environmental security and how these understandings have implications on how the environmental security linkage is treated. In other words, the study takes off from assumptions that the different conceptual understandings of environmental security could have implications on how environmental issues are treated and thus, it is essential to investigate the conceptual understanding of the environmental actors. Below, the diversity of environmental security is presented.

Definitions of both "environment" and "security" are very broad and can differ heavily depending on the interpreter of the concepts. In *The meaning of environmental security* (Barnett 2001), one of the most referred books in contemporary environmental security studies, Barnett emphasizes the unclearness of the concept *Environmental security,* despite its growing popularity. Other scholars have also stressed the broad meaning of environmental security and what implications this might have on the outcome of increased attention to linking environment and security (Greager 1996:113). The greatest unclearness of the concept seems to lay in the broad meaning and interpretation of the word *security*, and this is also lifted as the most important part to understand, in order to get a comprehensive understanding of the meaning of *environmental security* (Barnett 2001:110).

Barnett, and many other environmental security scholars, make a division of national security, military security and human security, linked to the environment (Greager 1996, Carius and Lietzmann 1999). This study hereunder discusses two main ways of how "security" can be understood and looked upon in linkages to environmental aspects - *national/geopolitical security,* and *human security.* The term "environment" in this study is referred to the physical and biological systems, distinguished from political, economical and other social systems (Levy 1995:36). The definition and use of environment in this study also takes a broader definition to include mineral deposits and petroleum deposits, and there trough includes aspects of energy. A

more comprehensive discussion of the definition of environment is found in the method chapter 3.4.

As both environment and security are very broad concepts, the interpretation of *environmental security* becomes extremely diverse and might differ a lot according to whom you ask. Many scholars in the area of human and environmental security have raised the problem with finding a clear and comprehensive definition of environmental security (Barnett 2001, Greager 1996). Barnett states that all definitions of environmental security are problematic but he chooses to look upon environmental security as "*the process of peacefully reducing human vulnerability to human-induces environmental degradation and human insecurity*" (Barnett 2001:291). This view focuses heavily on environment and *human security*, which is one of two main environmental security areas for this study. Barnett specifies the environmental problems and degradations to be such as issues of water degradation, deforestation, and increasing scarcity of resources. When these issues are linked to security, they might contribute to growing instability in a particular area (Barnett 2001:505).

Carius and Lietzmann (1999), on the other hand, choose to sum up the linkages between environmental change and security and break them down into the following four dimensions; 1 The impacts of military activities upon the natural environment in times of peace and of conflict. 2 Environmental cooperation as an instrument for confidence building and maintaining peace. 3 Environmental degradation and resource scarcities as a source of social and violent conflict. 4 Warfare through the deliberate modification of instrumentalization of the natural environment (Carius and Lietzmann 1999:12). These four dimensions imply that the linkages between environment and security are discussed in broader terms than only as *human security* and the security of the people, but also to include concepts of *national security* and *geopolitical security* with the added aspects of military security and threats. This broader view of environmental security to include aspects of the nation state and geopolitical security also goes in line with that actors such as the NATO and the UN Security Council today discuss aspects of environment and environmental threats (nato.int).

Greager (1996) argues that the concept of environmental security may even be too broad to keep its value as a policy instrument and that it today includes almost every aspect of security (Greager 1996:113). However, at the same time as she questions the broadness of the concept, she also claims that it cannot be completely dismissed and that the different definitions may serve different purposes (Greager 1996:115). Below, the different views of environmental security are presented more thorough. These different views of looking upon environmental security cannot be fully separated from each other, but each includes aspects that distinguish it from the other (Greager 1996:110).

2.2.1 Environment and national/geopolitical security

As introduced above, Greager argues that the great broadness of environmental security may undermine the use of the concept and she claims that it should instead be looked upon as a concept that focuses on the link between environmental degradation and violent conflict. Violent conflicts are matters of both the nation and of the people and many scholars argue today that large-scale environmental degradation may seriously affect national and international security (Lipchitz & Holdren 1990, Myers 1989). The concept of environmental security claims to stem from an understanding of national security, developed within the discipline of international relations (Barnett 2001:23).

According to Barnett (2001), there are three main ways that environment can be linked to national security. First, the military capacity is dependent on the natural environment for its economic resources and thus, the capacity to develop the military decreases if the environmental capacity does the same (Barnett 2001:43). Secondly, environmental degradation has negative impacts on national interests such as economic development and it threatens individual and collective economic livelihoods (Barnett 2001:43). Thirdly, environmental problems challenge the idea of the sovereign state and environmental issues become problems that have to be treated within and between nation states, where climate change is mentioned as one of these transboundary national threats (Barnett 2001:44).

Additional, Barnett's mentioned national interests in line with economic aspects, central for the discussions on the linkage between environment and national security is the idea of environmental degradation as cause and/or consequence of violent conflict. These linkages are discussed in ways that resource depletion/scarcity and more overall environmental degradation cause violent conflicts. Climate anomalies are seen as one thing that potentially could cause geopolitical instability in a region. This since above/below normal temperatures and/or rainfalls stress ecosystems and cause environmental effects such as flooding, storms and droughts. This type of events cause instability due to e.g. increased risk of health catastrophes and reduced access to freshwater, which in its turn may lead to national security threats of potential escalation for resource-based conflict, mass migration and regional instability (Lancci p.2).

A number of scholars argue that resource depletion due to environmental degradation cause violent conflicts and instability (Homer-Dixon 1994 & 1991, Barnett 2001, De Soysa 2002, Levy 1995, Nordås & Gleditsch 2007). Homer-Dixon and the Toronto School took the leading position in research on the causality between resource scarcity and violent conflicts in the 1990's. The main idea of the Toronto School is that resource degradation and scarcity cause instability and contribute to violent conflicts, especially in the developing world and that environmental degradation such as failed crops, scarce water supplies etc. cause regional instability (Homer-Dixon 1991:77-8). Homer-Dixon means that environmental degradation

causes shifts in balance between states and that the diversity of environmental conflicts ranges from war to terrorism and diplomatic and trade issues (Homer-Dixon 1991:77).

An instable situation due to environmental degradation may also lead to increased demands on key institutions of the nation state and at the same time decreased possibility to meet these demands, which puts the state in a difficult situation where increased instability may cause militarization and the creation of a hard regime (Homer-Dixon 1994:6ff).

To sum up, environmental security as a notion of national/geopolitical security mainly focuses on how environmental degradation and resources scarcity might cause national/geopolitical insecurity and increased militarization. Additionally, environmental issues are also national issues in line with that economic development heavily depends on the environment and its resources. Thus, degradation of the environment could be damaging for the national economy and put the nation in a weakened position. In contradiction to a full emphasis on environmental security as a national/geopolitical issue, notions of human security discuss environmental degradation as a threat to the people.

2.2.2 Environment and human security

The view of security as a national issue of defending state interests has traditionally been the main way to look upon and understand the concept of security. However, the two last decades, aspects of more people centered ideas have been added and today we are more and more talking about human security (Axworthy 2001:20, HDR 1994:22). Even though environmental aspects of national/geopolitical security in some ways go hand in hand with more human centered security aspects as introduced above, scholars still make distinctions between traditional environmental security and human security (Levy 1995:41). Although national security and human security have different focal points, where national security emphasizes on the nation state and human security on the people, the states are still critical in providing security for the people and can definitely not be ignored when human security is discussed (Barnett 2007:197, Barnett & Adger 2007:646).

However, the idea of human security is to broaden the concept of national/geopolitical security and move beyond the traditional security definitions and views. It rejects the exclusive focus on the nation state and at the same time, theorists of human security claim that national security is inefficient to guarantee people's security and that the concept for long has been interpreted too narrowly (Levy 1995:42, HDR 1994:22). Different from national security, the concept of human security does not focus on territorial security and is not a defensive concept as human security cannot be achieved by increased military capacity and more weapons (HDR 1994:24). Barnett argues that we need to understand and use concepts of national as well as human security to understand the diversity in the word security, where there is no single interpretation that could alone capture the broadness of the concept. Especially, he argues that

national security alone is not able to satisfy the full range of security needs of people (Barnett 2001:124).

In line with the development of environmental security, human security was established in the mid 1990's in the aftermath of the Cold War, when the security agenda got the opportunity to be broadened (Kerr 2007:91). Human security is people centered concerned with how people live in a society. The concept has two main aspects according to the UNDP Human development report (1994). First, it means safety from chronic threats as hunger, disease and repression. Second, it means protection from sudden and hurtful disruptions in the patterns of daily life (HDR 1994:23). When looking upon the link between environmental issues and human security, it is understood in terms of that environmental changes and degradation threatens the security of the people (Barnett & Adger 2007:642). Coastal erosion, declining precipitation and soil moisture are types of environmental changes that are listed as potential threats to human security (Barnett & Adger 2007:640). Also extreme environmental events such as flooding, droughts etc. are often discussed in linkage to human security and how these could create insecurity for people. With a human security centered view, environmental security is very much about the rights of all people to a healthy environment (Barnett 2001:128). As well as environmental changes and degradation per se can threaten human security, it can also undermine the capacity of the state and its institutions to provide needed facilities to create security for the people and ways for them to sustain their livelihoods (Barnett & Adger 2007:639).

2.3 Summary of theories – base for further analysis

Environmental security is today a well known and used concept and means some type of linking between environmental issues and security issues. Still, the ways that the concept can be understood are many and can differ heavily depending on if security is seen as more of a national/geopolitical or a human security issue. National/geopolitical security mainly treat environmental security as a question of national interests that need to be secured from other nations and that resource issues of e.g. scarcity could cause national insecurity. Human security, on the other hand, treats the question of environmental security more in a way of that environmental issues affect the prerequisites for the population. As an example, environmental degradation and hazards have an impact on the health of the population and is there through a matter of human security.

Securitization scholars both from the traditional Copenhagen School and the more contemporary theorists ask for increased knowledge on how the linkages between security and environment might affect policy work. Securitization theories generally discuss how the securitization of an issue could affect three areas; 1 awareness, 2 financial resources, 3 involved actors. The theories of how the securitization of *environmental issues* affect these areas are not

well-developed and the empirical knowledge is lacking on the actual effects on these areas from linking environment to security.

These two above mentioned gaps of; 1 knowledge on the conceptual understanding of environmental security and 2 the effects from linking environmental issues to security, are the theoretical base for the study that the further analysis takes off from. This further analysis investigates both the conceptual understanding of environmental issues and the effects on the treatment of environmental issues from linking them to security. Finally, the relationship between the understanding and the effects on the treatment is also studied based on the assumption that the way environmental security is understood might influence how the linking between security and environment has implications on the treatment of environmental issues.

2.3.1 Research questions

- In what way is the notion of environmental security understood in line with the concepts of national/geopolitical security and human security?

- In what way does the linkage between environmental issues and security issues at national political/organizational level in Moldova affect the treatment of environmental issues?

3. Methodology

3.1 Type of study

The study was conducted as a "Minor Field Study" supported by the Swedish international development agency (SIDA) and was conducted in Moldova during two months in spring of 2011. In order to answer the research questions to fulfill the aim of the study, a qualitative research strategy is chosen with a type of comparative case-study design. As the study aims at understanding how the linkages between security and environment are understood and the possible effects from this linkage, a quantitative study occupied with numbers and masses would not be sufficient. Instead, what is of interest is the wording and this needs to be investigated qualitatively. The available data and written work about the security linkage is not very comprehensive and thus interviews with involved actors were made to gather new and more material for analysis. Making interviews and talk to the actors themselves also gave the possibility to ask questions about their own interpretations and ideas about the causal relationship between security and environment, something that would be difficult to capture through other types of research methods (Bryman 2008).

The study is a form of combined testing and developing of existing theories on environmental security and securitization. The first research question regarding the conceptual understanding of environmental security develops theories on environmental security and securitization through gathering increased knowledge on how the concept is understood and whether and how different understandings have implications on how the environmental issues are treated. The second research question regarding the effects on the areas awareness, financial resources and involved actors when environmental issues are linked to security, tests securitization theories. These areas of investigation depart from the securitization theories of the Copenhagen School as these are seen as the general areas affected when an issue is securitized. This study thus tests whether and how security linkages of environmental issues are affected in the same way as the theories say.

The level of analysis is national level with research conducted at the national level in Moldova. According to the Copenhagen School, environmental security is mainly found at international level, but the political relevance is found at lower levels (Buzan et.al 1998:91). Hence, trying to study the political effects and understanding them at a global level would be inefficient and also very difficult since there are no specific institutions that are responsible for the global decision-making. At the same time, studying the phenomenon on a global level would mean a major challenge to delimit the study and find suitable interviewees. As the nation state still holds the major decision-making bodies, the national level is the most interesting to study the effects from the security linkage and the conceptual understanding of environmental security.

Furthermore, securitization scholars ask for increased empirical knowledge on the effects from linking environment to security and as the national level seems to be the most appropriate level of analysis, this study has intra-scientific relevance. The relevance of a study is seen as one important criterion and intra-scientific relevance is the contribution the study makes to the literature on that field (Bryman 2008:34). Besides increasing the empirical knowledge on the effects from linking security to environment, the study also contributes with increased knowledge on how the concept of environmental security is understood: knowledge that is lacking today and is of relevance for environmental security theories.

The societal relevance of the study concerns the fact that environmental issues today often are treated in security ways and that this might have impact on the treatment of environmental issues. As people and the society are affected by how environmental politicians and organizations are working with environmental issues, it is of societal relevance to understand how security linkages might affect environmental treatment. Global warming and environmental change are today seen as some of the major threats to society, and as these problems are linked to security and this linkage might affect people even more, it is essential to understand what these effects look like.

3.2 Moldova as a case

The study is a form of case study of environmental security in Moldova with comparative elements between different fields of environmental areas. There are few clear-cut case-studies, but almost all include some kind of comparing elements like the comparance between different fields of environmental issues when it comes to the conceptual understanding and effects from environmental security (Esaiasson 2007:121). Even though this is not a clear-cut case-study, choosing a suitable case for the study is of absolute importance since it highly affects the possibility for generalizing beyond the specific research context (Bryman 2008:33). Generalizability goes hand in hand with the external validity of the study, and validity is in many ways seen as the most important criterion of research (Bryman 2008:32). This study strives for generalizing beyond the specific case and thus, the choice of area for the study is essential.

Generally, in the case of studying the situation in a specific country, it is difficult to draw too wide conclusions of whether the results would be the same with different prerequisites. Different countries have different political and cultural situations and backgrounds, which in this case heavily affects the political and organizational treatment of a specific issue. Moldova as a country for the case study is chosen upon two criteria. First of all, it is important that the area for investigation has significant environmental issues that could possibly be linked to security issues, to not risk getting a null result. If a country/area of research with no significant environmental problems was chosen for the investigation, it would be of great risk that almost no linkage between environment and security would be found and thus the effects and understanding from such linkage would be impossible to study. Secondly, the area was chosen as an exemplifying case (Bryman 2008: 56) that could represent a fairly normal case for environmental issues with significant problems, but not any specific issue that is extra linked to security. Environmental security issues could be argued to be investigated in a context of more extreme environmental issues, such as in some African and Asian countries where great problems of e.g. droughts or flooding are common. Such cases would be examples of extreme or unique cases (Bryman 2008:55). However, for the external validity and in order to be able to generalize the results to other cases, it is important that the situation in the investigated area is not too extreme and can represent possible situations in more countries/areas.

Moldova as a country suffers from severe environmental problems of varying kinds and environmental security is today discussed at political level (National Programme for Environmental Security 2007-2015). In the UNDP National Human Development Report (2009) for Moldova, the main environmental problems for the country are lifted and these vary from agricultural issues, water scarcity, threatened eco-systems, environmental events such as floods and droughts (UNDP 2009: chapter 1). In the report, it is for example mentioned that climate change could seriously undermine Moldova's food security and that environmental changes

cause increased dependence on other countries for energy supplies (UNDP 2009:6). Today, Moldova already imports 97 % of its energy supplies, almost exclusively from Russia (Climate change office 2009:21).

Events like these, of serious environmental problems in combination with that environmental security is discussed at national level, make Moldova an interesting country to study how environmental security is understood and might affect the treatment of the issues. At the same time, and as desired, it is not an extreme case with great environmental security problems. As already mentioned, some countries with for example extreme droughts and/or heavily conflicted shared water resources or regions with extreme flooding could be seen as more extreme cases for studying environmental security. Even though the effects of linking security to environment might be even more obvious in these cases, it would at the same time be difficult to make any generalizations from such studies. Moldova could overall be seen as an exemplifying case of environmental security, but with some extreme aspects of e.g. total energy dependence and occasional extreme weather events. However, any case can involve a combination of elements with a base as an exemplifying case but with some elements of an extreme case (Bryman 2008:56).

3.3 The interviews and choosing interviewees

The interviews were conducted in Chisinau, Moldova during May and June 2011. Ten interviews with all together twelve interviewees were held, and the length varied from around 30 to 90 minutes. All interviews were held in English and one was interpreted into Moldovan language. To structure the interviews an interview guide was made with overall questions and themes to be brought up during the interview. The guide (see appendix 1, chapter 7) was broadly the same for all interviews, but adjusted to fit the different actors involved in different environmental areas etc. This type of semi-structured interviews allows for openness to change sequences in the interview questions, but at the same time it has some themes to be covered (Kvale 1996:124). The major themes for the interviews are introduced and discussed more in-depth in section 3.4 below.

The interviews were mainly conducted in the interviewees' offices, except for one that was held in a quiet part of a public park in Chisinau, and all these locations ensured good recording quality, which is of great importance for the interview (Kvale 1996:162). All interviews, except one, were recorded with audiotape and the interviewees were asked for permission before the recorder was turned on. For one interview, the choice was made to not use a recorder as the interviewee walked around to show things on maps and in different document etc. All recordings were transcribed into written text right after they had been conducted. Overall, it was no problem to hear the dialogue from the recordings, even though some words and phrasings were interpreted as they were difficult to catch. This interpretation is one of the weaknesses of

recording the interviews (Kvale 1996:163), but the alternative to only take notes would have caused that not as much information was caught. From early on, it was possible to see patterns in the answers that mainly went along with what the others had answered: something that indicates that theoretical saturation was achieved.

The study investigates different dependent variables from the linking between security and environment, or the effects from this linkage. When studying the dependent variables, it is crucial to be curtain that the study actually captures the right dependent variables that have effect on the independent variables, or in other words that it actually is x that causes y (Bryman 2008:32). Thus, choosing interviewees is crucial for the internal validity as they provide essential information for investigating the relationship between security and environment. As the effects from the environmental security linkage are asked about specifically in the interviews, it is comparably probable that the study also captures the actual effects. The alternative would instead have been to examine actual outcomes on the treatment of environmental issues at political and organizational level and interpret these as effects from environmental security linkage. However, this would have caused great problems with the internal validity since there are so many things that can affect political and organizational work and it would be very difficult to be certain about the causality with the environmental security linkage. If it would have been possible to set a specific date for when such a linking began, a study over time could have given good internal validity -- but as the environmental security linkage is an ongoing process with no specific staring date, this would not have been possible. Hence, the highest internal validity is reached through asking about the specific causal relationship and the effects from this.

The work with finding interviewees began already before arriving in Moldova through contacts via email, and continued upon arrival. The selection of interviewees was based on criteria of experience and expertise within the environmental field and especially within one or more of the fields (energy, water, overall environmental issues) that the study is extra centered on (see section 3.4 for more information). As the study aims at gathering knowledge on environmental security at national level in Moldova and to capture the overall situation in the country, it was of importance that the actors should be engaged at national level and has a great overall knowledge of the situation in the country. Hence, national politicians and the major environmental organizations in the country were contacted. The answers of the interviewees were promised to be kept separated from the person, so it would not be possible to trace specific wording to a person. However, all interviewees agreed on having their name published in the report (see appendix , chapter 7 for list of interviewees).

After some actors had been contacted via email upon the criteria of environmental knowledge in Moldova, the rest were mainly selected trough snowball selection where one interviewee suggests whom else to talk to (Kvale 1996:233). The twelve interviewees captured

broadly the different areas of knowledge that the study aims at investigating. It would have been desirable to talk to some more actor within the field of energy, as this was one of the three major areas of investigation, as discussed below. However, a majority of the interviewees are involved in a broad spectrum of environmental issues and were asked about the energy issue as well. Also, many of the actors working today within one field of environment have previously been involved within other areas and still have good insight in these areas.

The interviewees are both actors within environmental organizations and politicians involved in environmental decision making. These two groups together capture the main actors of the national environmental decision-making and management, and are thus the essential groups to talk to regarding the national understanding and effects of environmental security linkage. However, the groups are not divided in the analysis as they together capture the national environmental level and it is not of interest for this study to compare the politicians and the actors within organizations.

Coming to Moldova as a Swedish master student could both have its advantages and difficulties. The work with finding actors for the interviewees was pretty straight forward and almost all actors that were asked agreed on an interview. However, coming from a country that is heavily involved in the Moldovan development cooperation and thus an important financial player, could mean that some actors felt obligated to take part in the interview, or that the answers were colored by this relationship. Hopefully, this was avoided by the information to the interviewees beforehand, telling that the study is made by a student and that the interviewed actors had the possibility to be totally anonymous and could stop the interview at any time.

3.4 Creating analytical tools

In order to help answer the research questions, two analytical tools are created based on the chapter on previous research and theoretical framework. Most qualitative studies need a framework to guide the analysis of the data, and it is crucial that the analytical tools are created in order to carry out a true analysis (Bryman 2008:538f). For the study, the two research questions are divided into two different analytical tools to guide the data for each and one of the questions. These two analytical tools are then both divided into different analytical categories. For both research questions, the analysis is divided into three sub-groups of environmental issues that for the study are called: *Overall environmental issues*, *Water* and *Energy*.

The choice of these three categories is based on areas discussed as the most crucial environmental areas in Moldova. In the UNDP Human development report for Moldova (2009), climate change is used as an overall category but with water and energy as the main sub-categories. Obviously, climate change is a very broad topic and the category "overall environmental issues" is even broader and could be difficult to fully divide from "water" and "energy", as these are often interlinked with other environmental areas. However, for this study

it is of relevance to make some kind of comparison between different areas of environmental issues as there are theoretical indications of great variance between different areas on how they are linked to environmental security. As the number of possible categories to divide "environment" is enormous, the division has to be made upon some criteria for what is desired to compare in the specific study. Energy and water are, as mentioned, two of the main environmental areas discussed in Moldova. These three categories are based upon that energy is different from other environmental issues as it is not a clear-cut environmental issue but is still included in the study since energy issues are of major interest in Moldova and that water is major environmental issue of the country.

As mentioned before, the term "environment" in this study is referred to the physical and biological systems, distinguished from political, economical and other social systems (Levy 1995:37). The definition and use of environment in this study also takes a broader definition to include mineral deposits and petroleum deposits, and there trough includes aspects of energy. This broader criterion of environment is used to be able to include aspects of energy in the study. As mentioned, energy aspects of high dependence and low levels of own supplies are major issues in Moldova and thus of great importance to be included in the definition of environment. Still, the results from the study need to be understood in regard to that energy is included in the definition and in the investigation.

The analysis of the second research question about effects from linking security to environment is also divided into the three categories of: *awareness, financial allocation* and *involved actors*. These three categories are based on theories and previous research on securitization of the environment, as presented in chapter 2.1. The alternative to the making and asking for categories of effects would have been to treat the question more openly and not specify different types of effects. However, in order to be able to ask about more specific effects, the choice to make a division into three categories was made. This also links the study closer to the theories on environmental security and securitization as it bases it assumptions and questions on already existing theory. It's of great importance that the analytical tool covers the whole spectrum of data and that nothing of importance is excluded. Thus, more open questions on the effects were asked in order to find out if the interviewees brought up other aspects than those captured in the three categories. The results indicate that all the discussed effects can be categorized into the three areas and nothing was left out.

To provide a measure of a concept and to know what is measured, it is argued that it is important to have indicators for the concept (Bryman 2008:144). Still, the concepts of national/geopolitical security and human security are not operationalized in this study. If the data for analysis would have been already existing in the form of e.g. documents, policies etc., operationalization of the terms would have been essential to know what to look for and how to interpret and categorize different wordings. As the data for this study instead is gathered trough

interviews, it was possible to ask specifically about human and/or national/geopolitical security. Also, when the interviewees discussed environmental security without it being obvious within what category of environmental security it would fit, a clarification was asked for specifically.

On the next page, the two analytical tools for the study are presented. The results of the study can all be divided into the different columns of the analytical tools to make clear in what way environmental security is understood and how the security linking affects the areas of awareness, financial resources and the involved actors. As this is a qualitative study, the results of the analyses should not be interpreted quantitative thinking that a column represents how much understanding and/or effects there are. Instead, the columns will be filled with phrasing and wording from the interviews that indicate a relationship between the different areas. In the first figure, the three categories of environmental issues are divided into human and national/geopolitical security. Column 1.1, as an example, will be filled with phrasings from the interviewees that show how overall environmental issues are understood in line with human security. Also indications of contradictions between human security and overall environmental issues could fit into column 1.1, where this column then will capture the relationship between human security and environmental issues. In this way, the columns will not only contain phrasings that show a clear and positive relationship, but also indicate if there are clear understandings of a contradiction between e.g. human security and overall environmental issues. When making the analysis in line with these analytical tools, the differences in conceptual understanding of environmental security between the environmental categories become clear.

In the second figure, the three environmental categories are divided into the areas of effects; awareness, financial recourses and involved actors. Analyzing the results in line with this division gives a clear overview of the different categories and areas and the comparison between them becomes distinct. This figure presents the effects in relationship to the environmental categories and as in figure 1; these will be filled in to the columns. For example, from column 2.1 it will be possible to interpret the effects on awareness of overall environmental issues when they are linked to security. The column might contain both positive and negative relationships, i.e. both indications of actual effects on the awareness and indications of that the awareness is not affected.

Having the same categories of environmental fields in both analytical tools makes it easy to compare these as well, or in order words to see if there are any clear patterns between the conceptual understanding of environmental security and the ways the security linking affects the treatment of environmental issues.

3.4.1 Figure 1
The understanding of environmental security, divided into three categories environmental issues

Overall environmental issues		Water		Energy	
Human	Nat/Geo	Human	Nat/Geo	Human	Nat/Geo
Column 1.1	Column 1.2	Column 1.3	Column 1.4	Column 1.5	Column 1.6

3.4.2 Figure 2
The effects of linking security and environment on three categories of environmental issues

Overall environmental issues			Water			Energy		
Awareness	Financial	Actors	Awareness	Financial	Actors	Awareness	Financial	Actors
Column 2.1	Column 2.2	Column 2.3	Column 2.4	Column 2.5	Column 2.6	Column 2.7	Column 2.8	Column 2.9

4. Results

4.1 The understanding of environmental security

The first impression from the interviews is that environmental security is not discussed very broadly in Moldova and that the concept appears quite confusing to the interviewees. Many of the interviewed actors also began by saying that there are not any major environmental security threats in the country, and then referring to security as something explicitly national and geopolitical. With this nation centered understanding of the concept environmental security, the link to security is not applicable to that many environmental issues in Moldova according to the interviewees, with energy issues and severe environmental hazards as some exceptions of issues actually understood as national/geopolitical security threats. One interviewee said for example:

> "...We don't specifically spell out the interlinks between environment and security, the ultimate goal is to protect the people within all field of areas, but security is not anything we are working with explicitly".

This shows that the first interpretation of environmental security is not understood to foremost include the security of the people, but other types of security issues. Interviewees that began with saying that environment and security is not linked to each other and not worked with, then continued the interview by talking about how they explicitly worked with emphasizing environmental degradation as potential threats to people. Moreover, security seems to first and foremost be interpreted as national security when the understanding of environmental security was asked for explicitly. One interviewee said;

"It is definitely a matter of what you mean with security. You could say that climate change is threat of the lives of our people, it is threatening the infrastructure yes, but it is not seen as a national threat. It is seen as a challenge affecting across various sectors that is important for the country, but not as a threat for the existence of the nation"

The interpretation of this wording could be that there is some understanding of that security could imply issues of human security and the security of the people, but that the main understanding would be to see security as something regarding the existence of the nation state. When this view of security, as mainly a national issue, is applied to environmental issues, there are not that clear linkages. Additionally, when asking about the understanding of the concept environmental security, it was seen as something very theoretical that was difficult to grasp and understand.

"This link is generally too theoretical and it is a little more of a Western approach. So, maybe it's an international organizational approach"

Another interviewee also lifted that environmental security as something theoretical and "Western" that could be difficult to understand in a Moldovan context:

"When the U.N. Security Council discusses climate change, it is very global implications and the effects on the global population".

When moving away from openly discussing the understanding of environmental security, and instead ask more explicitly about both human security and national security, the understanding of the concepts is different. Now, the linkage between environmental issues and human security becomes much clearer and the majority of environmental issues are discussed linked to human security issues and not as national security. The difference in understanding of environmental security in line with the concepts of human security and national/geopolitical security becomes clear when discussing the linkage between water issues and security issues.

In the case of water it is evident that this is seen as a human security issue that has large impact on people's security and health, and that water issues are treated as important issues to secure the population.

"There will always be a link to human security when we talk about water management, water supply and sanitation. […] When we are treating issues of human health, every person needs to have access to five liters of water every day for instance".

It is apparent that water issues in linkage to security first and foremost are understood in line with aspects of human security and not national/geopolitical security.

"Water supply is a problem for the people, it is no discussed like a national security threat because there are enough water resources. But the problem is that some people don't have access to safe water."

From the interviews there is an impression of that the way an environmental issue is understood in security terms both differs heavily between different fields of environmental issues, and that the different understandings have great impact on how the issues are treated. In the next section 4.2, the more specific effects on the treatment of environmental issues from linking security and environment are presented. However, it is evident that the differences in the understanding of environmental security in line with human security and national /geopolitical security clearly affects the treatment of the different environmental issues, and this will be presented in this part.

Comparing issues of water, energy and other environmental issues, they are understood differently in line with human and national/geopolitical security, and this has implications on the way these issues are treated. Water issues are mainly understood as human security issues whereas energy issues are tighter linked to national security, and other environmental issues are generally not understood as linked to any form of security issues. Within the field of agriculture, the main understanding seems to be that environmental hazards might affect the agricultural sector and cause food insecurity, something that is understood as a national security issue.

"The security issue is treated better in the strategy of agricultural, because for the raised problems we try to find some solutions and possibilities to overcome the difficulties that face the country with fighting climate change and especially some hazards that affect the agricultural sector".

Water issues are, as mentioned, mainly understood as human security issues and this seem to affect the treatment of the issues in the way that they are recognized and the issues are lifted in policies etc. The interviewees lifted that drinking water is discussed as a major human security issue in Moldova and is treated as such in their work and the national water management.

"Then we have the human security as well of course, and it is definitely a prioritized problem of drinking water and quality and quantity of water. This is top priority".

The interviewees don't understand water issues in line with concepts of national/geopolitical security and mean that water supply is a problem for the people and is not discussed as a national security threat. The problem is not understood to be about not enough water resources for the country as a whole, but that some people don't have access to safe water.
One interviewee lifted the impacts it might have to understand water issues as only a matter of human security and not as a national/geopolitical issue;

"In my view, water and security are not discussed together very broadly. We try to frame it as a national security concept every time there is a possibility for such

discussion. And there, the idea of water as a disaster issue linked to national security is possible and could mean higher priority. But not every day issues are linked to national security, like for example water regimes, the role of forests etc."

In comparison to the understanding of water issues in line with human security, there is *energy* which first and foremost is understood in line with concepts of national/geopolitical security. In the interviews, energy issues are discussed as the biggest national security issue in Moldova since the country is highly dependent on others for their energy supply. The secure of needs of energy and the relations to other countries in order to secure these needs are understood as national/geopolitical issues that are linked to the existence of the country as such. The interviewees make a distinction between the national/geopolitical security and human security when they discuss energy issues.

"I mean that the national security is the biggest umbrella, and under this umbrella we have the security of the people. From an energy point of view, we need to establish the security of supply and secure supplies and negotiate with contra parts and negotiate with the prices that we could bear and could afford".

Comparing the security linking of water and energy, one interviewee lifted the difference in the security understanding of the two areas. And this also shows that different ways of understanding the linkage to security also has implications on how the issues are treated;

"The policy dialogue is not affected by the link to security in Moldova. Energy is high topic on the political agenda because we face high energy prices and almost a total dependence on Russia. And if it would not have been Russia, maybe it would have been easier. But when we speak about energy that is always the issue, to decrease the dependence and to increase the country's energy security. On water, I think that is not a politicized dialogue, not at all actually. Of course you have the two boarder rivers and ongoing dialogue with Ukraine and Romania, but it is more because they are boarders".

Phrasing like this indicates that the understanding of the security linking differs between the fields of water issues and energy issues, and that the different understandings affects how the issues are treated with higher prioritization and politicization of energy issues.

Looking at the category called "overall environmental issues", the understanding of the security linking mainly differs compared to both energy and water issues. As presented, water is mainly understood in line with concepts of human security and energy with national/geopolitical security. Other environmental issues, however, seem not to be noticeably understood in line with any form of security linkage. From the interviews, the general indication is that environmental issues are not discussed in security terms and that environmental issues

never have been the priority for Moldova. Several interviewees mention that there is no developed discussion of environmental issues (other than water and/or energy) as security issues and that this is not developed in policies etc.

> *"Speaking about the problematic framework, we do not specially spell out interlinks between environment and security, the ultimate goal is to protect people within all fields of areas, but this is not anything we are working with explicitly.*

The exception from this lack of security linking is, as already mentioned, environmental hazards, that seem to be understood in line with concepts of both human and national/geopolitical security. In the interviews, it is mentioned that hazards of e.g. floods and droughts have caused severe impact on both people and national interests like infrastructure and land, and that these issues today are understood as security threats.

> *"For me the environmental security is what we have - we have droughts and floods. So the issues for security are to protect people from floods and make some reserves of water for irrigation…"*

In addition to this understanding of droughts and floods as mainly in line with human security issues of the protection of people, floods are also mentioned as a national security threat. One interviewee mentioned that flood issues have been brought up in the security council near the parliament more than once, and that it definitely is seen as a national issue in Moldova.

4.2 How security linkages affect the treatment of environmental security

In the previous section, differences in the understanding of the security linking between different environmental areas were presented, and the impact these understandings might have on the treatment of the issue were introduced. As mentioned above, the different ways environmental security linking is understood has implications on how the issue is dealt with at political and organizational level. This section presents the effects from linking security and environmental issues more thoroughly, focusing on effects on the *awareness, financial resources* and *involved actors* of environmental issues, and how these effects differ between the different categories of environmental issues.

The impression from the interviews is that overall environmental issues generally are not heavily affected by the linking to security, or maybe more exactly - the absence of security linking. However, a number of interviewees mention that there are some attempts to link more overall environmental issues to security and that this type of linkage might have caused increased awareness to the issues. At the same time, the effects from linking overall environmental issues to security seem to stop at some indications of increased awareness to the environmental issues, but there are no concrete effects on either the financial resources or the

involved actors. The interviewees mean on that there is lack of concrete action and ways to treat the linkage between environmental issues and security issues. One actor phrases it like this:

> *"Environmental issues are a priority for the country and that we have to deal with these security threats. But we have to promote this further and try to work with other ministries in order to do so."*

Other interviewees lift that even though environmental issues are seen as security issues in some ways and that this might give them more recognition, concrete action to work with the environmental security threats are absent and that financial resources are lacking.

However and as already introduced in the section above, environmental hazards stand out and are looked upon differently in linkage to security than other environmental issues. The view of whether and how the security linking of environmental hazards affects the treatment of the issues differ between the interviewees. One actor lifts that the awareness of droughts and floods as severe security threats has affected the financial resources allocated to these issues and that the government today is financing practical work to prevent such events and help people who are affected. Another interviewee, on the other hand, means that security threats of droughts and floods are recognized and might have affected the awareness of the issues, but that practical work is still absent.

> *"You see that even not theoretical threats do influence governmental policies. In 2008 it was a flood from both rivers, Prut and Dniester, nothing was done after that. Then in 2010, again it was flood and the government adopted a decision immediately, that we need to develop a strategy against floods. And until now, nothing practical has happened. Maybe they are waiting, I don't know."*

The absence of concrete action when in it comes to the linking between environmental issues and security seem to be present also regarding the involved actors. A number of interviewees mention that more and new actors need to be involved in discussing and working with environmental security issues and that the involved actors today are not enough and are not working in the right way.

What seems to be a shared impression among the interviewees, regarding the effects on the treatment of overall environmental issues from linking them to security, is that there is a lack of a common methodology for how the security linking should be treated. Many interviewed actors rose that even though there was knowledge of that environmental issues could have security implications, and there is a desire to work with this, there is no common way for how this work could be done.

> *"Within all documents and policies the security issue is treated differently and there is no common methodology used by all sectors in the development of these documents, so*

all documents have been developed by experts within each sector and they have not used the same methodology when discussing security."

Regarding water, the impression from the interviews is that the security linkage of these issues heavily affects the awareness in the way that water is discussed and treated as essential to secure people's safety within organizations and at political level. Water is mentioned to be a prioritized problem because of its security linking, because water resources are needed to secure the wellbeing of the population. However, when moving away from the effects on awareness to the financial resources and involved actors of water issues, the effects seem to be less obvious but still present. Asking about the security linkage of water issues and how this affects the financial resources allocated, there are on one hand views of that this linkage means that more resources are allocated to water issues. Many interviewees mean that there has been financial progress to water management, and that the idea of water issues as important for people's security is a reason for this. However, on the other hand, some interviewed actors mean that the financing of water issues still is lacking even though they are understood as human security issues.

What can be said though, is that the actors mentioning that the security linking affects the financial resources, at the same time also mention that new actors are needed for this allocation. These new actors are mainly international donors, who support the work regarding water issues.

"Water issues are of top priority of environmental issues as it is crucial for the safety of the people and therefore specific programs are allocated for this issue. The ministry created a division responsible for water resources last year. Due to the priority of the ministry in this field, donors and the European Commission have allocated financial support."

When asking about how the linkage between water and security affects the involved actors, there are no concrete answers of any such changes. Recently, there has been some restructuring of the environmental ministries to make an own subdivision dealing with water issues, and some interviewees saw the linkage to security issues as one possible reason for such restructuring. However, the interviewees could not say for sure whether it is actually the security linkage that is affecting these changes of involved actors, or if it the reason for such changes depend more on other factors. The interviewed actors all meant that many NGOs are involved in the working with water issues, and that the security linking might have the effect that more organizations would be involved in the work around water issues.

Finally, looking at energy issues, they seem to be affected in similar ways by the security linkage as water issues are, even though the treatment of energy issues are more affected and in more concrete ways than water issues and other environmental issues. When it comes to the security linkage and its effects on the awareness of energy issues, it is obvious that the security

dimension has great impact. Compared to the other areas of environmental issues, the concrete action from the high awareness is also apparent.

> *"We have relevant threat of the national security and we have developed the secondary strategy of national security. The core of this strategy includes also energy strategies in terms of secure energy supplies, it means to organize relevant dispatch for all this national energy resources that we import, and it means to create this monitoring committee, it means to organize coordination power plans, monitoring for how they prepare for cold seasons and what resources they have. Mostly security of supplies."*

Phrasing like this shows that energy issues are prioritized and that the security linking has implications on the treatment, and that this goes beyond only being a matter of increased awareness to the issues, but also some concrete action to deal with the security dimensions.

Discussing the effects on involved actors from linking energy and security, it seems like the need to secure supplies of energy and decrease the insecurity from being independent of energy resources, has implications on the relationship to neighboring countries.

> *"Yes the link to security affects the work. Because in this case we need to discuss more friendly with all stakeholders. Even with Transdnistria[2] and with Ukraine and we have some lack of technical capacity to import from Romania, because we don't have unified, synchronized power systems. So it's very difficult to change between states towards the European Union, so our objective is to participate in this regional market. We have plans to build interconnection lines both for gas and electricity with Romania."*

Also as when discussing water issues, the interviewees did not see any problems for NGOs to be involved in the treatment of energy issues, neither that the security linking would affect such involvement. Regarding military participation, there does not seem to be such involvement in energy issues in Moldova. The interviewees mean that the military is only involved in issues like stock capacities of oil, but not in guarding energy supplies or anything like that.

Even though there are some indications of that the security linkage affects the treatment of the different categories of environmental issues in some ways, the interviewees also bring up other explanatory factors that affect the treatment of the issues. Many of the interviewees mention international obligations and pressure from the international community and

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[2] Transdniestria or the *Pridnestrovian Moldovan Republic* is a self-claimed autonomous region founded after the fall of the Soviet Union by the Russians who lived in the Eastern sector of Moldova. The region is situated at the eastern border to Ukraine next to the Nistru river, an important water supply for Moldova (Marcu 2009).

international donors as some main reasons for changes in the treatment of environmental issues. The desire to get closer to EU integration is brought up as a major reason for changes in environmental management in the country by a number of interviewees. One actor phrased it like this:

> -"So if you would say that some of the big reasons for government to prioritize water issues are linked to human security, would you agree then?"

> -"Yes, of course, absolutely. I'm sure this is very important. And the international obligations for Moldova, and we want to adopt some international and EU approaches."

Another interviewee also lifted the importance of the international community and the obligations towards this as a significant factor for the treatment of environmental issues by saying:

> "We have never treated security issues in any of our projects. There is no need because we follow some guidelines that are provided from the UNFCCC and we have not been asked to provide some responses on security issues."

These last quotes indicate that there are not only the security linkage that has effect on the treatment of environmental issues, but that there also are other essential factors.

4.3 Summary of Results

4.3.1 Figure 3 – Summarized results: conceptual understanding of environmental security

Overall environmental issues		Water		Energy	
Human	**National/Geopolitical**	**Human**	**National/Geopolitical**	**Human**	**National/Geopolitical**
Some indications of potential linkages between these categories. But, no concrete understanding of environmental issues as security issues. When such understanding is mentioned it is mainly about environmental hazards that could mean security threats for the population.	Almost no discussion on linkages between national/geopolitical security and overall environmental issues. Some understanding of environmental hazards as potential national security threats when they affect food security and national interests.	Water issues are understood as important issues to protect people's security. Drinking water is seen as a major human security issue.	Water supply issues are not understood in line with national/geopolitical security. Shared water resources are understood as potential nat/geo security issues, but this is not very commonly discussed or seen as a major issue in Moldova.	Some understanding in line with the relationship between energy and human security. But this relationship is seen as secondary to energy and national/geopolitical security.	Clear understandings of energy issues as national security issues due to high dependence on other actors for energy supplies. Energy issues are seen as the biggest national security issue.

4.3.2 Figure 4. Summarized results: The effects from linking environment and security

Overall environmental issues			Water			Energy		
Awareness	**Financial**	**Actors**	**Awareness**	**Financial**	**Actors**	**Awareness**	**Financial**	**Actors**
Some indications of that attempts to link security and environment have caused increased awareness to environmental issues.	No concrete effects. Some indications of that security linking of environmental hazards has caused increased financial allocation. But no significance in whether this is true.	No concrete effects	Heavily affected by the security linking. Water issues are prioritized problems due to their security linking.	Splited views of the effects on financial resources. Views of increased financial resources due to security linking, but the financial allocation is still lacking.	No clear results. Indications of that more actors/organizations are involved as an effect from the security linking.	Great effects on the awareness and prioritization of energy issues due to the security linking.	Indications of increased financial resources allocated to energy issues when they are linked to security.	Effects on the relationship to neighboring countries with increased co-operation. No involvement of military and some indication of increased involvement of NGOs.

5.1 Conclusions and discussion

The aim of the study was to contribute to the development of contemporary theories on environmental security and securitization and to increase the knowledge on how environmental security is understood and treated at national political and organizational level. This aim is rooted in the call for increased knowledge on the effects from linking security to environment, made by researchers in the field of environmental security and securitization. The study took off from, based on previous research on environmental security, an assumption that the understanding of the concept *environmental security* might be very broad and that this might influence what the effects from a security linkage could look like.

Starting off with the first research question regarding the understanding of environmental security in line with the concepts of human security and national security, some conclusions can be drawn. First of all, the understanding differs heavily between the different environmental areas, where the linkage between water issues and security almost exclusively is discussed in human security terms whereas energy is discussed in national/geopolitical security terms. This difference becomes clear when analyzing the interviews, where energy is mentioned as the number one security issue for the nation and that the security linkage foremost deals with the energy dependence to other countries. Water security, on the other hand, is understood to be a matter of the people and people's security. Other environmental issues are not significantly understood in security terms with the exception for environmental hazards that are discussed both in line with national/geopolitical security and human security.

Striking from the analyses is the indication of a gap between the theoretical and the practical understanding of environmental security. What is meant by this gap is that there is one theoretical understanding of environmental security that differs from the practical way that environment and security is understood and worked with in Moldova. First and foremost, the conceptual understanding of environmental security refers to traditional, national security and this type of understanding of security is not very applicable to environmental issues in Moldova. The only spontaneous linking that comes up when asking about the understanding of environmental security is energy issues, but on the other hand, energy issues are not always seen as environmental issues. However, when human security and its linkages to environmental issues are discussed more explicitly, there is another type of understanding and a general idea of that human security is applicable to many of the national security issues. Especially water issues are commonly discussed in linkage to human security, and also in quite concrete ways of how water shortages and insecure water resources mean insecurity for the people. Also other environmental issues are understood in line with the concept of human security and there have

been attempts to link issues of e.g. climate change to the human security debate, but these linkages are still not very clear or broadly discussed.

The conclusion from these results is that the conceptual understanding of environmental security is foremost in line with traditional security ways of national/geopolitical security as the main interpretation of the concept. But, at the same time environmental security linkages are mainly understood in line with the concept of human security and thus, the conclusion is that the way the concept environmental security is understood differs from how the linkage between security and environment is understood and worked with in practical ways.

Going back to the theories on environmental security, this study underlines the previous knowledge on that environmental security as a concept is very broad and undefined. Nevertheless, this study also shows that the way the actors involved in environmental work understand the concept and the way they actually work with it differs as the spontaneous conceptual understanding goes in line with national/geopolitical security dimensions, whereas the security work of environmental issues mostly deals with people's security. Furthermore, the traditional security rhetoric still seems to be the theoretical understanding of the concept whereas the more human centered way of looking upon security seems to be the way environmental issues are understood practically. This conclusion is also strengthened by that many interviewees themselves brought up that the concept of environmental security is too theoretical and too much of a Western approach. If the concept instead would have been understood more in a human security way, it would probably not be seen as too theoretical, as this is the way the environmental actors mainly work with the security issue.

In order to draw further conclusions on whether this two-folded view can be generalized beyond Moldova, more studies have to be made to test the understanding of environmental security. Different cultural and political context could possibly affect the way the concept is understood, and maybe actors in a former Soviet country like Moldova have easier to look upon environmental security as theoretically something national or geopolitical than environmental actors in other areas would do.

What can then be said about the effects from linking security and environment as the second research question asks? In accordance with the securitization theories of the Copenhagen School, securitized issues affect the awareness and the prioritization of the issue and also who the involved actors are in the decision-making and treatment of the issue. With this theoretical background as a base, and a call for increased knowledge of the actual effects from linking environment and security, the study was conducted.

The results show that the awareness of environmental issues increases when they are linked to security issues and talked about in security terms. This increase of awareness seems to be true for all fields of environment, even though some more general environmental issues still haven't been that clearly linked to security. However, the interviewees mean that there are some

attempts to link security and more overall environmental issues and that the effects from such linkages indicates some increased awareness of the issues.

When moving on from the awareness to look at the effects on financial resources allocated to the issues and the involved actors, the effects are clearest for security linking of energy issues. Here, there are effects of increased financial resources as well as effects on the involved actors. Going back to theories on securitization as presented in chapter 2.1, the effects from linking environmental issues to security issues do not fully go hand in hand with these ideas. According to the Copenhagen School, securitization of an issue would mean increased awareness, higher prioritization and more financial resources allocated to the issue. Moreover, securitization scholars also mean that securitized issues are in the hands of the power elites and that they often are treated by the military.

When looking at the results from the study, environmental issues do not seem to be securitized in the way that the Copenhagen School discusses. Both water issues and energy issues are discussed clearly linked to security, but the effects as the Copenhagen School discusses do not seem to follow from the security linking. Both environmental issues and water issues get higher awareness when they are linked to security, but when it comes to the concrete actions of allocated financial resources and involved actors, there are dissimilarities to the securitization theories. There are no clear results of that water issues get more financial resources as an effect from the security linking, and neither water nor energy issues go hand in hand with the securitization theories when it comes to the effects on involved actors. There are no indications of that the military is more involved in environmental issues linked to security, nor that the power elite tries to keep the management of the issues in their own hands. Instead, there are indications of that even more actors such as environmental and civil society organizations get involved as an effect from the security linkage.

The conclusion from these dissimilarities to the securitization theories of the Copenhagen School could either be that environmental issues are not securitized and that the security linkage is not as strong as discussed by the Copenhagen School. Or, the conclusion could instead be that the real effects from securitizing environmental issues do not fully go in line with the theories. This later suggestion of conclusion would most probably be supported by some of the more contemporary securitization scholars as presented in chapter 2.1. These scholars call for more empirical knowledge on the effects from linking security and environment as they mean that the securitization theories of the Copenhagen School might not be applicable to environmental issues – something that also seems to be the case when looking at the results from this study.

When comparing the results from the first and the second research question, i.e. the first and the second analyses, there are some interesting patterns. Energy issues that are understood in line with national/geopolitical security are also more affected by the security linkage than water issues and overall environmental issues. When comparing water issues with the overall

environmental issues, water issues that are understood in line with notions of human security are more heavily affected by the security linking than overall environmental issues. These results show that the conceptual understanding of environmental security has implications on the effects from linking security to environment.

To conclude, there are some main conclusions that can be drawn from the study and which together develop theories of environmental security and securitization. Firstly, the theoretical understanding of environmental security foremost goes in line with notions of traditional national/geopolitical security, whereas the practical work with environmental security mostly goes in line with notions of human security. Secondly, the effects from linking environmental issues and security have significant dissimilarities with the securitization theories of the Copenhagen School which means that securitized issues are treated in more hard security ways of a few power elites and increased involvement of the military. The results, on the other hand, rather indicate the other way around – the involvement of more actors from the civil society and small organizations. Thirdly, the way the concept of environmental security is understood has implications on the effects from linking security and environment.

These results and conclusions indicate that the major theories on both the conceptual understanding of environmental security and theories of securitization, in line with the Copenhagen School, are more nation centered and more focused on hard security, than what the practical work of environmental security is in Moldova. The practical work goes instead more in line with human security issues and this seems to be the way environmental issues are linked to security today. Possibly, the theories of environmental security and securitization need to be developed further in order to fit the contemporary understandings and practical work of the linkage between security and environment. That way, the actors involved in environmental organizations decision-making would probably not find the concept of environmental security as confusing and difficult to grasp as today – something that could also mean further potential for the environmental work and for the security of the people.

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7. Appendices

7.1 Interview guide

Below, an example of a guide for the interviews is presented. The questions were different for different actors, but the major themes were the same and the questions similar to each other.

Theme one – the understanding of environmental security

How do you work with environmental security?

In what ways do you look upon the link between security and environment?

Do you believe that the environment is seen as a national security issue in Moldova? In what ways?

Do you believe that the environment is seen as a human security/people's security issue in Moldova? In what ways?

Theme two - security linkage and its impacts on environmental work

Do you feel that environmental issues and security issues are linked together in Moldova?
- Explain in what way

How does this affect the environmental work and policies?

Do you think the security linkage affects the awareness of environmental issues?

The actors that are mainly responsible for environmental decision making in Moldova, do you think security linkage might affect who this is?

How do you think that economic resources that are allocated to environmental work are affected by security issues? (Ex - more resources? New and other areas like energy, military?)

Is your own work affected by the security linking? Has this changed since you began working with environmental issues in Moldova?

7.2 List of interviewees

Andrei Isac, Ministry of Environment and director POP's programme

Dimitru Drumea, Researcher institute of ecology University of Moldova

Ilya Trombitsky, Director Eco-TIRAS International Environmental Association of River Keepers

Kenneth Pickles, OSCE Organization for Security Cooperation in Europe, Mission to Moldova Political Military Mission Member

Mariana Grama, Ministry of defense, Head of ecological protection

Maruis Tsaranu, senior consultant Climate Change Office of the Ministry of Environment

Nadja Vetters, UNDP United Nations Development Programme, Programme Specialist Environment and Energy

Ruslan Melian, water expert Aqua Project Institute

Silvia Pana-Carp, UNDP United Nations Development Programme, Programme Associate

Vadim Ceban, Ministry of Economics, director of department of energy security and efficiency

Vasile Scorpan, Climate Change Office, manager Climate Change Office of the Ministry of Environment

Victor Cotruta, Director REC-Moldova, Regional Environment Center