

Environmental Security in Greece

*Perceptions from Industry, Government,
NGOs and the Public*



Charis (Harris) Gerosideris

DIGITAL ACTIVISM AND SOCIETY



Environmental Security in Greece

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Environmental Security in Greece: Perceptions from Industry, Government, NGOs and the Public

BY

CHARIS (HARRIS) GEROSIDERIS

The University of Sheffield, UK



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INVESTOR IN PEOPLE

To the memory of Eythimios Karystinos

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Abbreviations

ECB	European Central Bank
EEA	European Environment Agency
ENCOP	Environment and Conflicts Project
EU	European Union
EYATH	Thessaloniki Water Supply and Sewerage Company
EYDAP	Athens Water Supply and Sewerage Company
GECHS	Global Environmental Change and Human Security
GHGs	Greenhouse Gases
HRADF	Hellenic Republic Asset Development Fund (GR)
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IR	International Relations
MIT	Turkic National Intelligence Organization
NATO	North Atlantic Treaty Organization
ONA	Office of Net Assessment (US)
OPCW	Organisation for the Prohibition of Chemical Weapons
PKK	Kurdistan Workers' Party
PM	Prime Minister
PPC	Public Power Corporation
PRIO	International Peace Research Institute
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
WWI	First World War
YPEKA	Ministry of Environment, Energy and Climate Change (GR)

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About the Author

Charis (Harris) Gerosideris is Teaching Faculty of the University of Sheffield, and he was an Assistant Professor in Security Studies at the King Fahd Security College and University of New Haven in Saudi Arabia. He holds a PhD degree in International Relations and Politics from Keele University focused on Environmental Security and Energy Security in Greece. His research interests include environmental security and energy security, homeland and national security, intelligence, Q-methodology, social and digital movements (green movements) and digital methods.

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Chapter 1

Climate Change and Security

Philosophers have hitherto only interpreted the world in various ways; the point is to change it.

(Marx, 1845)

This book has a precise focus on the application of a unique and pioneering research methodology in security studies, namely the Q-methodology, related directly to the evaluation of perspectives of climate change and security in Greece. Accordingly, this chapter outlines the reasons for analysing climate change and security, the explanations for examining the case of Greece, the justifications for applying Q-methodology and, additionally, the research design which includes Q-methodology, discourse analysis and the relationship with climate change and security. The precise focus of this research is on the perspective of climate change and security, with the aim to locate and uncover the discourses and points of views contained therein. Climate change has attracted the interest of the academic community in recent years, especially in the security studies discipline. There are several open debates on the appropriateness of linking climate change with security and vice versa. Additionally, as the threat of climate change seems to have risen and as the present policies in operation are clearly not working, there is a pressing need to take appropriate action related to climate change. This requires the introduction of new and radical policies to, at the very least, assuage the issue to some extent. It is, therefore, imperative to analyse people's perspectives while aiming to reach an in-depth understanding of how they have been influenced by the security discipline's existing attitude to climate change as a security issue theory, in addition to perspectives and policies. Obviously, there is a pressing need to become aware of the scientific and public understanding of climate change and security by virtue of providing conceivable perspectives and potential solutions.

Climate Change as a Security Issue in the Case of Greece

This research has chosen to concentrate on climate change and security in the case of Greece. The reason that Greece has been selected as the case study of this research arises from the academic discussion of climate change and security, in which there is an extensive focus on the role of developed and developing countries needing to tackle the climate change threat. However, there is a limited or non-existent analysis of the vulnerable and middle rank developed countries,

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which have an unsustainable future due to the many interrelated issues that they are confronting. The case of an indigent and vulnerable country like Greece, which is a full member state of the European Union (EU) and a typical Mediterranean country with many interconnected problems (economic, political, societal, security, etc.) as a direct consequence of the current global economic and environmental crisis, will be used as a representative case of a category of countries which are not covered extensively in the academic discussion.

Moreover, there is a need to open the discussion of climate change and security in a vulnerable country, as other important matters monopolize the political and public interest and as climate change threat is not included in the Greek agenda. There is a need to determine the stakeholders' perceptions of whether they identify this issue; how they make sense of it; whether climate change is a threat to security; and if it is, what type of threat; what their understanding of security is; whose security is threatened; and how is climate change ranked against/among other threats, etc. The answers to these questions produce actual discourses which specify the gaps that security studies must target to avoid any complexities, misunderstandings and misguidance and also to inform the stakeholders of the most accurate ways of dealing with climate change. It is proposed that the stakeholders' perspectives in a vulnerable country like Greece will be examined and that the need to establish new roots, approaches and attitudes in the general discourse of climate change in the security discipline will be the major contribution from this book to the existing knowledge.

The establishment of the different viewpoints of Greek stakeholders, including the public, seems to be an unequivocal necessity in the discussion of climate change and security. This provides highly significant discourses and information based on the stakeholders' views which are otherwise missing or excluded from the academic discussion or literature of climate change and security. This establishment is appropriate for revealing any problem in the theoretical framework of security studies as well as being adequate for bridging the gap between the academic and stakeholders' discourses. Thus, the main research question which needs to be answered is:

What are the perceptions and opinions of the stakeholders (policymakers, energy-industry leaders, national non-governmental organizations [NGOs] and the public) on climate change and security in a country like Greece?

Research Design: Q-Methodology, Discourse Analysis and Climate Change and Security

In general, Q-methodology has the characteristics of being a unique and innovative methodological approach in social sciences. In terms of security studies, Q-methodology has not been applied even sporadically, no matter that the study of climate change and security is a major source of disagreement, in which Q could be used as a sophisticated analysis of human subjectivity. Accordingly, this project considers the application of Q-methodology in security studies to be necessary and a useful research mechanism for the entire field of security, as well

as in the study of examining and establishing the perspectives and opinions of climate change and security in Greece in particular.

This study, through the application of Q-methodology, answers the main research question, what are the perceptions and opinions of the stakeholders (policymakers, energy-industry leaders, national NGOs and the public) on climate change as security issue in a vulnerable country like Greece, as well as the questions posed in the literature review. Thus, Chapter 3 explains the steps of applying Q-methodology and the research design of this study to fulfil its aims.

The application of Q-methodology developed in six stages, which have been discussed and described in detail. Below, a brief overview of each methodological step provides an insight into Q-methodology and its application in this study.

Starting with the first step, this explains the identification of an issue or a particular topic that requires examination. The next step focuses on the identification of a relevant group of participants who have significant views and perceptions, or well-formed opinions related to the concourse. What follows is the selection of the participants and then the next step concentrates on the development and conduction of structured interviews through which the researcher will choose specific statements made by the participants and not by the researcher that reflects the concourse effectively. Finally, the Q-sort step is the stage in which participants are asked to sort out the statements to understand their attitudes and perceptions on the examined topic.

This chapter explains in more detail the exact steps of statistical analysis, based on what the study developed. Following this process, the different factors, attitudes or perceptions were extracted, interpreted and established.

The analysis also provides the essential details of the research design of this study and the practical steps that were followed to complete the Q-methodology's steps as outlined above. Hence, the researcher highlights the research difficulties and solutions that have been faced in all stages of studying the perceptions of climate change as a security issue in the case of Greece. Moreover, it explains and justifies the question selection of the structured interviews as well as the methodological roots which have been followed in the interviews too. Proceeding to the structured interviews, it clearly presents the participant selection and the unique method of selecting the statements, which is usually the researchers' own decision and not grounded in the participants' unbiased selection, as has been developed especially for this research study. Finally, the chapter extensively analyses this study's Q-sorts and how they have been conducted by the researcher and the exclusive information and results (factors) of the statistical analysis (factor analysis) for this study.

Previous Research of Discourse Analysis and Climate Change and Security

The United Nations (UN) Security Council debate, which attracted the interest of the academic community, presented countries and states' approaches to climate change as a security issue, has also been used as an analytical tool for

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examining the influence of the academic discussion on countries/states and policymakers. According to Detraz and Betsill (2009, pp. 304–320), the UN Security Council debate has, up to a point, been informed by the academic discourses on environmental security, but it does not provide a ‘discursive shift’ to environmental conflict discourses, which seems to be the major concern of the academic community. However, this content and discourse analysis is limited, as it only focuses on the environmental conflict and environmental security discourses, ignoring significant connections between climate change and security (health security, energy security, economic security, etc.), as these have been suggested by the UN Security Council (2007) regarding specific environmental matters. Therefore, this approach does not provide a clear understanding or a guide regarding the countries and states’ perceptions and responses to climate change as a security issue. In addition, while the UN Security Council (2007) has indicated the distinctiveness of the less developed countries/states, which in any climate change are the most effected and vulnerable or threatened countries, this analysis does not include or suggest any significant path when dealing with these cases. In this context, this analysis does not indicate whether a less developed or a cohesive country, such as Greece, is following the UN Security Council’s perceptions and whether it is adopting any relevant agreements and measures.

At the same time, there is a gap between the academic discourses and the countries/states’ discussion on climate change as a security issue. The academic interest has been focused on specific links between the environment and security (e.g., environmental security and environmental conflict), while on the other hand, the countries/states’ discussion connects climate change to various security concepts.

Therefore, it would be interesting to examine what the stakeholders’ (policymakers, energy industry leaders, NGOs, public) perceptions are of climate change as a security issue and to identify whether, how or up to which point these are influenced by the academic discourses, mitigating or bridging the gap between the two. Additionally, it is important to study the perceptions and responses of those who have a beneficial interest in a vulnerable and less developed country, as according to the UN Security Council (2007), climate change is having a significant impact on poor and less cohesive countries. Most of the relevant discourses of security studies do not provide or include any information on the stakeholders’ discourses/perceptions on climate change and security, especially for the cases of least or less developed countries.

In a similar way, the academic discourses do not mention practical and actual ways of dealing with climate change as a security issue, as these discourses do not include or take into consideration the problems or characteristics of each particular case and example. However, these characteristics should be added into the discussion on climate change and security, questioning the impact that these might have on the overall discussion on climate change and security. Once the discussion is about conflict and climate change, most of the relevant academic discourses pay attention only to environmental conflict, as they have a state-centric and militarized view of security.

These discourses do not highlight the necessity and value of ecological/environmental protection, but they do spread the problems of security in the climate change discussion. These discourses spread the theories, policies, viewpoints and perspectives that are dominating the discussion on climate change and security as well as the stakeholders' perceptions. Another major concern of the study was focused on exploring whether the perceptions of the stakeholders are influenced by the academic discourse and whether the academic discourses are describing accurate, real and actual issues and cases.

In this study, Q-methodology was used as a tool which will help in both the identification and understanding of the perceptions and discourses of stakeholders on the examined issue. Then, these perceptions were analysed about the academic discourses and perceptions, highlighting the links and association between the two.

Research Design: Q-Methodology, Discourse Analysis and Climate Change and Security

This research study applies Q-methodology or 'commonly (and incompletely) known as the Q-sorting technique' (McKeown & Thomas, 1988, p. 7), which in security studies is suggested as an alternative approach to researching discourses and perceptions. Q-methodology is simply a research method of extracting 'human subjectivity' (McKeown & Thomas, 1988, p. 9; Cross, 2005, p. 208) where, in this method, subjectivity refers to 'a person's communication of his or her point of view' and, therefore, is a 'self-reference subjectivity' as that presents 'individual remarks' (McKeown & Thomas, 1988, p. 12) and 'pure behaviour' (Brown, 1980, p. 46) when a person expresses his or her opinions/attitudes/perceptions, such as 'In my point of view...', 'I consider that...', etc. (for more examples, see Brown, 1980; McKeown & Thomas, 1988). Q-methodology was invented by William Stephenson in 1935, aiming to be used in the 'orderly examination of human subjectivity' in academic psychology (Brown, 1980, p. 5). However, even nowadays, 'Q' confers the characteristics of a 'new and innovative strategy for conducting behavioural research' (McKeown & Thomas, 1988, p. 11), and it has been applied in the fields of political, communication, behavioural and health science as well as in many sub-fields and the broader fields of social sciences (Brown, 1980, 1997, 2003; Cross, 2005).

According to McKeown and Thomas (1988, p. 12), this research methodology holds a promising 'more intelligible and rigorous' (McKeown & Thomas, 1988, p. 12) way of analysing human subjectivity 'in a structured and statistically interpretable form' (Barry & Proops, 2000, p. 23). Barry and Proops (2000, p. 20) point out that Q-methodology is used as a very successful attitudinal research for bridging the gap between quantitative and qualitative applications in social discourses, as it creates patterns of perspectives in certain groups of individuals and it utilizes the factor analysis as a statistical technique for allocating the range of these groups' discourses. Discourse in the lexicon of Q-methodology simply refers to a 'mode of communication' (Pierce, 2008, p. 280) or 'a way of seeing and talking about something'; this methodology has a remarkable way of collating

and correlating perspectives, excerpting the hidden discourses from the data which have been held by the participants (Barry & Proops, 2000, p. 21). Hence, 'conversations, commentary and discourses of everyday life' on a specific topic provide the basis for this particular research, which has been mentioned as the 'flow of communicability', which is known as the 'concourse' in the Q-sorting technique (Brown, 1993, p. 94).

In practice, Q-methodology uses six steps (Brown, 1980, pp. 5–6; McKeown & Thomas, 1988, pp. 12–13; Barry & Proops, 2000, p. 23; Danielson, Webler, & Tuler, 2010, p. 93), and these steps have been followed by this research study:

- (1) Identification of the areas of discussion and the certain groups of individuals, that the researcher wishes to focus on.
- (2) A sample of the relevant participants share their viewpoints on an important issue with the investigator who is able, through these interviews, to collect a series of statements raised by the participants and not by him or her.
- (3) The statements selected by the researcher for use in the Q-sorts (set of statements ranked by the participants).
- (4) Q-sort ranked by the participants on the scale of 'most agree with' to 'most disagree with'. Each Q-sort ranked by a participant is an individual Q-sort.
- (5) Using statistical analysis (factor analysis), these Q-sorts are used to extract a few 'typical Q-sorts' known as factors, which indicate the commonalities of several individual Q-sorts.
- (6) The researcher verbally interprets the factors in order to extract the social discourses out of the statistical analysis. Finally, these discourses represent a new and actual way of seeing/understanding the world.

Q-methodology has many reasons for being the recommended research method of human subjectivity for many studies and for this research as well (McKeown & Thomas, 1988, p. 11). Among the assets, McKeown and Thomas (1988, p. 11) explain that Q requires only a small number of participants, which is a corresponding reason for applying this research method to this proposed research topic. This is because it is interested in Greek stakeholders' perceptions and many stakeholders would not be accessible. In addition, this research method provides specific techniques available on a small research budget, such as a computerized statistics program and a basic knowledge of research statistics (McKeown & Thomas, 1988, p. 12). Moreover, it is a sophisticated methodology, and it has been used in many different fields for analysing subjectivity with a view to efficiently inform the policymakers and scientists of the perceptions/opinions/attitudes on real matters (Brown, 1997) which are also key issues in proposing this research method for this study. It seeks to bridge the gap between the academic community and the stakeholders. Finally, the Q-sorting technique has some advantages over qualitative methods because it uses factor analysis to establish the perspectives and interprets the results verbally (Danielson et al., 2010). For this study, this is an appropriate asset, as this method will support the identification and establishment of specific patterns in the perspective of climate change

and security in Greece in a unique way for the field of security studies, linking them with the security discipline.

In contrast, Q-methodology has specific limitations, as it does not provide patterns in the traits (gender, age, class, etc.) in relation to the perspectives/opinions/attitudes, as does the R methodology (survey analysis). It is not able to point out whether the individuals that hold the viewpoints are affected by age, gender or race etc., or not (Barry & Proops, 2000, pp. 22–23; Danielson et al., 2010, p. 93). However, this research study does not have to focus on establishing patterns in the traits; this is because it needs to find out what the perceptions are of climate change as a security issue while aiming to understand how the perceptions have been influenced by the academic discussion on climate change as a security issue, which could be examined only by the application of Q-methodology to security studies. Finally, this is the main reason why context analysis is not useful for this proposed research study; it is not able to identify new and unique perceptions of climate change as a security issue in the case of Greece and, thus, will not fruitfully add to the academic discussion about the results.

The study of attitudinal research (perspectives/opinions/responses to a specific matter of concern by a certain group of people) has intensely attracted the interest of the academic community, and there are many studies in different fields that have illustrated this with various applications of Q-methodology. Some of the most interesting and significant studies, which have illustrated the use of the Q-sorting technique, include research studies that studied the perspectives of gay rights (McKeown & Thomas, 1988), the attitudes of members of local exchange trading systems in the United Kingdom to citizenship, environmental concern and sustainability (Barry & Proops, 2000) and other studies which examined the stakeholders' perceptions on the clean-up of Waukegan Harbour in Illinois (Danielson et al., 2010), reconstructive democracy theory (Dryzek & Berejikian, 1993), the various responses to terrorism in a European context (Sowerby, 2008) and also the study of the stakeholders' views of the environment and the resource dimensions of sustainability (Curry, Barry, & McClenaghan, 2012), etc.

While Q-methodology has been used in various fields, including political science, natural and health science or even international relations, still there is no specific study on security studies in which the Q-sorting technique has been used as a research methodology in order to identify people's perceptions/opinions/attitudes in relation to a security issue. An indicative example can be found in Sowerby's (2008) study that concentrated on responses to terrorism in a European context. This study focused on an issue associated with the academic discussion and field of security studies; however, it was not handled as a security-related topic, but instead it was studied as an international relations issue. Security studies, as a sub-discipline of international relations and a field of social sciences in general, does not have defined academic borders. As a sub-field, it has a precise agenda which entails any threat to survival (Collins, 2007), and climate change is one of these threats. Consequently, this proposed research will explore people's perceptions of climate change and security in Greece through the application of Q-methodology for the first time in security studies, which stands as this research thesis's main contribution to the existing

knowledge. The aim is to suggest an intellectual, innovative and effectual methodology for studying perceptions and opinions in security studies, in which textual analysis or context analysis have been the dominant research methodologies to a very great extent.

Q-methodology, which supports both the exploration of hidden discourses and the establishment of new discourses and perceptions, is employed in this study as an appropriate research method for approaching climate change and security, and for discovering the stakeholders' perceptions in the case of Greece. The discussion on climate change and security usually does not consider and has excluded the perceptions of stakeholders, creating a gap on policymaking and public perception or opinion.

Therefore, Q is the proper method for approaching this topic as it has many advantages in relation to contacting and exposing the human subjectivity and answering the key questions raised by the researcher or as revealed by the topic. While the stakeholders' perceptions are often concealed and unknown, Q-methodology is used as the key tool for unveiling and establishing discourses/perceptions through a systematic analysis of perceptions.

These two significant characteristics of Q-methodology do not certify only the establishment of the actual discourses and the answers of the relevant research questions, but they also guarantee that this research will bridge the gap between the academic and stakeholders' perceptions. In addition, these characteristics of Q reassure that this research is unique and new as it discovers, from the very beginning, the particular area of discussion and the group of individuals involved in it as well as testifying on the occurred theoretical discourses. Even if the academic discussion is not uncommon and different on its own, the application of Q-methodology helps to make it exclusive and unique by having a highly significant contribution to the field of security.

In the case of establishing and revealing the stakeholders' perceptions of climate change and security in Greece, this research study is different and unique. It is very different because it is the first time that a security study has explored and revealed the discourses of the stakeholders in relation to environmental security and it opens up a discussion in a very vulnerable and less developed country, including the discourses/perceptions of a different group of countries in the field of security studies. This study also applied and tests the use of Q-methodology in security studies as an innovative research method for identifying and targeting the threats to security and as a systematic approach that supports the investigation/exploration of hidden perceptions. This process could potentially support the improvement of the policy relevance of security studies.

Q-methodology suggests six steps that need to be followed for the successful application of this method; therefore, the next section of this chapter concentrates on a detailed review and explanation of these six methodological steps through which human subjectivity can be investigated.

The first and most important step for applying Q method is to identify the issue/topic that needs to be studied. By the identification of an issue in a Q study does not only refer to the recognition of a specific topic, but, as noted by Barry and Proops (2000, p. 22), it also presupposes the acknowledgement of 'a range of