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"The Aral Sea Shrinking: Communicating and Framing Scientific Knowledge in Online newspapers"

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ABSTRACT

Rise of globalized institutions and globalized approaches could be observed in many spheres, including environmental domain. Countries are being unified today under the slogan to contribute to sustainable prosperity of our society under the considerations on the environment. In so doing, many local environmental issues are being presented as problems of one unified system, and therefore are framed as of global significance, requiring collective responsibility.

With the help of a discourse analytical approach, I aim to show how the image of the Aral Sea as a global issue is discursively created, and that specific storylines are created and get activated to transform the Aral Sea shrinkage from local environmental problem into global political issue. Basing upon three online newspapers, Uzbek, Russian and British, this thesis aims to show argumentative storylines characteristic for each of the sources. A particular interest of mine is to see how is knowledge attached to this environmental issue (re)constructed in the process of communication in these sources. Taking a co-productionist idiom is essential to understanding environmental governance, while framing theory allows to see how various elements of a discourse are differently created in three analyzed sources.

ZUSAMMENFASSUNG

Der Aufstieg globalisierter Institutionen und globalisierter Ansätze kann heutzutage in vielen Bereichen, so auch in Umweltangelegenheiten, beobachtet werden. Länder werden heute unter dem Motto vereinigt, einen Beitrag zum nachhaltigen Wohlstand unserer Gesellschaft unter dem Gesichtspunkt der Umwelt zu leisten. Dabei werden viele lokale Umweltthemen als Probleme eines einheitlichen Systems dargestellt, sind daher von globaler Bedeutung und erfordern kollektive Verantwortung.

Mit Hilfe eines diskursanalytischen Ansatzes möchte ich zeigen, wie das mediale Bild des Aralsees als globales Thema diskursiv erzeugt wird und dass spezifische Handlungsempfehlungen vorgebracht werden, um die Schrumpfung des Aralsees von einem lokalen Umweltproblem zum globalen, politischen Thema zu machen. Basierend auf drei Online-Zeitungen *Gazeta.uz* (Uzbekische), *Regnum.ru* (Russische) und *TheGuardian.com* (Britische) zielt diese Arbeit darauf ab, argumentative Handlungsstränge aufzuzeigen, die für die jeweiligen Quellen charakteristisch sind. Ein besonderer Fokus meiner Arbeit liegt darauf darzulegen, wie Wissen, das mit diesem Umweltthema verbunden ist, in diesen Zeitunge konzeptualisiert wird. Als theoretische Perspektiven dieser Arbeit dienen die Konzepte ‘Ko-produktion’, welches zentral ist für das Verständnis von umweltpolitischen Angelegenheiten, sowie ‘Framing’, welches hilft darüber zu reflektieren wie unterschiedliche diskursive Elemente unterschiedlich dargestellt werden in den besprochenen Quellen.

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Last but not the least, I dedicate this work to my children, Daler and Asal.

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CHAPTER 1

INTRODUCTION

1.1 Global Environmental Politics as an STS Inquiry

In recent years, environmentally related issues have become an important trend in public discourse. New terms, such as 'sustainability', 'climate change' and 'ecological crisis,' are being widely deployed in the media when talking about specific, local environmental issues. As early as the 1970s, many nations united to discuss a number of environmental issues, including acid rain, ozone depletion, climate change and desertification, and to put the 'environmental problematique' on the agenda. The environment had been presented as unified system, whose stability depends on an equilibrium between its different components, "[c]ountries discovered that they were not self-contained units, but contingent on actions taken by others" (Sach, 1992, p. 23). One may see how a new category of environmental problems, 'the global issues', emerged and how this lead to the rise of globalized institutions and globalized approaches to solving these problems. The level of public concern with green issues has been increasing since then, resulting in the birth of environmentalism as a social movement. Today, the media is encouraging that people have to be aware of 'the ecological crisis' our planet faces and it therefore calls for more responsible approaches to 'environmental problems'. Moreover, there is an explicit attempt to approach environmental problems on a global scale and to propel the environment into an issue of global significance (Jasanoff, 2004a). The emergence of so called 'ecological modernization' that "suggests that environmental problems can be solved in accordance with the workings of the main institutional arrangements of society" (Hajer, 1995) in this regard could be considered as a new language of environmental politics, the new dominant policy discourse in the environmental domain. Among the results of this process is the present hegemony of the idea of sustainable development in environmental discourse, and in international institutions, like the United Nations and the World Bank. These institutions have taken leading positions in developing a "plan for action for people, planet and prosperity" and managing "the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path"[1]. One may even argue that the focus is shifting from real actions to address the causes of the ecological problems to the strategy of sustaining development. This brings me to my research interest, which is how do specific environmental problems get defined in public discourse. The characteristic feature of above mentioned discourses about climate change and sustainable development is the articulation of scientific facts. Throughout the discourse, knowledge and dominant problem framing are aligned. Scientific knowledge supports the framing of the issue. This is a very intriguing process indeed. Science is presented as having the authority to define the environment.

[1] https://sustainabledevelopment.un.org/post2015/transformingourworld

Therefore, a particular interest of mine is to see how is knowledge attached to environmental issues (re)constructed in the process of communication. I am also interested to see how the discourse about certain environmental problems shifts the emphasis from local to global, and which story lines are being activated by the media in so doing.

1.2 The Research Question and the site

The current project uses a specific case study, the problem of the Aral Sea. The Aral Sea is an endorheic lake in Central Asia that has been dramatically shrinking in size. This project aims to adds more considerations to accounts of environmental matters in public discourse.

The Aral Sea is situated in Central Asia and stretches across Kazakhstan and Uzbekistan. Its drainage basin encompasses not only these two countries, but also parts of Tajikistan, Turkmenistan, Kyrgyzstan, Afghanistan and Iran. This inland sea used to be one of the four largest lakes in the world, with an area of 68,000 km, however, as media describes it, the last measurements of the sea level revealed that less than 10% of its 'original' size remained[2]. The causes of the destruction of the Aral Sea are linked to the inefficient use of water from its tributaries for the needs of irrigation (Micklin, 2014, p. 2). After the US space agency's Terra satellite released images in 2014 that showed that the eastern base of the sea is completely dried up, this case study became an internationally famous example of environmental mismanagement; the satellite pictures of the sea became a classical depiction of how humanity can destroy nature. Moreover, experts from the European Space Agency (ESA), based on their observations of the sea level from the Envisat satellite, claim that the Uzbek part of Aral Sea would completely disappear by 2020[3].

The visits of two UN chiefs, Ban Ki-moon and Antonio Guitteres in 2010 and 2017 respectively, added great weight to the representation of this case as of global significance. Ban Ki-moon said this is a sight that "underscores the need for collective action to save the planet's resources" and added "It was a vivid testament to what [...] happens [...] when we waste our common natural resources, when we neglect our environment, when we mismanage our environment"[4]. The Secretary noted that the storms blow dust and salt from the dried bottom of the sea "as far as the North Pole," pointing out that this disaster requires collective responsibility. The current UN chief, Antonio Guiterres, also flew over the shrinking Aral

[2] https://www.theguardian.com/world/2014/oct/01/satellite-images-show-aral-sea-basin-completely-dried

[3] https://www.esa.int/Our_Activities/Observing_the_Earth/Earth_from_Space_Declining_Aral_Sea

[4] https://news.un.org/en/story/2010/04/334402

Sea and noted that this is "probably the biggest ecological catastrophe of our time," one that demonstrated that "men can destroy the planet," and therefore, he called on everyone to make the Aral Sea a lesson and to mobilize the whole international community to implement the Paris Agreement on climate change and to make sure that such tragedies will not be repeated.[5] It is interesting that the lessons from the Aral Sea are used in the context of recent climate change campaigns in order to "avoid similar, looming disasters in other regions" (Blondel, 2013, p. v). This urgency has been noted in regular reports by the Intergovernmental Panel on Climate Change, as well.

In my Master Thesis, I will examine how online news media frame scientific knowledge with regard to the problems associated with the Aral Sea shrinkage and I will ask why the discourses about the 'disappearing' and later 'dead' sea shifted its emphasis from local to global. In doing so, I will focus on the process of placing the environment on the international policy agenda and framing it as an issue requiring collective responsibility and global approach. Analyzing the output of three different mainstream news websites, I aim to unpack the main framing devices as they appear in Uzbek, Russian and British media coverage to communicate this issue and search for the specific interpretive storylines used to frame what caused this 'disaster', who might and should be blamed, and what should be done about it. A particular focus of mine is on framing and translating scientific facts and evidence by journalists to craft reports about the Aral Sea shrinking.

Therefore, my research question is:

How is the Aral Sea problem communicated and framed in terms of usage of scientific facts in online media (on the example of three online newspapers)?

The following sub questions shall function as a foundation of the main research question:

1. What kind of scientific knowledge (experts' opinion, scientific publications, satellite images, etc.) is presented as legitimate to communicate the issue and talk about its scales?
2. Which framing devices are used to relocate the issue from local to the global and whether responsibility for the disaster is also relocated (from Soviet mistake to human responsibility in general)?
3. How social contexts (specifics of three different sources) influence what is said and how is said? What is the difference in argumentation in these sources?
4. Whether frames change over the time?

[5] https://news.un.org/en/story/2017/06/559232-catastrophe-aral-sea-shows-men-can-destroy-planet-warns-un-chief-guterres

As we shall see, this case is presented as a truly planetary problem and one that needs collective action. The media relocates this issue to another, larger scale and situates it into discourses about climate change and sustainable development, thus contributing to the development of global environmental policy making in that sense. To analyze this process, I draw on the methodology of discourse analysis based on critical readings from three different online newspapers, one Uzbek, one Russian, and one British. I am aiming to see whether the issue is framed differently in these different sources. This would mean not only examining what is being said, but rather focusing on when specifically, and in what context, it is being said. The comparative analysis of the discourses from these three different sources allows me to focus on the different contexts that shape what is said. This way, I am able to examine specific social conditions and focus on the construction of the problem in three news websites. Therefore, I seek to show that discourse analysis adds essential insights to our understanding of contemporary environmental politics.

1.3 Thesis structure

My Master's Thesis is organized in the following sections: in the second chapter, the state of the art, I examine: 1) how scholars within communication studies and Science Technology Society (STS) fields have approached media framing of scientific knowledge, in particular relating to environmental issues, 2) how STS scholars have written about environmental policy making or environmental governance, and 3) provide an overview of the major works dedicated to the problem of the Aral Sea shrinkage. In the third chapter, the Theories and Sensitizing Concepts, I explain why I decided co-production and framing theory to be proper lens for my research, through which I could develop my arguments. Then, in the fourth chapter, the Methods and Materials section, I talk about my experience dealing with Critical Discourse Analysis (CDA), explain the logic behind choosing three sources for analysis: local online newspaper – *Gazeta.uz*, Russian – *Regnum.ru* and British – *TheGuardian.com,* and characterize them. The next chapters of my Thesis, chapter 5, chapter 6 and chapter 7, present the data analysis and empirical results from these three sources respectively. Finally, in chapter 8, the conclusion, I compare the three different sources, and I describe how the case of the Aral Sea shrinkage is communicated and framed differently in diverse contexts. I also present particular discourse characteristics for these specific contexts. Additionally, I try to draw some parallels in how the Aral Sea problem is framed in these sources and examine how the discourses were developed over time. I also demonstrate how the framing of the issue reflects the characteristics of global environmental politics.

CHAPTER 2

STATE OF THE ART

To understand how local environmental issues, such as shrinking of the Aral Sea level, are being communicated and framed in online media, I will first give an overview to the relevant social science literature with regard to my research interest. In the course of the review of scholarly works, I identified three areas of research that not only have been used as a starting point for familiarizing with different aspects of my research interest, but also continually provided analytical support for developing my arguments. The first area, framing of science (**2.1**), was of a particular interest of mine, since the main focus of my work is on different ways of communicating scientific knowledge in online media. The second strand of literature relates to environmental politics (**2.2**) and, therefore, I discuss how STS scholars have reflected on the development in the field of environmental governance. This area is relevant to my research, because, as I show, the case of the Aral Sea is a good example of how local environmental issue are contributing to global environmental campaigns, such as sustainable development and climate change. Finally, I also found relevant to see how this case study is being scrutinized by local and foreign scholars (**2.3**). As such, this area of literature provided me an important background for understanding various aspects of the issue under the study, such as ecological, social, and economic situation around the Aral Sea problem.

2.1 Media framing of science

In this part of my thesis, I would like to lay out a strand of literature on media framing of scientific content. The medialization concept is studied in the light of competing concepts in (i) media and communication studies and (ii) in the sociology of science (Rödder, 2011, p. 836). For the sake of brevity, I will present an overview of the works that relate to the second sphere and are inspired by Peter Weingart, the German sociologist of science who introduced the term *medialization* in 1998 (Weingart, 1998, cited by Schäfer, 2009). In particularly, I shall elaborate on existing strands of literature in social sciences that deal with the medialization of scientific knowledge, primarily relating to environmental issues, such as climate change. This is my major interest here, because the problem of the Aral Sea shrinkage is traditionally communicated in public discourse as an environmental problem.

Science and media are increasingly intertwined today. According to Dietram A. Scheufele, current *medialization* of science implies, on the one hand, that the media "rely on public scholars or celebrity scientists for newsworthy portrayals. Scientists, on the other hand, increasingly take advantage of traditional and online media to increase the impact of their research beyond the finite network of

academic publishing and to advocate for more public investment in science" (Scheufele, 2014, 13585-13586). This underlines that the majority of people hear about scientific issues only from the media, and that their exposure to science via media has, in most cases, an indirect character.

The coupling between science and the media has been changing over time. Mike S. Schäfer emphasizes significant change in mass media coverage on science in the recent past, and a shift from public understanding of science to public engagement with science (Schäfer, 2009). Science communication is no longer seen as a way to increase acceptance amongst the public through translating science for the audience, but rather there is broad understanding of a need to discuss science with the general public (p. 476) and the media started to play a crucial role in this process. Weingart proposes the term medialization for this (Weingart, 1998, cited by Schäfer, 2009). His notion focuses on the investigation of communication processes between science and the mass media, e.g. the increasing coverage of science in media. Simone Rödder has developed this notion further (Rödder, 2009; Rödder, 2011) and has revealed the two main assumptions of this concept: "(i) an increasing media attention for scientific issues and, subsequently, (ii) an increasing orientation of science towards the mass media, i.e. that ''the interests and values of their publics communicated by the media become an important reference for science'' (Rödder, 2011, p. 835).

Thus, there is a broad consensus that the relationship between science and society, and between science and the media, respectively, is changing; but the nature of these changes is controversial (Röbber, 2011, p. 837). Thus, a changing facet of the science-media relationship is at the center of several other scholarly works (Bucchi 2003, Bucchi 2016), where characteristic dimensions of their interaction were identified and described. In his work, Massimiano Bucchi demonstrates what a claimed shift from deficit to dialogue model looks like: this is, basically, a transition from 'public awareness of science' to 'citizen engagement', from 'communication' to 'dialogue' and, finally, from 'science and society' to 'science in society' (Bucchi, 2016). In his earlier work (2003), having conducted a content analysis of science coverage in the leading Italian newspaper over the period of fifty years, he suggests a hypothesis about the presence of marked dualism between two journalistic genres. He calls them respectively: *science-popularization* and *science-as-news.* The former genre depicts science "as straightforward, consensual, and as bringing improvements into peoples' lives", while the latter "pays closer attention to controversy and to the harmful consequences of the scientific investigation" (Bucchi, 2003, p. 21). He concludes with a final comment about the expansion of science coverage in recent years, and, in particular, the expanding role of biomedical issues coverage in Italian newspapers (pp. 21-22).

Among the other works that discuss the medialization of science, is an article by Maximilian Fochler and Ulrike Felt, where they inquire about what exactly science stories do (Fochler & Felt, 2012). Unlike Weingartner's medialization, their use of the term contains a much wider spectrum of various forms of

public communication and representation of science. For them, medialization is, on the one hand, "an ever-increasing coverage of science in the media, as well as a multiplication of contexts in which scientists themselves present and re-present their work to different audiences", and, on the other hand, "it also means that specific forms, formats and guiding values typical of classical media communication now become central in core areas of scientific practice, such as in funding processes, assessment exercises or self-presentations" (Felt & Fochler, 2012, p. 4). The conclusion is that the medialization also plays a crucial role in how researchers contextualize and value their own work, and what kinds of promises will frame and, possibly, guide it (p. 11).

Schäfer claims (2009) that science issues from different epistemic cultures can be expected to be "medialized" to different extents. He analyzes mass media coverage on stem cell research, human genome research, and neutrino research to underline this claim. Although it is beyond of the scope of my primary focus to lay out a detailed explanation of works dedicated to science coverage in the media, it is worthwhile to mention that the three dimensions of mass media coverage of science, or "medialization," have been widely agreed on in the respective literature: "1. *extensiveness:* science is said to be increasingly represented in the mass media; 2. *pluralization:* media coverage on science is said to be increasingly diverse in terms of actors and content; 3. *controversy:* media coverage on science is seen as increasingly controversial" (Schäfer, 2009, p. 478).

So, if the primary interest of the media when reporting on science is to capture the attention of targeted publics, then there should be specific ways to achieve this. Various frames are actively utilized by media to translate scientific knowledge for the various publics. Thus, frames can be understood "as ideal-type arguments" that are deliberately used to interpret certain topics (Schäfer, p. 485). The majority of works on framing fall into two main categories: studies that consider framing as a concept (Gofman, 1974) and studies that focus on the application of framing in media and its effects (Gamson&Modigliani, 1989, Pan&Kosicki, 1993, Scheufele, 1999). I present an overview of framing theory in my Theories and Sensitizing Concepts part. Here, I would like to reflect on the studies that talk about framing in media.

Matthew Nisbet classifies framing as establishing one context for perception versus another: "an attempt to remain true to what is conventionally known about an issue, as a communication necessity, framing can be used to pare down information, giving greater weight to certain considerations and elements over others" (Nisbet, 2009a, p. 16). By making certain aspects more applicable or relevant to an issue than the others, a frame needs only be evoked only a few times in order to be persuasive (Nisbet&Feldman, 2011). Scheufele characterizes framing as a tool for conveying meaning and helping the recipient make sense of the message: "[f]raming is therefore inextricably linked to any effective form of human communication" (Scheufele, 2014, 13589). Frames are much more than leaving out details and providing a particular context. They are not only about simplifying complex issues and giving greater weight to particular arguments; when speakers frame their messages, they use scientific knowledge to

support certain arguments. Therefore, frames shape public opinion on the one hand, and are shaped by society on the other.

The importance of framing scientific knowledge has been emphasized by communication researchers (Nisbet, 2009c, Nisbet&Scheufele, 2009). With regard to communication about science- related policy issues, Nisbet has argued "scientists and journalists can adopt one of two roles, either serving as honest brokers or as issue advocates. In either role, the use of framing is unavoidable..." (Nisbet, 2009c, p.69). Whether a journalist is playing any of these roles, the same ethical imperative of honesty and accuracy applies: "[j]ournalists should not engage in the false balancing of first premise claims on issues such as climate change where there is clear expert agreement in the area. Nor should they exaggerate the implications of expert consensus as a way to dramatize a complex topic such as climate change" (Ibid, p. 65).

One recent work (Brand and Brunnengraber, 2012) offer more explanations for why frames matter when speaking about environmentally related issues. They point out that the framing of such a risk- related issue can also influence broader public attention via shaping the "scope of participation" (Nisbet & Newman, 2015). Nisbet and Scheufele raise a broader question what is next for science communication (Nisbet and Scheufele, 2009) and in doing so they discuss the importance of framing science messages "in ways that activate participation from wider, more diverse and otherwise inattentive publics, while discovering new media platforms for reaching these nontraditional audiences" (Nisbet and Scheufele, 2009, p. 1770). Framing such issues, like climate change, in terms of public health, such as the increase of infectious diseases, asthma, and allergies, may make this topic particularly relevant to the people. This is due to connection the issue to health problem that are already familiar to them and received as important (Nisbet 2009a, Nisbet 2009b). Therefore, messages about climate change, for instance, are likely to influence fear, hope, and anger differently (Feldman & Hart, 2015).

Nisbet and Scheufele consider framing effects as are a distinct cognitive and social process shaping individual judgements and decisions (Nisbet and Scheufele, 2009). They emphasize that framing should not be understood as a way for 'selling' the public on science, but rather call to use it as a mean for constructively shifting the conversation about an issue: "[f]raming should be used to design communication contexts that promote dialogues, learnings, and social connection and that allow citizens to recognize points of agreement while also understand the roots of dissent" (p. 1771). It might and should be used with the purpose of promoting "dialogues, learnings and social connection and that allow citizens to recognize points of agreement while also understand the roots of dissent" (Nisbet and Scheufele, 2009, p. 1771). In this regard, a "social constructivist" approach to media framing lead by sociologist William Gampson (1992) is also a relevant point to examine. According to this line of research, in order to make sense of an issue, citizens use as the resource the frames of media coverage, but they integrate these packages with the mental frames, i.e. personal experience or discussions with

others. A so called 'frame contest' takes place and one interpretative package might gain influence because it resonates with cultural background of the reader or series of events (Gamson, 1992, Nisbet, 2009b). The typology of cultural schema identified in a study of nuclear energy by Gamson and Modigliani (1989), includes: social progress, economic development/competitiveness, morality/ethics, scientific/ technical uncertainty, Pandora's box/Frankenstein's monster/runaway science, public accountability/ governance, middle way/alternative paths, conflict/strategy (Gampson & Modigliani, 1989; Nisbet & Scheufele, 2009). Thus, frames set the context for perception and discussion through selectively activating different existent cognitive schema that people have. If a frame draws connections and links to something that is not relevant to the topic that the public understands, then it is most likely that this kind of messages will be be ignored or conceived as not significant (Nisbet, 2009a).

Brand and Brannengraber (2012), with their focus on conflicting knowledge construction on climate change, have developed a more nuanced coding scheme. With the aim of uncovering discursive constructions, the authors analyzed two mainstream and two alternative newspapers within the United States and Germany. They come up with an interesting result: mainstream media tend to depict climate change as environmental problem, without references to the economic dimensions of the process, while the possible solutions are framed through marked-based instruments. Regarding to the coverage in alternative media Brand and Brannengraber noted that it stresses inherent relationship between the capitalist structuring of economies and climate change and hints toward necessary transformation of structures of economic activity in order to solve the problem of the climate change (pp. 15-16).

An important conclusion of the majority of works that have been laid out above, is an ethical aspect and outcome of the process of communication and framing scientific news. Nisbet and Scheufele, for instance argue if scientists do not shift "from frames that traditionally work at science beat to new frames that fit at other media outlets and with wider audiences, then they risk ceding their important role as communicators" (Nisbet & Scheufele, 2009, p. 1771). Framing can be used ethically by prioritizing dialogue and bottom-up citizen expressions, by avoiding false spin or hype and remaining true to what is known about a scientific topic (Nisbet, 2009c).

The study of this pieces of literature brought me to the conclusion that I have to scrutiny my topic from the perspective of what and how is being presented as known about this 'disaster' and what remains silent. With this consideration in mind, I move on the second area of research related to my research interest, environmental politics, and continue my discussion of the process of bringing science related issues to the fore in the public discourse. The focus, of the next sub-chapter though is on the process of placing environment on the international arena and making it an issue for all. In doing so, I specifically focus on how STS scholars scrutiny this social phenomenon underlining the role of social construction of environmental problems in this process (Hajer, 1995).

2.2 Environmental Politics

Many STS scholars underlined, that over the last 40 years, we may observe an interesting evolution in the field of environmental policy making, or environmental constitution making, as Jasanoff puts it (Jasanoff, 2001, 2004a). The major characteristics of this period is a so called willingness to seek global solutions to local environmental problems. As a starting point of such an approach, many scholars take the year 1972, when United Nations held the biggest ever conference in Stockholm initiated by Sweden, which was worried about several environmental issues, like acid rains, pollution and level of pesticides and metal in fish and birds. Remarkably, it is during that conference that the environment was, for the first time, placed on the international policy agenda. Since then, a new way of conceiving environmental problems has been developed and environmental management became a major task for politicians and policy-makers. Although it is not my primary interest to elaborate on the historical roots of ecological modernization , that "suggests that environmental problems can be solved in accordance with the workings of the main institutional arrangements of society" (Hajer, 1995) or to show how it happened that the environment suddenly became a political topic in many societies. In this part of my thesis, I would like to reflect on several works on environmental politics that have impacted my approach to dealing with the topic of the Aral Sea in public discourse, and enhanced my understanding of global environmental politics.

In 1992 Wolfgang Sachs edited and co-authored the volume *The Development Dictionary: A Guide to Knowledge.* This is a seven-chapter excavation of the age when questions of development are presented as global problem, requiring global solutions. Among other spheres he also talks about environment (Sach, 1992, pp. 24-36) and shows in details how and why the marriage between the craving for development and concern for environment was announced. In particularly, he talks about introducing 'the global ecosystem approach' that teaches the perception of global space "as a system whose stability rests on the equilibrium of its components, like population, technology, resources (including food) and environment" (p. 25). Sach pays a great deal of attention to the role of Brundtland Report, which is known as *Our Common Future*, a publication revealed in 1987 by World Commission on Environment and Development that introduced the concept of sustainable development. Remarkably, this report incorporated "concern for the environment into the concept of development by erecting 'sustainable development' as the conceptual roof for both violating and healing the environment" (p. 28). Thus, Sach explains how government discovers "a new conflict-ridden area in need of political governance and regulation" (p. 32), that is not the peace among people but rather "the orderly relations between man and nature" (Ibid) and describes the mechanisms through which the state installed a system that watches over, regulates and manages the environment since then.

A few years later, Maarten Hajer published a book *The Politics of Environmental Discourse. Ecological Modernization and Policy Process* (1995). The thesis of that book is that "whether or not environmental

problems appear as anomalies to the existing institutional arrangements depends first of all on the way in which these problems are framed and defined. That is what the environmental conflict is about" (Hajer, p. 4). The author argues "the environmental conflict has changed, it has become discursive. It no longer focuses on the question of whether there is an environmental crisis, it is essentially about its interpretation" (p. 14). So the book is about this new environmental conflict and the author's calls to see it as a constant and continues struggle over the definition and the meaning of the environmental conflict itself. Therefore, his major interest is political implications of ecological modernization, the process he defines as "the discourse that recognizes the structural character of the environmental problematique but none the less assumes that existing political, economic, and social institutions can internalize the care for the environment" (p. 25). Using several case-studies that focus on regulations in the UK and the Netherlands, he aims to show the emergence and development of ecological modernization as the new policy discourse in the environmental domain. In doing so, he uses social constructivism and discourse analysis to provide essential insights to the understanding of environmental politics. The argument is that "the developments in environmental politics depend critically on the social construction of environmental problems", and in order to analyze the social dynamics of problem construction he introduced "the concept of discourse- coalition that analyses the formations that shape up around certain social constructs" (p.264). So the main theoretical thesis of his book is that "one can observe how the institutional practices in the environmental domain work according to identifiable policy- discourses that through their story-lines provide the signpost for action within these institutional practices" (Ibid). In his last part, Hajer presents a discussion of how institutional reflexivity could be enhanced. He proposes several possible institutional innovations that would enhance our reflexivity while dealing with the ecological dilemma and concludes with two suggestions: the introduction of a 'societal inquiry' and the system of 'discursive law'. It is also argued that a strong public domain should be an appropriate response to any environmental problematique and the author proposes several ways to achieve that.

Another work that adds more thoughts to the interconnectedness of global environmental science and international governance is edited by Clark Miller and Paul Edwards. It is a collection of essays entitled *Changing the Atmosphere. Expert Knowledge and Environmental Governance* (2001). These essays present "detailed, empirically grounded case studies of settings in which people make and interpret knowledge about the earth's climate and link that knowledge to political decisions" (p. 15). The main focus of the collection is climate science and its uptake into public policy. Among other works, there is an article by Sheila Jasanoff (Jasanoff, 2001, pp. 309-337), where she takes an Apollo image of the Planet Earth taken in 1966 and studies its reception in American and, through US mediation, international environmental politics. She shows how this image has come to inhabit our political consciousness as 'an icon of global environmentalism'. One has to note that Jasanoff is undoubtedly among those who have contributed significantly to this field. She has written and co-edited several works about contemporary environmental policy making it clear that she figures as a part of a larger

process of global constitution making herself (Jasanoff, 2004a). One of such works is a collection of essays *Earthly Politics: Local and Global in Environmental Governance* edited by Sheila Jasanoff & Marybeth Martello (2004) that examines "how the dynamics of localization and globalization relate to different ways of knowing and evaluating environmental phenomena, as well as to the norms, beliefs, practices, and artifacts through which environmental knowledge get power in political domains" (p. 4). In the "*Heaven and Earth: The Politics of Environmental Images"* (Jasanoff, 2004a), she connects the origins of global perspective on the environment with US manned space program and focuses on visual repertoire of environmentalism. Using the example of United States and India she shows that this vision of the biosphere is accepted differently throughout the world.

In the line with the above-mentioned works that discuss the role of global institutions in the current ecological modernization, Michael Goldman discusses the World Bank with its transnational policy networks in development and sustaining 'water for all' policy across the world (2007). He explains how this new global water policy was accepted by countries so quickly and brought to profound institutional effects. Goldman suggests a special term for this World Bank's phenomenon development regime in the field of water management, he calls it 'green neoliberalism'.

Finally, I would like to mention a work by Esther Turnhout, Art Dewulf and Mike Hulme (2016), that undoubtedly contributes to the field of global environmental politics. The authors go further, and ask a legitimate question: *What does policy-relevant global environmental knowledge do?* They use the examples of the Intergovernmental Panel on Climate Change, the Intergovernmental Platform on Biodiversity and Ecosystem Services and the Millennium Assessment in order to show how policy relevant knowledge represents the environment and therefore talk about the performativity of knowledge in these contexts.

In the next sub-chapter of my Thesis, I will lay out the main works that have been written on the topic of the Aral Sea. As such these works cover various aspects of the issue, ecological issues, health problems, possible measures to mitigate the consequences of this ecological problem, etc.

2.3 Aral Sea Studies

"If everyone who came to study the Aral Sea had brought a bucket of water, the sea would be full by now" (Rudenko, Lamers, 2010, p. 4).

This is how local people, with a certain level of skepticism, talk about scholarly interest as well as local and foreign initiatives to solve problems associated with the destruction of the Aral Sea. A wide range of academic and popular press accounts documented almost all stages of this disaster: the death, decline and nearly disappearance of this water body (Micklin, 1988, Glantz, 1999, Micklin, 2010). The story about 'disappearing sea' caused by "irresponsible human intervention in a fragile natural environment" (UNESCO's Water related Vision for the Aral Sea Basin for the year 2025, 2000, p. 6) has attracted

substantial regional and global attention over the past decades. This case has been in the focus of historians, hydrologists, ecologists, zoologists, engineers, also sociologists and anthropologists but there is a big uncertainty if these endeavors are of any benefit, since the majority of scholarly works have been mainly short term in nature (Rudenko, Lamers, 2010, p. 4).

The main frame used by scientists in scholarly literature is the one that emphasizes wrong policy of former authorities and recall to their responsibility. The main explanation for such a large scale decline is a human activity that took place in Soviet era, when Central Asian states were constituent republics of the Soviet Union (USSR). By establishing a special agricultural program, the Soviet government deliberately deprived the Aral Sea of its two main sources of water, the Amu Darya and the Syr Darya to provide irrigation for cotton production in Uzbekistan and Turkmenistan, starving the sea. It has been diminishing ever since, with the sea level dropping to 16 meters between 1960 and 1996 (discourse fragment # 5, p. 1). The exposure of the bottom of the sea has released salts and pesticides into the atmosphere, poisoning both the environment and people (discourse fragment # 6, p. 1). Degradation of ecosystems, salinization, desertification, climate change, heavy pollution, destroying once the flourishing and famous fishing industry in the region, large scale unemployment, dramatic increase in human illnesses – this is not a lengthy but not final list of ecological and social problems population faced by this region. Pictures of camels, deserts instead of sea, ships in dry harbor and salty soil "have entered the consciousness of lay citizens around the world, showing how human activities have slowly but steadily destroyed what was once a rich and productive region" (Micklin, Aladin, Plotnikov, 2014, p. v). In the early 1990s, the heads of the Central Asian states initiated the establishment of the International Fund for Saving the Aral Sea (IFAS) for the purpose of improving social, economic, and ecological situation in the basis of the Aral Sea. The major responsibility of IFAS is to coordinate the efforts of all Central Asian states for financing rehabilitation efforts and to facilitate assistance from international donors. The leadership of IFAS rotates every 2 years among Central Asian states. International donors such as the World Bank, the Asian Development Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), The United States Agency for International Development (USAID), the European Union, governments of the USA, Canada, the Netherlands, Switzerland and many other countries have implemented a handful of projects to assist research and began providing water resource management assistance in the basin of the sea. The largest donors to the Aral Sea region are World Bank and United Nations Organization, and as the result their evaluation, expertise and knowledge set the tone for future activities in this field. In early 1990s IFAS together with World Bank started an Aral Sea Assistance Program (ASBP 1) that aimed (1) stabilizing the environment in the Aral Sea basin; (2) restoring the disaster zone around the Sea; (3) improving management of transboundary waters in the basin; (4) developing the capacity of the regional

organizations to plan and implement the Program and costed more than 400 million USD[6]. In 1996, the Word Bank did a major review to evaluate the strengths and weaknesses of the preparatory phase of the ASBP 1 and based on that they developed, a new effort known as the Water and Environmental Management Project to be funded jointly with the Global Environmental Facility (GEF) (Micklin, 2014). So, from 2003 to 2010, the IFAS, with the help of international donors, conducted the next phase of the program (ASBP 2) titled "Program of Specific Actions for Improving the Ecological and Social Situation in the Aral Sea Basin". This program set up "projects covering a wide range of environmental, socioeconomic, water management, and institutional problems for the period 2003-2010"[7]. In particularly, it aimed to improve ecosystems and lands usable for pasture in the deltas of the Amu Darya and Syr Darya, to prevent desertification, and to develop measures for preventing salt and dust transfer from the dried bottom of the sea. The total contribution from the IFAS country members to the implementation of activities was over 1 billion USD (Executive Committee of IFAS, 2011, p. 18). The third phase of the Program (ASBP 3) titled "From the Glaciers to the Deltas: Serving the People of Central Asia," run from 2012 to 2015. The main slogan of the program was "building cooperation for the future", and it was presented as "a vision for the future, a blue print for development, peace and prosperity in the region" [8]. ASBP 3 included projects relating to (1) integrated water resources management; (2) environmental protection; (3) socio-economic development, and (4) improving the institutional and legal instruments. In spite of such a large-scale campaign, local water disputes in the region are still unresolved, no institutions to improve water management in the region could come up with any promising results so far. Furthermore, actions for promoting sustainable irrigated agriculture through participatory irrigation management are also lacking any successful results (World Bank report, 2014).

In parallel with a large-scale funding of the Aral Sea projects, a great number of scholarly works have been published by local and foreign scholars. This strand of literature, as a rule, emphasizes anthropogenic factors, concerns with ecological aspect of the disaster (Chub, 2002) and health problems among the population, forecasts future scenarios, and considers possible measures to be undertaken to mitigate the consequences and to partly restore/save the sea (Aladin, Plotnikov, Potts, 1995).

Among the Russian scholars who were the first to claim about the ecological consequences of the Soviet irrigation projects was Nikolay Aladin, a zoologist. In 1978 he visited the Aral Sea for the first time and

[6] http://ec-ifas.waterunites-ca.org

[7] http://ec-ifas.waterunites-ca.org

[8] http://ec-ifas.waterunites-ca.org

discovered an increase of salt in the water and changes in the local fauna. Later, due to his scientific explorations and efforts, significant measures have been undertaken to save the northern part of the sea (Aladin, et al. 1995). Many of his works are concerned with the rehabilitation of the biodiversity of the sea (Aladin, et al. 2004). Since 2002, Central Asian states systematically cooperated with the Russian Academy of Sciences (RAN) and implemented a number of joint projects. The Institute of Oceanology of RAS conducts filed trips to the sea and publishes annually the results of their study. The scientists claim that scientific exploration and observation of the Aral Sea is of vital importance and should not be interrupted at any stage.

One of the attempts to form a structured summary of the Aral Sea problem and possible solutions is the book *The Aral Sea. The Devastation and Partial Rehabilitation of a Great Lake* (2014) edited by three main specialists, Aladin Nikolay (Russia), Micklin Philip (USA) and Plotnikov Igor (Russia). They have spent decades of their professional lives measuring and understanding the evolution of the Aral Sea and currently collaborate on this subject. This study brings together a wealth of experts from different countries, spanning many fields, like fisheries, geology, zoology, biodiversity and environmental management.

In 1990s media raised a question of bringing water to the Aral Sea from outside Central Asia, specifically from Siberian rivers (Russia), and this idea has been presented as one possible solution to improve the situation in the region. This grandiose scheme still continues to be discussed and promoted in Central Asian water management and governmental circles. However, another opinion among environmentalists and scientists is that a new diversion project would have disastrous effects on the ecological balance in Siberia and Central Asia (Temirov, 2003). Thus, many scientists insist it is more important for the region to improve regional water management rather than discuss unrealistic projects on importing water from Siberian rivers (Kamalov 2003).

But there is another framing of the issue in scholarly literature, which as a rule does not get a voice in public discourse. It emphasizes the impact of the natural cyclic recurrence of the water level that depends on the flow of the Amu Darya river. The idea is that historically the sea experienced cycles when it disappeared and returned. The latest archeological excavation undertaken on the territory of the 'dead' sea led to the discovery of medieval settlements and mausoleum Kerderi dated back to the 12- 13 centuries (Krivinogov, 2014). Scholars defined this phenomena Aral-Azar civilization. Graves, ancient tools and jewelry that had been found on the bottom of the Aral Sea brought historians and archeologists to the conclusion that it is not the first time that the water level decreased, so people had been lived on these territories long before. Moreover, the information about 'going and coming back of sea water' is mentioned in some historical sources of the region. Philip Micklin, Professor of geography from Michigan University claimed in 2014 that "[d]ating of relict shore terraces, of marine fossils and

deposits of various salts precipitating from the sea contained in sediment cores from the sea bottom, and of archaeological sites, along with historical records point to repeated major recessions and transgressions of the sea" (Micklin, 2014).

This overview of existing literature on the issue under study points out that no STS perspective that consider nature-science-technology-society relations in depth has been used so far for this case. A couple of recent works (White, 2013a, White, 2013b) seem to be an attempt to study the issue from another perspective than historically dominated tradition in this direction of research. An American geographer, Kristopher White, uses a single image on the former seabed of the Northern Aral Sea in 2011 as a vehicle through which the geographical framing had been guided (White, 2013a). Three interpretations of the image related to three broad foci of the discipline of geography facilitated this framing. In another study, White considers nature-society linkages operating currently within the spheres of regional economy, human health and political considerations, and comes to the conclusion that particular urgent need to reform a major anthropogenic driver of the Aral Sea disaster – agricultural production (cotton) and the unsustainable irrigation practices anchoring this economic sector (White, 2013b).

From my point of view, it is crucial to understand that it is this framing that plays a crucial role in attracting public awareness. With this consideration in mind, in my project I am going to determine particular framing devises used to set the context for perceptions while speaking about the Aral Sea shrinking. I would like to make it explicit that the aim of my work is not to question a dominant framing of the issue about human impact, nor do I question the scales of this environmental disaster. With the help of a discourse analytical approach, I aim to show how the image of the Aral Sea as a global issue is discursively created, and that specific storylines are created and get activated to transform the Aral Sea shrinkage from local environmental problem into global political issue.

CHAPTER 3

THEORIES AND SENCITIZING CONCEPTS

3.1 Co-production

Finding a theory that fits with the research interest might be very challenging. But with the help of theories and sensitizing concepts we may significantly enrich our research. In what follows I will explain why I have decided to use Jasanoff's idea of co-production and framing theory as the lens through which I think I could open my eyes to the elements that would have stayed hidden otherwise.

The main idea of Sheila Jasanoff's co-production is that "in broad areas of both present and past human activity, we gain explanatory power by thinking of natural and social orders as being produced together" (Jasanoff, 2004b, p.2). More specifically, she explains co-production as follows: "co-production is shorthand for the proposition that the ways in which we know and represent the world (both nature and society) are inseparable from ways in which we choose to live in it. Knowledge and its material embodiments are at once products of social work and constitutive of forms of social life; society cannot function without knowledge any more than knowledge can exist without appropriate social supports. Scientific knowledge, in particular, is not a transcendent mirror of reality. It both embeds and is embedded in social practices, identities, norms, conventions, discourses, instruments and institutions – in short, in all the building blocks of what we term the social. The same can be said even more forcefully of technology" (Ibid, p. 2-3).

As I have shortly mentioned above, the case of the Aral Sea is a good example of how environmental knowledge receives power in the political domain. The process of environmental discourse's creation reflects specific values and preferences and brings political effects at the end. As a result, the way the causes of the Aral Sea shrinking are represented and are seen as natural, and the way they are managed as rational. To support my argument about the politics of environmental knowledge relating to the Aral Sea problem, I suggest putting on a co-productionalist lens. Specifically, in my case, the natural order is the scientific knowledge created about the Aral Sea devastation, while the social order is presented via practices, identities, norms, discourses and social institutions relating to it. By defining them in this way, I certainly do not aim to separate them; the main idea about co-production is about avoiding natural and social determinism and emphasizing a constant intertwining of nature and society. The intertwining of the social and the natural orders could be trapped throughout the development of discourses about of the Aral Sea devastation. Large scale research of the sea level and the first voices about the 'wrong' agricultural policy that caused the ecological disaster appeared in a more or less systematic way at the end of the 1980s through the beginning of the 1990s. It was a time when a need of finding new instructive evidences of the mistakes and atrocities of the Soviet regime was crucial for local authorities, who

became independent after the collapse of the USSR in 1991. This frame of the Aral Sea problem as caused by inefficient management of water resources by Soviet government was profitably situated into scientific facts and public discourses. With the passage of time, a slightly different framing that emphasized 'fragility' of the environment and the need of sustainable approach has been developed. The knowledge about this case study is actively used to frame contemporary discourses about the climate change and sustainable development, and to prevent similar mistakes in mismanagement of natural resources. Thus, we may see from these examples how the natural order, which in our case is the scientific knowledge about the Aral Sea, directly influences the social order, which is the people's way of recognizing this problem and their experience of dealing with it. At the same time, social order directly influences natural one. Scientific knowledge about the causes of this 'disaster' produces significant political effects and become a piece and parcel of contemporary environmental politics on the one hand and reflects specific interests of transnational networks on the other. This means that the social domain greatly impacts the development of the natural one. In this sense, we may speak of a twofold process: knowledge about the Aral Sea "embeds and is embedded in social practices, identities, norms, conventions, discourses, instruments and institutions – in short, in all the building blocks of what we term the *social*" (Jasanoff, 2004b, pp.2-3). To put it simply: what we know about causes of this disaster is directly linked to our sense of what we can do about it.

Jasanoff explains, that co-production "occurs along certain well documented pathways" and one of these ordering instruments is "making discourses" (Jasanoff 2004c, pp. 38-41). As she states, "[s]olving problems of order frequently takes the form of producing new languages or modifying old ones so as to find words for novel phenomena, give accounts of experiments, persuade skeptical audiences, link knowledges to practice or action, provide reassurances to various publics, and so forth" and "such strategies often involve the appropriation of existing discourses… and their selective retailoring to suit new needs. In the process, scientific language often takes on board the tacit models of nature, society, culture or humanity that are current at any time within a given social order" (pp. 40-41).

One of Jasanof's research site, where she locates the idiom of co-production is environmental domain. As she notes, taking a co-productionist idiom is essential to understanding the processes of environmental governance taking place today. As she shows, many international environmental organizations "had to develop persuasive ways of speaking about the problems over which they exercised jurisdiction" (p. 41).

Therefore, I found Jasanoff's idea about co-production to be a helpful tool to see things, mainly that the natural order - a scientific knowledge about causes of water shrinking and the social order - practices, identities, norms, discourses and social institutions related to it, are two co-produced entities that can't be treated separately. As Jasanoff and Martello (2014) put it, "how we understand and represent

environmental problems is inescapably linked to the ways in which we choose to ameliorate or solve them" (p.5).

3.2 Framing Theory

Framing theory was first put forward by Erving Goffman in 1974 in his work *Frame Analysis. An Essay on the Organization of Experience* (Goffman, 1974). His main idea is that people interpret what is going on around them through a primary framework. And this framework is primary because it is taken for granted by the user: "primary because application of such a framework or perspective is seen by those who apply it as not depending on or harking back to some prior or 'original' interpretation; indeed a primary framework is one that is seen as rendering that would otherwise be a meaningless aspect of the scene into something that is meaningful" (p. 21). According to him, there are two distinction within primary frameworks: natural and social: "natural frameworks identify occurrences seen as undirected, unoriented, unanimated, unguided, 'purely physical'… Social frameworks, on other hand, provide background understanding for events that incorporate the will, aim, and controlling effort of an intelligence, a live agency, the chief one being the human being" (p. 21). So, the difference between natural and social frameworks is functional, but both play the role of helping people interpret data. These primary frameworks organize and establish social life, because it is through them everyday events can be understood.

Robert Entman in 1993 set out to clarify frame theory. For him framing essentially involves selection and salience. Frame is "to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p. 52).

I have used the concept of framing to analyze how particular storylines are activated and to discuss ideas about environmental issues and how they gain currency. I have specifically analyzed how scientific knowledge about environment related issues are (re)constructed and spread throughout discourses. The main question I kept asking throughout my research was what is brought up and what is left out in framing certain issues? More specifically, baring Entman's two entities, selection and salience, in mind, in my Thesis I aimed to find what particular form of scientific knowledge is more salient in the text. By the same time, I have hoped to reveal what ideas are emphasized and constructed as defined, that do not need further exploration in communicating the Aral Sea shrinkage. Thus, having the concept of framing as my analytical tool I could unpack interpretative packages that help to set the terms of the debate and to see which of them dominate in printed media.

CHAPTER 4

METHODS AND MATERIALS

4.1 Critical Discourse Analysis (CDA) in Social Sciences

CDA allows us to see language as social practice and to focus on 'the context of language use' (Wodak & Meyer, 2009, p. 5). The two concepts that are important to CDA are *ideology* and *power*. When it comes to ideology, CDA is interested in "the more hidden and latent type of everyday beliefs, which often appear disguised as conceptual metaphors and analogies thus attracting linguists' attention" (Ibid, p. 8). Power is another central concept, since in many cases the analysis is focused on language use of those who are in power. As Wodak and Meyer put it, CDA is interested in analyzing "opaque as well as transparent structural relationship of dominance, discrimination, power and control as manifested in language" (Ibid, p. 10). Thus, the main idea of this approach is to examine the role of language and, more importantly, the processes surrounding the use of languages. Considering my interest is to analyze online articles coming from a controversial debate, I found CDA to be the most fitting methodological approach. This method goes very much in line with Jasanoff's idiom of co-production that I take as my theoretical approach, because it would allow me to identify the strategies of "producing new languages or modifying old ones" (Jasanoff, 2004c, p. 39). More specifically, I aim to identify how media develop persuasive ways of speaking about the problem of the Aral Sea in the analyzed sources.

The scope of my investigation is based on Jäger and Maier's concept of discourse, namely "they institutionalize and regulate ways of talking, thinking and acting" (Jäger & Maier, 2009). In order to address their guidelines for fruitfully applying CDA in empirical research, I will shortly mention the theoretical background of CDA.

Foucault's concept of discourse and discursive practices is an important driver for improving the methodological principles and guidelines of CDA. In the book Archaeology of Knowledge (1972), Foucault defines the discourse as an "ordered system" due to its character of constitutive statements produced in an ongoing discursive stream. He disclaims that discourses are the result of individuals' intentionality. Diaz-Bone and his colleagues (Diaz-Bone, Bührmann, Rodríguez, Schneider, Kendall, & Tirado, 2007) explain the foucauldian understanding of discursive practices, and how they become productive. They produce specific semantics of the words in use, and they relate words to objects and to strategies of acting towards and thinking about things, persons, etc. In this way, ontologizing categorizations and evaluations are integrated and they appear as 'natural' as opposed to 'constructed' or as the contingent result of discursive practices. In this sense, discourses produce a perception and representation of social reality. This representation forms part of hegemonic strategies of establishing dominant interpretations of 'reality'.

Jäger and Maier bring in Jürgen Link's notion of discourse, as "an institutionalized way of talking that regulates and reinforces action and thereby exerts power" (Link, 1983, cited by Jäger & Maier, 2009, p. 35), and add the role of the social actor, as link between discourse and reality. Thus, Jäger and Maier's concept of discourse strengthens the question of hegemony and the power of discourses in establishing a dominant view over the responsibility for the Aral Sea 'disaster' debate.

4.2 Data gathering and Steps of Analysis

From the beginning I planned to take early 1990s as a chronological frame of my research, because this is the time when the first claims about the Aral Sea shrinking received voice and scientists first documented the decrease in the water level. It turned out that only British newspaper has a digitalized archive of older hard copy issue, while Uzbek and Russian sources do not. Therefore, I take all the articles on my topic that appear in three sources, starting with the earliest. To that end, I include all the relevant articles published online until the present in order to see whether the framing has been changing in these sources over time. First, I have created a list of all articles that could be found by searching "the Aral Sea", "environmental disaster in Central Asia" into the websites' respective search engines. There are 143 articles in total: 56 articles in *Gazeta* (Uzbek newspaper), 63 articles in *Regnum* (Russian newspaper), and 24 *The Guardian* (British newspaper). Second, the articles' metadata is entered into a 'data collection grid', including the title of the newspaper, URL, title of article, authors of article, publication date and short summary.

As mentioned above, I followed Jäger & Maier's guideline for conducting Critical Discourse Analysis.
(1) As a first step, and to help me to get an overview, I have converted all articles into Word documents and have created three different files. I would like to reflect here that specifically for the purposes of initial analysis, I have decided to analyze each of the three sources separately;
(2) In my second round I have decided to 'code' full sentences/passages/paragraph that relate to my research question;
(3) Next, I moved to the structural features of my texts and the focus was on how the headers and other layout features support or guide the arguments, and what role images, introduction and conclusion play in the communication process. This, in turn, helped me to get a good idea the macro-features of my texts and more importantly to identify the articles for the detailed analysis;
(4) In the fourth step, I exported the codes into a separate document, which basically represented a very reduced version of my corpus. I used this as a tool to think through my codes, compare and adapt them, and, in particularly, to zoom in on the individual statements or discourse fragments. Then, I grouped the same codes from different texts and examined what they said on the respective discourse strand;

(5) I have tried to identify different sub-topics within one discourse strand and have summarized them into the groups. For example, the discourse strand that I named *the consequences of the Aral Sea shrinking* includes several sub-topics, such as health problems, social consequences, economic consequences, etc. This brought me to the initial assessment of the respective overall discursive construction of the problem and to the identification of the discursive entanglements in each source;
(6) As the next step Jäger & Maier (2009) suggest choosing 'typical' articles for the detailed analysis, aiming to identify and understand the discourse. In some cases, they say, when structural analysis has shown that discourse strand is very heterogeneous, the researcher can also address several typicalities, i.e. several kinds of 'typical' articles (p. 54). In my analysis I use one 'typical' article from each source for the detailed analysis. So, during this phase of analysis (further analysis), one may to turn the focus on specific aspects. During detailed analysis I was able to take a closer look at the paragraphs and discourse strands and pay attention to the content, surface of the text, rhetorical means and ideological statements. As the result, I came to the conclusions regarding discourse position and overall message of each chosen for the detailed analysis articles;
(7) For the synoptic analysis the results of structural and detailed analysis have been brought together and a final assessment of the website's discourse position has been made;
(8) Finally, as the last phase of my analysis, I put the discourses taken out of three different sources together and tried to see the differences and to make parallels in developing specific discourses.

To sum up, it turned out that CDA was a proper method for my research. Jäger & Maier claim that "the best way to learn CDA is to do CDA" (p. 56) and call the researchers to be flexible and imaginative. So, I used Jäger & Maier's guideline for conducting Critical Discourse Analysis as an important orientation that provided initial insights into the wide range of possibilities.

4.3 Materials

The complexity of such a highly debated and controversial issue, like shrinking of the sea, makes the topic particularly attractive for investigating communication process in media since majority of the people become acquainted with environmental issues through media and not through scientific articles. That is why I have chosen to see how the problem of the Aral Sea is depicted in public discourse, and how media translates scientific claims to society.

My choice of online newspapers is partly connected to the ever-increasing launch of online news services in reporting news and their growing popularity in Central Asia and worldwide. My second reason is a question of practicality. Unlike the published versions of the newspapers, their online editions are not constrained in terms of size or format. They may comprise the articles and essays which are not

represented in regular old, hard copy newspapers.

Also, as stated above, I have decided to use different sources for the analysis because my aim is to compare these different sources and to see whether the problem of the Aral Sea shrinkage is communicated and framed differently in different media. Such a comparative approach, in turn, provided a much more diverse set of opinions, frames and inherent biases that I teased out of the discourse. My main purpose has been to bring the discourses taken out of these newspapers together, and to see whether the same scientific data does the same job while communicating the issue in different sources. It is through the comparison of the local and foreign sources that I aim to see how local environmental disputes get transferred to the global scale, and what particular forms of scientific knowledge are used to give rise to a rhetoric of the Earth's fragility and ecological interconnectedness (Jasanoff, 2001).

Therefore, in order to analytically assess my case study, I used the outputs of different online newspapers. The corpus of my data consists of three different sources: *Gazeta.uz* – an Uzbek online newspaper that publishes news both in Russian and Uzbek languages (I have used Russian version), *Regnum.ru* - Russian online newspaper in the Russian language, and *TheGuardian.com* – online edition of British newspaper in the English language.

4.3.1 Gazeta.uz[9]

Gazeta.uz is an Uzbek non-governmental online news service, disseminating news predominantly on Uzbekistan politics, economics, and social and cultural life. This is the first and the major Uzbek online news agency. The online newspaper was founded in 2008. Currently, the media service's Uzbek, Russian, and English (partly) on-line editions are available. In Uzbekistan over the last two decades, the country's information field manifested itself in the full dominance of state-run mass media, wherein all existing channels for providing the population with the information had been subjected to the strict censorship and have been extensively utilized for the sake of state propaganda. *Gazeta.uz,* being represented the first online media, sought to address it readers (users) in slightly different ways. Though dissemination of the news was (and still is) possible solely within the framework of assessments given by prevailing state propaganda, the main strategy of *Gazeta.uz* is to raise some sensitive issues, which are mostly neglected by official media. Among them is the problem of the Aral Sea.

[9] https://www.gazeta.uz/uz

I would like to note that I have chosen this source because this is the first online newspaper, and is the main communicatory source of its type, in the country. It not surprising, therefore, that the newspaper has been extensively increasing the number of its readers over the course of recent years, and currently appeared to be one of the most popular online news resources in Uzbekistan. This is especially due to its app-versions hosted by the global messaging services, like Telegram and Facebook. The analysis of data from this newspaper allows not only the unpacking of the state's official position and state's voice toward the issue under consideration, but also examining other angles of the story. Unlike the most part of the official mass-media that intentionally refrain from considering the Aral Sea issue (or provide only approved pieces of information) since the latter is considered among "sensitive issues", the *Gazeta.uz* provides a more detailed depiction of the issue providing a bit more of a wider room (or giving the voices) for the experts.

4.3.2 Regnum.ru[10]

Regnum.ru is a Russian on-line news service disseminating news from Russia and abroad from its own correspondents, affiliate agencies, and partners. The news agency was founded on July 22, 2002. Currently, *Regnum.ru* has an extensive correspondent network (about 400 correspondents) in Russia and neighboring countries. This enables *Regnum.ru* to cover events in all regions of Russia, as well as in neighboring countries in Europe, Central Asia, and the South Caucasus, with the emphasis on the Russian-speaking audience on the territory of the former Soviet Union. According to various observations over the last decade, *Regnum.ru* has been included in the top five online Russian speaking news resources in terms of quotability[11].

Although this online newspaper positions itself as non-government independent news agency, it is safe to conclude from the content of the news that it is rather designed as a tool in Russian state propaganda machine. It is worth mentioning that one of the Agency's highest officers is Mariya Zakharova[12], an official spokesperson of the Russian Ministry of Foreign Affairs, who is also broadly known due to her harsh statements on different issues of the international agenda[13]. Due to its editorial policy and assessments, Regnum has repeatedly faced harsh criticism both from journalists' and politicians' circles across the world. For instance, this online newspaper has been repeatedly blamed

[10] https://regnum.ru/
[11] https://www.liveinternet.ru/stat/regnum.ru/
[12] https://regnum.ru/information/about.html
[13] https://www.bbc.com/news/world-38012048

by Estonian media as a "the most powerful influence agent of the Kremlin propaganda"[14]. In 2011, the Foreign Ministry of Turkmenistan, a Central Asian country neighboring Uzbekistan, issued an official statement arguing that the Regnum Agency "disseminates in systematic way unreliable, biased information about Turkmenistan"[15] .

I am focusing specifically on this source because of its regional scope, that in turn allows to see whether the problem of the Aral Sea is constructed as regional problem, and whether the framing of the problem is being changed by different correspondents, for example by Uzbek journalists in contrast to Kazakh journalists, etc.

4.3.3 TheGuardian.com[16]

TheGuardian.com is a British news website that contains almost all of the content of the newspaper *The Guardian*, a body of web-only work, and a digital newspaper archive. This archive comprises the digital copies of the of *The Guardian* newspaper's articles from 1791 to 2003. The online edition was launched as early as 1999. The newspaper positions itself as financially and editorially independent media, which ensures the journalistic freedom and liberal values free from commercial or political interference. As it is stated on the site of the newspaper, it is one of the most read newspapers in the world (in 2014, it was world's second most popular English language newspaper[17]).

There are a few more English language newspapers which covered the issue under study, but *The Guardian* seemed to be the one that elucidated the Aral Sea problem the most. So, the logic behind choosing this particular newspaper was to see whether the discursive position of the foreign (as comparing to local and regional) newspapers is different when discussing the causes, responsibilities and outcomes of this environmental disaster. I am interested to see whether one of the world's most read newspapers makes efforts to situate the water crisis taken place in Central Asian region into wider discourse of global effect and/or climate change.

[14] https://inosmi.ru/world/20051019/223122.html
[15] http://turkmenistan.ru/ru/articles/36061.html
[16] https://www.theguardian.com/
[17] https://www.theguardian.com/media/2014/oct/21/the-guardian-overtakes-new-york-times-in-comscore-traffic-figures

CHAPTER 5

ANALYSIS OF DISCOURSE ELEMENTS FROM GAZETA.UZ

5.1 General characteristics of the articles

My corpus of empirical materials from the Uzbek newspaper, *Gazeta.uz* consisted of 56 articles. The earliest article was published online on 3rd of March, 2010, whereas the most recent one is from 16th of October, 2017. The articles[18] appeared in the following sections: *Politics* (Политика), 22 articles (discourse fragments #25, #26, #27, #28, #29, #34, #35, #37, #38, #39, #42, #47, #48, #52, #53, #57, #58, #60, #61, #68, #73, #74), *Society* (Общество), 20 articles (discourse fragments #33, #36, #40, #41, #43, #44, #45, #46, #49, #63, #64, #65, #69, #70, #75, #76, #77, #78, #79, #80), *Economy* (Экономика), 9 articles (discourse fragments #30, #31, #50, #55, #56, #59, #62, #66, #67), *Culture* (Культура), 2 articles (discourse fragments #32, #54), *Media*, 1 article (discourse fragment #51), *Interview* (Интервью), 1 article (discourse fragment #71), *Columnists* (Колумнисты), 1 article (discourse fragment #72). The vocabulary and line of argumentation in different sections of the newspaper do not differ much, although there is a difference in what aspects of the problem are being put to the fore depending on the section.

For the detailed analysis, I have chosen an article published on 25th of May, 2017 in the section Columnist, Society. The title says "*Aral is alive and waiting for the tourists (+ photo). In spite of everything, the Aral Sea is still alive. And this lonely sea is worth to be visited*" (discourse fragment #72, title). I have selected this article for several reasons. First, it contains many typical interpretive storylines but by the same time it introduces a new discourse regarding the necessity of developing (eco)tourism in the Aral region. So I was interested to see how *Gazeta,uz* develops completely new arguments, but by the same time refers to the previous discourses. Second, the article is 'typical' in terms of vocabulary, argumentation and techniques of communication, but different in terms of format, being not written in the format of the current source, such as reports and official statements. In contrast to this, we may see how personal opinions, feeling, and arguments become entangled in the process of communication. Third, and finally, this is the only article dedicated to the problem of the Aral Sea shrinking that has a name and some background information about the author.

As mentioned above, *Gazeta* reflects state official position toward various issues in political, socio-economic, cultural or ecological spheres, therefore language in the majority of the articles seems to be rather restrained and a careful self-control of the part of journalists could be read between the lines.

[18] In what follows, I call analyzed articles discourse fragments. For example, a reference to the discourse fragment #22 relates to the analyzed article #22.

Depending on the category of the news, the vocabulary of the publications differs slightly. The majority of the articles come from two main sections of the newspaper, *Politics* and *Society*. The characteristic feature of these articles is that they are written as official reports, for example about recent diplomatic activities relating to Aral Sea problem, or such as speeches of Uzbek diplomats at the UN sessions or visits of international donors to the area. Another feature is that political vocabulary is actively implemented to discuss environmental problems. This becomes evident in headlines, for example: "Secretary-General of the United Nations is going to visit the Aral Sea" (discourse fragment #27), "Ecologists appealed to the Head of European Parliament" (discourse fragment #36), "Ministry of Foreign Affairs of Uzbekistan gave a talk at the 66th session of General Assembly of the UN" (discourse fragment #38), "Heads of the United Nations agencies in Uzbekistan visited Karakalpakstan"[19] (discourse fragment #45), etc. In these articles, the journalists try to establish credibility through words and terms from the diplomatic domain, conveying the information through highly diplomatic language. Another characteristic feature of the vocabulary is numerous references to the words of the representatives of international organizations.

All 56 online articles have visual background. As a rule, this is a main image used before the heading which occupies central position in the whole publication, in some cases the smaller images accompany the text. Depending on the content of the article, different types of images are presented: the sea itself (discourse fragment #33, #44, #52, #60,), Uzbek officials giving a talk at the assembly of UN (discourse fragments #25, #26, #34, #37, #38, #39, #40, #48), heads of international organizations visiting the Aral region (discourse fragments #27, #28, #58, #74, #80), reports about local or foreign conferences on the problem of the Aral Sea (#41, #43, #57), buildings or local people as a statement of stabilizing their lives (discourse fragments #45, #53, #55, #61, #62, #64, #67), Gas stations while talking about *Aral Sea Operation* - the gas producing company performing comprehensive geological examination of West Aral field (discourse fragments # 30, #31, # 59,) or hydro station standing on the rivers when discussing the unsafety of construction of giant hydroelectric facilities on Amu Darya river (discourse fragments #35, #36) and local places being transformed into Eco touristic zone (discourse fragments #66) . It is very intriguing to see how specific images are being implemented to frame the topic, and how illustrations in combination with the texts do their job in shaping perception. And what is more important is that only particular types of imagery gain dominance, promoting specific ways of knowing about the scale of the disaster. For example, the discussions about local and foreign investments in the region are supported by the images of the dried part of the sea (discourse fragments #33, #44, #49). These images are quite impressive and symbolize how humankind could destroy once 'flourishing nature'. More recent articles, where the focus is on partial restoration of the sea level, as well as on a hope, create the meaning through the images that depict much more

[19] Karakalpakstan is an autonomous republic within Uzbekistan. It is located in western Uzbekistan near the Aral Sea.

water (discourse fragment #46, #72). For example, discourse fragment #72 from 2017 named ***Aral is alive and awaiting its tourists*** is aiming to create an image that "in spite of everything, the sea is still alive. On our land, in Uzbekistan. And this lonely sea is worth to be visited to touch the surface of water" (discourse fragment #72, p. 1, lines #11-13). In doing so, the author actively employs only those images of the sea that depict a large volume of water and not the desert areas that surround it. Unlike two other sources, *Gazeta,uz* has only one article with a satellite image (discourse fragment #51).

The analysis of 56 articles from *Gazeta.uz* brought me to 5 main interpretive storylines through which the problem of the sea devastation is communicated (Figure #1). These topics appeared to be very interconnected with each other: (5.2) Local Water Disputes with 2 subtopics within it (5.2.1) Rationality, (5.2.2) Rogun[20] versus Aral; (5.3) Ecological Aspects with 3 subtopics within it (5.3.1) Sustainable development, (5.3.2) Climate change, (5.3.3) Environment without borders, (5.4) Zooming out, global approach, (5.5) Gas, (5.6) (Eco)tourism. In what follows, I will introduce each elements of the discourse in more details and will provide illustrations from my material.

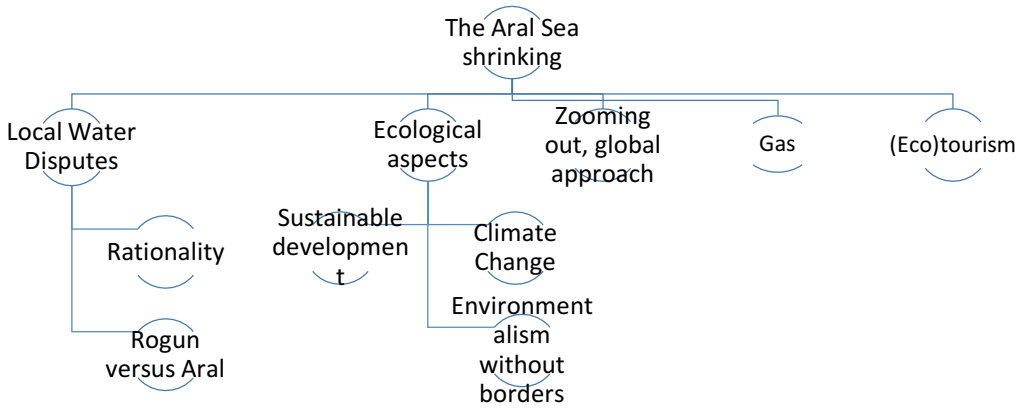

Figure #1

5.2 Local water disputes

The articles from 2010 to 2015 frame the problem of the Aral Sea shrinkage primarily in the context of a need to develop new strategies for rational water consumption for all Central Asian countries. This, in turn, reflects regional disputes over water and electricity that are taking place after Soviet Union's dissolution. The main point here is that relations among five Central Asian states, due to their geographical position, are more often than not defined by water and, since the dissolution of the Soviet Union, the counties have been facing water problems in the region. Unsurprisingly, a number of codes and memos relating to regional water management topic appeared during my analysis. But what has surprised me was the fact that the problem of the Aral Sea shrinkage is being successfully situated into

[20] Rogun is a hydro power station in Tajikistan, neighboring country.

these water conflict discussions. Uzbek officials found themselves in a very suitable position as a nation that suffers from the desertification process the most. This, in turn, allows them to put this ecological disaster at the center while discussing transboundary water management in the region.

Therefore, one may see that the problem of the Aral Sea shrinkage was situated into larger discussion about water crisis in the region, and disputes over the use of water from two main sources, Amy Darya and Sir Darya. The line of argumentation is as follows: due to irrational use of water resources in the past, the level of the sea has been falling, over the life of one generation the sea almost disappeared, the consequences are on a large scale, and without significant assistance of the United Nations and the world community, it is impossible to solve the Aral problem. Recognizing that the restoration of the sea to the former borders is barely possible, Uzbekistan calls first and foremost to save people living in the region, and to stabilize the ecosystems of the Aral Sea area (discourse fragment #47). The importance of the two tributary rivers for the local population is the focus (discourse fragment #34). Therefore, Uzbekistan stands for 'pragmatic and realistic approach' to water issues (discourse fragment #60, title). One of the central argument is that any activity that leads to the decrease of water coming from these rivers to the sea (such as building dams, hydo power facilities, etc.) may result in the further degradation of the Aral region (discourse fragments #34-38). Therefore, attempts to launch the building of dams by neighboring countries (for example by Tajikistan) are depicted as the main factor that threaten the future of Aral. In so doing, the newspaper does not talk about continuous planting of cotton and growing prestige of the country as a cotton producer in the world, nor does it raises the problem of inefficient irrigation practices that dominated Uzbekistan for decades.

In the following subsections I would like to talk more specifically about two main subtopics, Rationality and Rogun versus Aral within Local Water Conflicts topic. In order to support my arguments, I will provide some extracts from the discourse characteristic for these two subtopics respectively.

5.2.1 Rationality

Rationality of using current water resources is the focus. The articles I analyzed construct rationality as of vital importance for the region, making references to the previous irrational use of natural resources that led to the current ecological situation in Aral region. For example, the title of discourse fragment #37 says, *Uzbekistan calls for rational use of water resources. Rational use of water and energy resources is one of the most serious problems in Central Asia, said the Permanent Representative of Uzbekistan to the UN*. In this regard, the ambassador calls to treat carefully any project that may harm the environment and lead to further aggravation of existing problems in this area. The UN organization is framed as a means to promote regional cooperation in environmental domain, it is through basic

international legal instruments of the UN, that Central Asian states have to regulate their relations in the field of common water use. The interests of all neighbouring countries should be taken into consideration. It is worth mentioning that the case of the Aral Sea shrinkage is used in this context as the vivid example of human made mistakes that led to ecological catastrophe in the region that, in turn, enables them to strengthen the main argument about necessity to starting to using „our water resources rationally taking into accounts the interests of all neighbouring countries" (discourse fragment #35, #36, #37).

5.2.2 Rogun versus Aral

Rational and thoughtful approaches to using water resources is in turn linked to another important issue – the unsafety of plans in neighboring countries, Kyrgyzstan and Tajikistan facing constant blackouts, of building giant dams to provide for their energy needs. Kyrgyzstan completed its power station in 2010 and started construction of a second one with the help of Russia. Emomali Rahmon, a Tajik leader, also initiated the erection of the 335-meter dam - Rogun, which would have potential to turn his country into powerbroker. Especially, the articles from 2010 to 2011 discuss intensively the plans of Tajikistan and frame it as regional threat. In doing so, the authors employ discussion about current need to use our natural resources rationally and thoughtfully as a preamble to justify Uzbek position toward construction of hydro power facilities on two rivers. So, one may easily discover how the new entity – hydro stations -- appears here.

- Discourse fragment #34, lines 35-41: “The life of millions of people in the region depends on the water coming from the two tributary rivers, the Amu Darya and Sir Darya. This is needed to be taken into consideration…. Any activity that leads to the decrease of water coming from these rivers may result to the further degradation in this area. That’s why any idea about the construction of hydro power stations that had been developed in Soviet times should never be encouraged”.

The ambassador underlines that the project to use hydropower facilities on the two rivers had been developed in Soviet times, pointing out that with the passage of time there is a need for a safer technology that takes into consideration the interests of all neighboring countries and excludes previous mistakes that damaged the environment. Thus, the main message is the unsafety of Tajikistan’ plan to construct the Rogun. Among other causes, the launch of this hydroelectric plant “would affect flow of the Amu Darya river and total water level in Aral, exacerbating its tragedy” (discourse fragment #35, lines #98-101).

So, we may see how framing of the issue changes and moves in a bit of a different direction, now that the future of Aral Sea problem is directly linked to the attempts of neighboring countries to build their own energy facilities. Uzbek ecologists launched a movement against the construction of Rogun. Their main message is directed to the head of European Parliament: „Rogun would become a serious factor that would further exacerbate the drying process of the Aral Sea... Where is the logic, reason and principle?... We hope that you and the other members of the European Parliament will listen to the voices of millions of people living in the Aral Sea region who are seriously concerned about further drying of the Aral Sea due to the construction of huge water reservoirs with hydropower facilities on the headwaters of the rivers that feed the sea," (discourse fragment #36, lines #37-44). It is intriguing that *Gazeta.uz* frames the UN norms and practices in water management as 'well established' and 'internationally acknowledged', as a legitimize basis for solving regional conflict between two countries, Uzbekistan and Tajikistan.

When discussing this issue the meanings are also created through visual images, the articles deploy image of the dam, that stops the river flow and collects water (Photo # 1). Although this is a symbolic image, since the construction of Tajikistan's energy facilities have not even been completed by the time when the article has been published, it is interesting to see how such a visual repertoire helps to convey a message, symbolizing how dams may threaten the future of the Aral Sea.

Photo #1 (discourse fragment #36)

So, the frame that emphasized Tajikistan's initiatives to build hydro power facilities as a potential danger that could escalate further ecological and socio-economic situation in this area, dominated from the early 2000s until 2015. More recent articles underline the role of regional cooperation in solving problems associated with the Aral Sea degradation and, therefore, introduce another elements of the discourse.

5.3 Ecological aspects

Presenting the problem of the Aral Sea as environmental issue and emphasizing ecological aspects of this 'disaster' is another way to communicate the issue. Such a frame allows not only to fore issues like desertification of the arid territories, salinization, and climatic changes in the region but also to open a discussion about the need to transform to the sustainable development of natural resources, including water. Interestingly, such discussions have been found in the majority of articles analyzed, doesn't not matter whether it is *Politics, Society* or *Economy* sections. But, what surprised me was the fact that no definitions of 'sustainable development' are provided to the readers, neither one may find any references to how such an approach relate to the problem of the Aral Sea.

So, the words *ecology* and *environment* were among the most frequent encountered in the sources. I subdivide this rather huge topic into smaller sub-topics, which in my opinion appear in some chronological order, depending on the directions and priorities of local politics: climate change (5.3.1), sustainable development (5.3.2) and finally environment without borders (5.3.3).

5.3.1 Climate change

As assumed, a popular discourse of the present day, *climate change* is also reflected in the discussions about ecological consequences of the Aral Sea shrinkage and *Gazeta.uz* has been found to cover climate change issues as an environmental problem. But it is remarkable that references to climate change are made differently in different contexts. In some cases, this expression is used to signify climatic changes such as dryness, desertification, and salinization processes resulting from the shrinkage of the Aral Sea. For example, the former President of Uzbekistan Islam Karimov (1991-2016) during his greeting speech at the International Conference "Development of cooperation in the Aral Sea Basin to mitigate consequences of environmental catastrophe" held in October 2014, noted that "shrinking of the Aral Sea resulted in dramatic changes in the climate of the whole of Central Asia, causing an aggravation of the water shortage, intensification of seasonal droughts and duration of severe winters, accelerated melting of the Pamir and Tien Shan mountain glaciers and aggravation of agricultural conditions in Central Asian countries" (discourse fragment #54, lines #61-65). In this context, the disappearance of the sea is framed as resulting in changes in local climate, flora and fauna.

In another context, it is used completely differently, as a process is taking place worldwide: "Uzbekistan is being adapted to the climate change. State Committee on Nature Preservation reported about the measures are undertaking in Uzbekistan to adapt to climate change and to mitigate its consequences" (discourse fragment #41, title). Now the climate change phenomenon gets a completely new meaning, it is a factor that is associated with current regional problems in the environmental domain: "The

Republic of Uzbekistan, located in the arid climatic zone of Central Asia, is facing environmental problems of global climate change, transboundary air pollution, desertification and land degradation, loss of biodiversity, lack and deterioration of water resources. All of this causes a number of socio-economic problems" (discourse fragment #41, lines #33-37) . Climate change is turning into a threat that not only impacts all spheres of humans' life, but moreover affects the drying of the Aral Sea: "Central Asia is also threatened by an increase in global temperature, causing the melting of mountain glaciers. These glaciers are the main source of water in the region - including the small amount that still falls into the Aral Sea. Their melting can turn into an even more serious environmental disaster than the drying out of the Aral Sea" (discourse fragment #58, lines #78-82). In this context, climate change is presented as a natural factor that effects, among others, the drying of the sea. In another context, it is presented as a factor that, alongside anthropogenic activity, caused the devastation of the sea (discourse fragment #46). I have found references to the opinion of Pyotr Zavyalov, deputy director of the Institute of Oceanology of Russian Academy of Sciences, who had claimed that this is not the first case of catastrophic drying out of the sea, as it also dried up about 2000 years ago, again during the Middle Ages, and only 400-500 years ago did the sea come to the same state as it is today. Therefore, he says: "the drying out of the Aral Sea is connected both with the recent anthropogenic factor and with natural climatic changes," (discourse fragment #46, lines #32-34). Remarkably, this is one of few references to one of the leading experts in the field of Aral Sea studies that one may encounter in this source.

So, all actors speak about climate change, but they mean slightly different things when putting it into different contexts.

Overall, the sources 'climate change risk factors' are widely presented while communicating on the topic of the Aral Sea shrinkage. In so doing, they frame it within the framework of current and future initiatives of the United Nations Organization, as well as World Bank on climate change: "In recent years, UN agencies have been paying increasing attention to the climate change risk factors and adaptation to climate change in those areas of the region that are most affected by climate change. The UN closely cooperates with governments and development partners to increase the number of projects related to climate change and mitigation of its consequences" (discourse fragment #58, lines 74-79), and "The Board of Executive Directors of the World Bank on November 3 approved the allocation of $ 38 million from the International Development Association to finance the first phase of the Climate Adaptation and Mitigation Program for the Aral Sea Basin Project for Central Asia…. The goal of the Climate Adaptation and Mitigation Program in the Aral Sea basin is to take advantage of regional cooperation and interaction to address the growing problems of climate change, which often do not end with borders of the countries in the region and expand far beyond" (discourse fragment #62, lines #10-24). In order to gain more credits and to strengthen the importance of the topic, big institutions like the UN and World Bank are mentioned in the context.

Another point to mention is that the climate change phenomenon is covered in an uncontroversial manner, or that debates within the respective societies are absent in this media: “According to the report of the WB, Turn down the heat: confronting the new climate normal, the countries of Central Asia are likely to face more intense warming than in the average in the world. If, on average, the world's temperature increases by 4 degrees Celsius, the average annual temperatures in Central Asia at the end of the 21st century can rise by 7 degrees in comparison with 1951-1980… Climate variability and climate change in Central Asia will affect key sectors of the economy such as agriculture, energy and water supply, and will endanger the livelihoods of the rural population…” (discourse fragment #62, lines #29-41). We may see here how uncontroversial the claims about climatic changes with regard to temperature are. Moreover, one hardly encounters coverage of scientific knowledge production in this area: “[f]orecasts show that our region will suffer even more than Europe or other territories - in Central Asia there will be 10-15% less water than today” (discourse fragment #72) says Executive Director of the Regional Environmental Center for Central Asia, without specifying which particular studies are conducted in this field.

Thus, the topic of climate change gained a very high degree of popularity in current media and one may see how two issues, the Aral Sea shrinking and climate change phenomena taking place worldwide, are constructed as deeply intertwined. Remarkable examples of this process are the numerous references to the words of Antonio Guterres, the new UN chief, saying that the tragedy of the Aral Sea is "*perhaps the biggest environmental disaster of our time…. It should be a lesson for all to mobilize the world community for the implementation of the Paris agreement on climate and that such catastrophes do not happen again”* (discourse fragment #74, lines #19-22). We may assume Gazeta not only uses his words in this context in order to introduce the climate change topic to the readers, but also to put forward the implementation of Paris agreement on climate change.

5.3.2 Sustainable development

Starting in 2012, we may see how *Gazeta.uz* introduces a new element of a discourse, a need to transition to the new organizing principle for meeting human development through so called ‘sustainable development’. This happened after participation of Uzbekistan in the United Nations’ Conference on Sustainable Development “Rio + 20” that took place in Rio de Janero, Brasil on 20-22 June, 2012. In the wake of the conference, the need to accept Sustainable Development Goals, which built upon the Millennium Development Goals and converge with the post 2015 development agenda of the UN, was justified. A special issue was dedicated to this event, the article was titled "*Uzbekistan is going to accept the strategy of sustainable development. Conference “Rio + 20”* (discourse fragment #42). The main

message of the article is that Uzbekistan is already on its way to sustainable development. Information is presented in a very linear way, as a call of the present without any further analysis or justification behind chosen objectives:

- Discourse fragment #41, lines #18-22: “One of the tasks of mankind is to achieve a balanced and fair solution of economic and environmental problems. Undoubtedly, human activities affect the climate, and in this connection, consolidated efforts are needed to limit the harmful impact on the environment and to transit to sustainable development"
- Discourse fragment #42, lines 8-12: “Economical, social and political achievements of Uzbekistan in the last years create a new horizon for the transition to the sustainable development. One of the instruments of this is the transition to the “green” economy”.

Arguments about Uzbekistan’s transition to sustainable development and ‘green economy’ are framed in a very affirmative and positive manner. The Characteristic feature of those arguments is a so-called concept of discourse coalitions (Hager, 1995), a process of grouping around the same storylines, but interpreting them differently and giving different meanings to the same stories. In the United Nations Organization’ context, the need for “clear and practical measures for implementing sustainable development” may have different meaning than in Uzbek context. For the latter, this initiative allows shifting the focus on regional cooperation: “For Uzbekistan strengthening of regional cooperation among Central Asian countries based on international laws in the field of rational management of transboundary water resources is one of the important components of sustainable development” (discourse fragment # 42, lines #30-32) or attracting foreign investments: “Abdulaziz Kamilov, the Minister of Foreign Affairs of Uzbekistan stated it is highly desirable to create a special Trust Fund for the Aral Sea and the Aral region under the UN at the UN Summit on Sustainable Development in New York on September 25: “taking into account the planetary scale of the Aral catastrophe, it is crucial to expand cooperation and to establish target financial mechanisms in this direction," pointed the minister” (discourse fragment #61, lines 10-17).

Suffice to say, much attention is drawn to consciousness raising aspects and to the willingness to place the idea of sustainable development into a space for everyone: “Building local capacities, raising environmental awareness and enlightening the population are also at the focus for more effective sustainable development” (discourse fragment #42, lines #81-84).
Therefore, *Gazeta.uz* sees its task in enlightening public about climate change and sustainable development initiatives of the current day, and in calling to adapt to these changes and to use our natural resources ‘more rationally’.

As we could see, the construction of the sustainable development is being done within framework of current and future campaigns of UN on sustainable development. Interestingly, including Uzbekistan into the UN initiatives on Sustainable Development is framed as something important both for region and the world: “Uzbekistan hopes that the Aral Sea disaster will be taken into consideration while implementing the Sustainable Development Goals for 2016-2030, the Foreign Minister of the country noted. "We understand that climate change and everything that is connected with many of the problems that are being discussed today during the current summit are directly relate to the Aral Sea issue, that, according to the statements made by Secretary-General Ban Ki-moon during his trip to the Aral in 2010, requires" collective responsibility of the whole world, not only of Central Asian countries," he said” (discourse fragment # 61, lines #40-47).

It is remarkable that, in this context, the idea about sustainable development helps to relocate regional water problems from the local to the global scale, and to shift attention from specific local problems to another, more obscure level. In doing so, the words of the previous UN Secretary-General help to propel ecological problems in the region, and the associated socio-economic problems, into an issue of global significance. The local and specific problem of the sea shrinking becomes both placeless and obscure.

5.3.3 Environment without borders

Starting from 2017 *Gazeta.uz* starts to emphasize the significance of regional cooperation in solving problems associated with the Aral Sea. If previously there were general calls to threat the problem of Aral as a common issue, the main argument advanced from 2017 is that the environment has no borders, and environmental crises taking place elsewhere in the world should be regarded as happening on our common planet Earth. Environmental problems are now constructed as a matter of concern for every country in the region and, outside of it, and the main focus in the interpretative storyline is the idea that the environment we live in can not be separated by administrative borders (discourse fragment #71). In this context, the main focus in the process of communication is on regional cooperation, since, as they put it, only by means of close cooperation of all Central Asian countries might it be possible to solve 'our common problem of Aral'. In doing so, the media underlines that the current constructive dialogue among Central Asian countries on the implementation of joint Programs aiming to improve the consequences of the Aral Sea shrinkage, is possible due to the new political regime in the country.

Iskandar Abdullayev, an executive director of the Regional Environmental Center for Central Asia, points out that the recent improvement of relations among the countries of Central Asia enables the discussion of water problems to rise in the region in a more rational and concrete way. So, the central argument is that comparing with previous years, a current state of affair in the field of water management

in the region is much better, and communication among the countries Central Asian countries has gained 'a more positive tone', making the dialogues on water problems, including the problem of Aral, ‘more rational and concrete': "It is the moment when all the neighbours have to leave aside all claims including on water" (discourse fragment #70, lines #19-20).

So, one may encounter a completely new discourse here, one that underlines collective responsibility of all regional countries: "each of us has to feel responsibility for water resources″ (discourse fragment #71, lines #90-91) and calls for collective systematic measures aiming to solve the problem of Aral. This is achieved through a emphasizing interdependence of Central Asian countries, they are presented as bound together via a common environment which has no borders: "You can not create favourable conditions on the territory of your country and ensure everything is so good there. These conditions could be easily affected by environmental problems of your neighbour. Environment of Central Asia is an entire organism and it is very interconnected," (discourse fragment #70, lines #34-37).

Therefore, in my opinion, it is remarkable that such a discourse is characteristic for the last couple of years after the new-elected Uzbekistani President, Shavkat Mirziyaev, came to power (2016). Therefore, we may see that local political changes directly influence how the problem of the Aral Sea is threated and presented in media. Shavkat Mirziyoev positions himself as reformer who aims to discontinue longstanding policies that had back the Uzbek economy and isolated the country regionally and internationally. One of the strategies of him is to strengthen regional cooperation among Central Asian countries, including in the field of water management and to put the dialogues on a new level. In particular, we may see that *Gazeta.uz* presents the relations with neighbouring Tajikistan as being improved as well. One can barely find references to the problems associated with construction of Rogun dam in more recent articles and the discourse changes according to local circumstances.

5.4 Zooming out, global approach

Another element of a discourse that directly relates to the previous two, Local water Conflicts and Ecological aspects, is an interpretive storyline that I name Zooming out or Global Approach. Throughout the analysis, I came across numerous attempts to zoom out the case of the Aral Sea shrinkage. This means that the problem of the sea devastation is constantly shifted to another scale, and the issue is being presented as of global significance. This is a fascinating angle, as it allows to see how local environmental problems become transferred to another scale, and to think about the purposes and effects of such process. But one should not see it as a linear process where a group of specific actors aim to use the case of the Aral Sea to pursue certain political and/or socio-economic purposes. Instead, we may see that variety of actors (local officials, heads of NGO, journalists, heads of international organizations and

missions to Central Asia, and even presidents) deliberately, or not, attempt to zoom out to environmental consequences associated with the sea shrinkage saying that "these apocalyptic landscapes is an example of the consequence of a careless waste of natural resources by humankind" (discourse fragment #77, lines #24-26) and pointing out that this "catastrophe should be a warning for us all and an example of how a humankind can destroy a planet" (discourse fragment 74, lines #12-13).

My particular attention was drawn to the words of the two UN Secretary-Generals Ban Ki-moon (2010) and Antonio Guterres (2017) after their visits to Aral in 2010 and 2017, respectively.

The discourse fragment #27 from March 29th, 2010 tells us that "the head of the international organization will discuss with representatives of Central Asian countries issues of regional cooperation, disarmament, ecology and achievement of the Millennium Development Goals" (lines #9-12) and "one of the main issues to be discussed in Uzbekistan is the consequences of the Aral Sea shrinkage. The head of the UN plans to get acquainted personally with the situation in the Aral Sea area" (lines #26-28). The title of the next article from April 5th, 2010 announces that "Ban Ki-moon is shocked by the Aral Sea. The UN Secretary-General described the Aral Sea as one of the worst environmental disasters on the planet and urged the leaders of the region to unite in order to solve the problem" (discourse fragment #28, title). The author then refers to the words of the UN head: "this is undoubtedly one of the worst environmental disasters in the world. I was shocked. What I saw here, made a profound impression on me, it's very sad that such an enormous sea disappeared" (lines #9-11). Moreover, the article raises the question of collective global responsibility for this 'disaster': "not only regional countries but the whole world should be responsible for this ecological disaster" (lines #16-17) and "UN specialized agencies are going to assist to the regional countries in their efforts to ensure prosperous life for future generations" (Ibid, lines #20-21). It is interesting to see how personal feelings of the UN leader are used in this context to underline the scales of the disaster, and how the expression *worst environmental disaster in the world* and the idea about *world responsibility* are being introduced here.

Starting from that time, the media repeatedly discussed this visit and Uzbek officials started to refer to the words of Ban Ki-moon in different contexts, aiming to underline the global scale of the problem and calling for the collective responsibility of the world. In September 2010, a photo exhibition devoted to the Aral Sea problem was organized under the supervision of Ecological Movement of Uzbekistan. *Gazeta.uz* cited the words of Boriy Alikhanov, a head of the movement, saying that the photos "depicts the global scales of the problem and are aiming to warn about possible consequences of humans' irrational economic activity" (discourse fragment #32, lines #20-22). A few weeks later, Kamoliddin Sadikov, a deputy head of the State Committee on Nature Preservation, also underlined global scale of the problem by saying "during his visit to the Aral Sea region, the UN Secretary-General Ban Ki-moon was convinced this ecological disaster produces ecological consequences not only on regional but rather

on planetary scale" (discourse fragment #33, lines #49-52). Even the high rank officials such as the ambassador of Uzbekistan to the UN referred to the visit of UN head while talking at the 66th session of General Assembly of the UN: “We can observe a complex of not only environmental but also socio-economic and demographic problems in the Aral Sea region that have a planetary consequences as it was noted by Secretary-General of the United Nations Mr. Ban Ki-moon who could personally see the scales of this problem during his visit to the Aral last year” (discourse fragment #39, lines #20-23).

We may conclude that the visit of Ban Ki-moon, the UN head in 2010, became a starting point for constructing a new discourse about the “planetary scale” of the Aral Sea disaster in current online media. More recent articles dedicated to the visit of the new UN head Antonio Guterres to Aral in 2017, and his impressions of the area, bring some more arguments in support of this discourse: "Catastrophe of the Aral Sea shows men can destroy the planet", warns UN chiefs Antonio Guterres" (discourse fragment #74, title). In this context, the words of UN head are comfortably situated next to the discourse in order to underline the planetary significance of the environmental problems in the region. The next paragraph in the article is quite interesting: "The Aral tragedy is "perhaps the biggest environmental disaster of our time," the UN chief said. It should be a lesson for all to mobilize the world community for the implementation of the Paris agreement on climate, so that such catastrophes do not happen again" (lines #19-22). So, two discourses, planetary scale and climate change, are joined and intertwined here.

With regard to the sources of scientific knowledge, I could identify some references to ‘international experts’ that are introduced into the discourse in order to underline the scope of the problem. For instance, the Ministry of Internal Affairs Abdulaziz Kamilov claimed at a UN Summit in 2015 that "the threatening impact of the Aral catastrophe is observed all over the world today. According to international experts, poisonous salts from the Aral region are found on the coast of Antarctica, in the glaciers of Greenland, the forests of Norway and many other parts of the globe," (discourse fragment #61, lines #59-62).

Framing the issue in such a way brings the potential reader to the conclusion that, first, the shrinking of the sea brought ecological consequences of global scale, and, second, this problem is a matter of concern for the whole world. In this regard, the support and the initiative of international organizations, like the UN and WB, are framed as a key means of overcoming ecological and socio-economic problems in the region. As Abdulaziz Kamilov, the Minister of Internal Affairs of Uzbekistan, puts it “We are grateful to the UN and personally to the Secretary-General Ban Ki-moon for the serious attention paid to the problem of Aral. This is a huge support that make us to feel confident the countries of the region will not be left alone in the fight against this global disaster" (discourse fragment #48, lines #45-48)

Finally, I would like to reflect on the visual imaginary that helps to zoom out the problem of the Aral Sea through the depiction of the two UN heads. For example, discourse fragment #28 named *Ban Gi-moon is shocked by the Aral Sea* employs a very famous picture of him taken during his visit to the Aral Sea in 2010 as a part of his tour through Central Asia (Photo #2). It presents the UN Secretary-General against the background of the dried sea. The focus is not on him but rather on the desert landscape. At the same time, we can see how he is staring attentively and sadly at the desert areas as a reminder of the sea. It is interesting that only the dried part of the sea had been depicted.

Photo #2 (discourse fragment #28)

Another example is discourse fragment #74 from 2017, titled *The UN Secretary-General Antonio Guterres said the Aral catastrophe is an example of how a humankind destroys a planet.* The photo of the new Secretary-General (Photo #3, discourse fragment #74) is identical to the photo of the previous UN chief from 2010. He is staring at the desert area with a ship at the center. The face of Guterres is zoomed in on the left part of the image while the desert area is at center. Again, the journalists have deliberately chosen Southern Aral - the part of the sea that suffered the most and left behind by the Northern Aral that due to the fact that restoration work is being partly stabilized in order to make the main message of the UN head more persuasive. In my opinion, the images the UN heads plays a certain role in perception making and transforming the issue from the local to the global scale.

Photo #3 (discourse fragment #28)

5.5 Gas

Gas is another interesting element of the discourse that is characteristic for Uzbek and Russian newspapers. In the early 2000s, Uzbekistan decided to conduct geological studies in its part of the Aral Sea. In 2006, the Uzbek government signed a deal for a project with an international consortium of energy companies (Russia, China, Malaysia, Korea) for geological exploration of the sea bottom for the next 35 years (discourse fragment #30), and the company-operator Aral Sea Company was established. In 2010, a natural gas was found in two test wells that were drilled in the Aral Sea's dried lake bed. So, starting from 2010, one may see how a new non-human actor – *gas,* came into play. It is worth mentioning that there are only three articles amidst 56 which elaborate on this issue. Two are from 2010, when the first tests gave positive results, and one is from 2015, when the second round of work started.

It was interesting to see how the framing of the issue received a new direction: "The first gas was found on the Aral Sea. Aral Sea Operating Company received an industrial gas inflow on the contract territory in the western part of the Uzbek territory of the Aral Sea", says the title of the first article (discourse fragment #30). We don't encounter any references to the disappearing sea here; the tone of the article is rather pragmatic and one may find only information relating to designing, running, and implementing of new business: "According to the terms of the agreement, the consortium participants at the initial stage will own 10% of the production, the minimum share of Uzbekistan is 50%... To the present, about 75 million dollars have been invested into the project. In 2010, in accordance with the state investment program, it is planned to bring $ 17 million" (lines #18-24).

The second article states “the task of the future is to investigate the territory of the Aral Sea, where four oil and gas prospecting structures have already been prepared and a search well has been drilled on one of it” (discourse fragment #31, lines #36-39). The focus is on positive outcomes from gas extraction and, one may feel a positive tone in the whole discussion about this new project. There are no doubts regarding the relevance of the current long term initiative on gas production on the territory of the disappearing sea and the focus is made on the economic benefits of this campaign.

The third article that discusses gas production on the territory of the dried sea bed is from 2015, it reports, that “operational consortium Aral Sea Operating Company (Aral Sea), that carries out geological survey on the Uzbek part of the Aral Sea, may begin development of hydrocarbon fields already in 2017” (discourse fragment #59, lines #9-11) and “it is planned to invest about $ 300 million in 2017-2031 in the development of deposits” (lines #12-13). It is interesting to see that in this context, foreign investments are going to serve another goal, not mitigating the consequences of the disaster but rather fostering a new, promising field – gas production!

5.6 (Eco)tourism

Starting from 2017 a comparatively recent, and a very interesting element of a discourse within which the Aral Sea topic communicated, is arising. Within it, it is argued in favor of using the cultural and ethnographic potential of the Aral Sea region to turn it into a center for (eco)tourism. The emphasis is on the unique ecosystem of the area, that could be used to turn the area into tourist hotspot.

In October 2012, a conference named *“Lost Sea: the lessons and conclusions”* was hold in Tashkent, a capital city of Uzbekistan. The event was a part of the big informative campaign carried out by the State Committee for Nature Protection of Uzbekistan, in partnership with a number of ministries and departments, and international and public organizations. The major purpose was facilitating a partnership between state bodies and the media in covering issues of environmental protection, and raising the level of public awareness. *Gazeta.uz* covered this event substantially and presented its viewpoint regarding state initiatives to turn the Aral region into tourism hotspots: “the region has a rich cultural and ethnographic potential, which is complemented by unique landscapes and unique biological diversity. Keeping all this heritage, it is possible and necessary to develop tourism (including eco-tourism) in Karakalpakstan. Within the framework of a number of projects it is planned to work on tourist routes and carry out related advertising campaigns. This, in turn, will help to create additional jobs in services and handicrafts” (discourse fragment #43, lines #36-42). So, one may see how an argument about possibility of using biological ecosystem in order to develop ecotourism is made.

One year later, *Gazeta.uz* published an expert opinion of Peter Zavyalov - Deputy Director of the Institute of Oceanology of the Russian Academy of Sciences, saying that the drying of the Aral Sea is slowing down and**,** despite the extremely high salinity of water, the Aral Sea has its own ecosystem: "the ecosystem of the Aral Sea is very specific, but alive," the scientist said" (discourse fragment #46, lines #24-25). So, the newspaper introduces the idea that the sea is not completely dead; instead they picture it as having specific and unique natural conditions. One may regard this as the implicit intention of the current newspaper to promote (eco)tourism in this area. Much more explicitly, the same arguments have been made in 2017 and one may encounter a number of articles that bring onto the table the strategies for developing (eco)tourism in the region. The framing is that it is a new political regime in the country that is instrumental in the process of turning former port city of Mynak into a center of tourism: "The President has approved a comprehensive Development Program for Muynak, aiming at development of the economy and tourism in previously port area" (discourse fragment # 66, title).

From that time, the Aral Sea problem is discussed only through the lens of developing tourism in this area. Tourism is assigned a very important part in the development of the area and, in particularly, there is a plan to build a trade and tourist complex in the former port city of Muynak, that will offer unique local products and services (such as quad biking on the bottom of the sea, mud treatment, therapeutic baths in highly saline lake), building hotels, staging an annual international ecofestival named "Aral and rebirth of Muynak", gastronomic festival '99 fishes of the Aral Sea', musical and poetic festivals, reconstruction of local museums, rebuilding and reconstruction of 11 ships, development of handicrafts that symbolize the dead sea, etc. One may see that the development of the respective infrastructures is the focus. As it is stated, the purpose of such a comprehensive development program is to draw the attention of the international touristic community to the area (discourse fragment #66).

In order to further promote ecotourism in this area, a large-scale auto rally named Discover Rally Tour "Tashkent-Aral" with the length of more than 4000 km across Uzbekistan is organized in August, 2017 (discourse fragment #75). It worth mentioning here that *Gazeta.uz* was a major advertising media partner of this event, and covered all stages of the Rally Tour extensively. The final destination is the Aral Sea, and a chance to see "the most unexplored and magical places of the Uzbek land, with cosmic landscapes and a tragic history" (discourse fragment #76, lines #12-14) played a crucial role in advertising campaign. As the analyzed online media puts it, there are several reasons to visit the place: 1. "to see the Aral Sea to take thought… The death of the Aral Sea is a tragedy. It is impossible to remain indifferent when you see rusting ships on land, where recently there was a deep blue surface. These apocalyptic landscapes are an example of the consequence of an irrational waste of human resources", 2. "to see how ships die ...Walking on the bottom of once worlds' largest lakes in the world, seeing what was under a kilometers of water a few dozen years ago is not fantastic at all…This view would impress

with its magnificence and tragedy", 3. "to touch the secrets of the Aral Sea... There are many mysteries, legends and secrets around Aral… To see a place that is being explored by scientists from all over the world is a truly unique experience", 4. "to swim in the water of the vanishing Aral Sea... The water of the Aral Sea-lake is very salty, and mud is believed to have a curative effect. It is worth to check the usefulness of this procedure and to cool in the waves of a unique pond" (discourse fragment #77, lines #22-42).

As we may see in order to attract the attention of potential tourists, the media creates the image of the legendary Aral Sea at the focal point. In so doing, a special attention is given to visual elements of a discourse. For example, the image of the ship, gets a new meaning in the context of developing ecotourism in the region. Unlike the articles from *The Guardian,* where the rusted ships in the sand symbolizes the decline of the fisheries, the articles from *Gazeta.uz* uses the images of the ships to discuss the recent initiative of Uzbekistan's President to transform the Aral region into the center of tourism (discourse fragment #68). As such, those ships, after reconstruction, are going to be used to attract tourists from around the world (photo #4).

Photo #4 (Discourse fragment #68)

The latest article from this source (discourse fragment #79) goes even further in creating the image of legendary sea and depicts an interesting photo of a souvenir can filled with the 'Air from the Aral Sea' (Photo #5). It is said, that local businessmen in Karakalpakstan have started manufacturing a souvenir can with a label 'Air from the Aral Sea' and the tourists now have a chance to buy the canned air that preserves 'reminiscences of Aral'. The lettering appears in English language. The manufacturer notes that a tourist who has bought a souvenir will take with him "not only air, but also memories of the Aral Sea" (discourse fragment #79, lines #9-10). The author emphasizes that the production was launched under a ruling of new elected President on measures to boost development of domestic tourism.

Photo #5 (discourse fragment #79)

The article from 2017 that I have chosen for the detailed analysis (discourse fragment #72), brings more thoughts about how discourse and framing are being changed since 2017 and let us to see how the line of argumentation in favor of developing ecotourism in the area is being developed. The author's utterly optimistic and advertised position toward the potential of the area to be turned into (eco)tourist hotspot might be apparent throughout the article. From the very outset, he claims: "none of the world's famous places impressed me so much as the panorama of the Western Aral Sea from the elevation of the Ustyurt plateau. This is a completely cosmic, unearthly landscape*"* (lines #17-19). The main job of the author is to urge brave travelers to visit this *"*unique place, make many, many photos and publish them on social networks. Then more people will know about the Aral Sea and its problems" (lines #70-73). Throughout the article the author aims to convince the reader that, although one cannot restore the former sizes of the sea, it is possible to successfully maintain the life of the remaining lakes: Small Aral and Western Aral. Moreover, those places are worth to be visited: *"*this is an incredible sight. And it is in our country" (lines #264-265). Moreover, citing the most prominent experts in the field of Aral Sea studies he talks about curing effects of the salt and mud from the bottom of the sea, saying that hypergaline water and mud have curative effect and are similar to the water and mud of the Dead Sea in Israel.

The last paragraph of the article, titled *To Give Life to Aral,* explicitly conveys the future perspective. Referring to the scientists, he concluded that "natural environment is surprisingly stable. Therefore, one should not lose hope and leave efforts to preserve it, even when the task looks frightening. Many people have thought Aral has no future, but now it is clear that some of its parts can be saved and ecologically restored" (lines #259-263). So, the future is constructed not as hopeless, but rather as stable and even a sustainable entity. In my opinion, the author deliberately brings forward such a supportive and

encouraging paragraph as the concluding remarks for his article, that in turn reflects local political changes and new priorities aiming to develop (eco)tourism in the region.

CHAPTER 6

ANALYSIS OF DISCOURSE ELEMENTS FROM REGNUM.RU

6.1 General description of the articles

The analysis of the Russian online newspaper, *Regnum.ru* was based on 63 articles. The earliest is from February 8th, 2006, and the latest is from January 19th, 2018. The articles appeared in the following sections: *Politics (Политика), Society (Общество), Economy (Экономика), Incidents (Прошшествия)*. The layout of the articles differs slightly, there are some written in the form of a short essays or reports, while the others present a longer discussion of the issue. For the detailed analysis I have chosen an article published on July 4th, 2017 in the *Economics* section (discourse fragment #138). The article was chosen because of its 'typicality': when I had examined thoroughly all of my documents, this article stood out, as it recaps many lines of argumentation that relate to my research question. For example, it has some interesting passages that connect to the discourse about human made disasters and consider the devastation of the Aral Sea as a consequence of reclamation of steppes and deserts in the area. It contains many of arguments typical for its source and many references to scientific knowledge. At the same time, the article could be regarded 'atypical' because it puts on the table a new discourse and focuses on differentiation between the state of affairs in the Uzbek part of Aral and in the Kazakh one. Overall, the article provides me with a comprehensive basis for detailed analysis. Interestingly, as the place of publication, the author put Aral, as if the article was published there. This is 'atypical' aspect, since the majority of the articles from Regnum specify country and city of publication. Another remark is that this article, unlike majority of the other articles from this website, has the name of the author attached.

In terms of the visual background, unlike *Gazeta,uz*, few articles from *Regnum.ru* newspaper provide imaginary to the written text (only 12 of 62 articles). Discourse fragments #110, #117, #118 contain photos of local and foreign diplomats: Khamrokhon Zarifi, Tajikistan Foreign Minister (2006-2013), Hillari Clinton, US Secretary of State (2009-2013), and Serik Akhmetov, head of Kazakhstan government (2012-1014) respectively. Discourse fragments #125, #128, #132, #133 employ classical images of rusty ships marooned in the sand, leaving quite strong impression on the reader. Discourse fragment #135 concerns recent initiatives of creating a medical and tourism center at the center of the drying Aral Sea, and the written text is accompanied by a photo of a place that depicts the lowland with some sea at the back. Discourse fragments #137, #138, #139 contain satellite images of the Aral Sea. Interestingly, no references to the reconnaissance satellites that orbit the Earth are made, except general information such as "Photo from Space" (discourse fragment #136).

My analysis brought me to four main interpretive storylines (Figure #2) within which the Aral Sea problem is communicated and framed in current media: (**6.2**) Aralkym a man-made desert, (**6.3**) Water

as economic issue, (**6.4**) Water as security and peace issue, (**6.5**) Kazakh part of Aral versus Uzbek part of Aral. In what follows, I'll talk more specifically about every elements of a discourse and will provide examples from my discourse fragments.

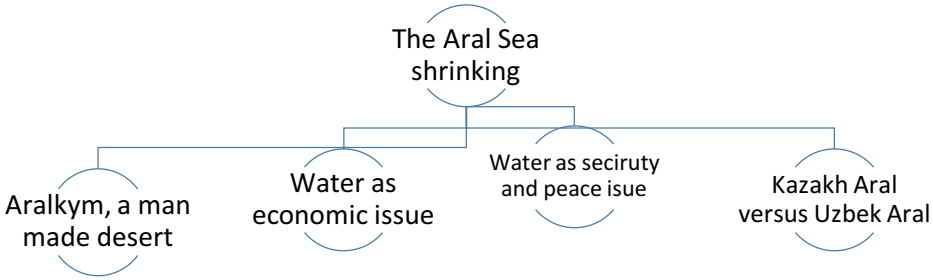

Figure #2

6.2 Aralkym, a man-made desert

In 2009, speaking at one of the round tables of the Summit on Climate Change, Murad Askarov, the Permanent Representative of the Republic of Uzbekistan to the UN, stressed that the process of desertification in the Aral Sea region has significantly increased: "additionally to existing two huge deserts - Kyzylkum and Karakum, Aralkum a new huge desert territory covered with sands and salt dust is forming in the region" (discourse fragment, 93, lines #29-33). The new formed desert area is called 'a cancer tumor on our planet': "no matter how many beautiful houses and streets are built in the Aral Sea region, no matter how much of humanitarian supplies are being sent there, or which environmental slogans we put forward. Without proper 'treatment' of the Aral Sea bottom it is impossible to solve the problem" (discourse fragment #86, lines #17-20). To support this argument, *Regnum.ru* employs the expert opinion of an academic, Zinovy Novitsky, the leading employee of the Republican Research and Production Centre for Decorative Horticulture and Forestry, who also argues in favor of land and forest reclamation work on the bottom of the Aral Sea as the most effective way to overcome the consequences of the desertification.

Therefore, a salty poisonous bottom and its far-reaching impacts are used in this context as the discursive storyline. Framing shrinkage of the sea in terms of public health, helps to make this environmental problem relevant to the audience. The issue is portrayed in a such way, that it underlines negative impact on the quality of life, health and, most importantly, the population's gene pool. Moreover, one may see the discourse about man-made desert helps to link environmental problem with social-economic problems in the area: "The trails of poisonous aerosols exceed 400 km in length and are 40 km wide. Starting from the beginning of 1980s dust storms take place over 90 days a year in this area. Clouds of salt dust worsen the ecological conditions of the Aral Sea area, resulting bad health conditions among

Central Asian population, decreasing the yield of crops, damaging fauna and flora, and causing corrosion of mechanisms and metal products" (discourse fragment #106, lines #24-33).

Besides that, a discourse about the harmful impact of Aralkym, a man -made desert covering the dried-up portion of the sea with a surface area of more than 5.5 million hectares, helps to construct the issue under study as an environmental issue of global importance. Remarkably, a new, non-human actor, the bottom of the sea, begins to play a crucial role in the process of communication:

- Discourse fragment #86, lines #11-17: "dried bottom of the Aral Sea, consists five million hectares today. Annually more than 100 million tons of salt, dust and sand are spread to the air from it. According to forecasts of experts due to further drying of the Big Aral the bottom area due may increase in the near future by another 500 thousand hectares, and an additional 40 million tons of harmful particles would affect people lives and result in respiratory diseases".
- Discourse fragment #128, lines 11-19: ""The problem of the Aral Sea shrinkage poses a threat to the whole world", Nursultan Nazarbayev, President of Kazakhstan stated. The corresponding statement of him was made within the framework of the UN Summit on the adoption of the development agenda for the period after 2015. "The disappearing Aral Sea poses a threat not only to our region, but to the whole world. As a result of its drying, the wind annually raises up to 75 million tons of dust and poisonous salt from the bottom, which are already found in Europe and Antarctica," Nursultan Nazarbayev said".

Again a visual element is being used as an important part of a discourse, that helps to make a message more persuasive and create a meaning. While talking about far reaching effects of the salty bottom, *Regnum.ru* employs classical images of rusty ships marooned in the sand, leaving quite strong impression on the reader (Photo #6, discourse fragment #133). So, the two issues ecological consequences and socio-economic degradation are intertwined in this image.

Photo #6, discourse fragment #133

IFAS is presented as an authoritative body that has the potential to fight against the desertification process. In 2009, IFAS implemented a new project aiming at a detailed investigation of the dried bottom and to surround it with reservoirs (discourse fragment #85). Within this project of IFAS, in 2010, ecologists of Uzbekistan started a large scale planting on the territory of dried bottom aiming to prevent further desertification process, improve the condition of the sea bottom, and reduce wind erosion on these territories (discourse fragment #96). Planting of a local plant *saksaul*, for example, is presented as a possible solution to maintain the ecological balance in this area, since this spice can "accumulate dust, keep sands, release oxygen, and absorb carbon dioxide" (discourse fragment #96, line #22). *Regnum* also talks about first positive results of above mentioned initiatives. In 2010, a group of scientists from Muynak forestry within the framework of measures on improving the ecological situation in the Aral Sea region could make *sakura*, Japanese cherry blossom seeds take root on the dried-up bottom of the Aral Sea: "today it grows next to saxaul and promotes sand consolidation, purifies the air, prevents salt storms" (discourse fragment #106, lines #13-15).

In terms of chronological timeline, framing the problem of the sea devastation through the prism of desertification process caused by human intervention into natural environment takes place throughout the discourse in *Regnum.ru*.

6.3 Water as economic issue

Characteristically for this discourse is the portraying the problem of Aral within the framework of effective water resources management, and management of water as an economic resource. Water is presented as economic good; it has its economic value that impacts development, because "for the population living in the Aral Sea basin, water represents life itself, its availability determines the economic development of countries and the quality of living conditions" (discourse fragment #112, lines #20-22).

An 'effective' management of water resources, as compared to previous, irrational use of natural resources, comes to the fore while discussing the fate of Aral:

- Discourse fragment #88, lines #4-34: "Today, the rational use of natural resources, primarily water and energy, is one of the most important issues in the Central Asian region… the fate of the Aral Sea drying led to tragic consequences, not only for peoples of Central Asia, but also for the whole Eurasia … All water resources of the region are confined to the basins of the Syr Darya and Amudarya rivers. If one changes the current state of the water resources of the transboundary sources in the region, where more than 50 million people live, this can result to even larger

environmental disaster, as well as problems with drinking and irrigation water, and droughts… In case of such damages, guilty party has to take all measures to eliminate or to reduce the consequences, and, if necessary, compensation needs to be paid".

In that sense, we may conclude that the Aral Sea crisis provides an important opportunity for current media not just to promote water's vital role in our lives, but also to advance its economic value and, therefore, to start discussion about the need of taking a 'responsible' approach to the use of water resources in the region:

- "Every Central Asian state should take the most responsible and rational approach to the use of water resources, since life and security of individual countries and the entire region directly depends on it" (discourse fragment #93, lines 39-42).
- "Today the interests of more than 50 million people living in the region require a comprehensive and thoughtful approach to water resources" (discourse fragment #98, lines #19-20).

Agriculture, which traditionally constitutes the main economic activity of local population, is portrayed as the biggest user of water. Particularly, Uzbekistan among five Central Asian states, is being depicted as a country that has the largest water supply extraction in the area (discourse fragment #131, title). An information source is a report of the Food and Agriculture Organization of the United Nations (FAO), that investigated irrigation systems and water use in Central Asia and Afghanistan. According to this report, "the lowest water extraction in the region is observed in Kyrgyzstan (6%) and Tajikistan (8%). The water extraction in Uzbekistan is 39% (56 km3) of the total, experts attribute this to the fact that the irrigated area in Uzbekistan is 2-4 times bigger than the irrigated area of its neighbors in the region" (lines #10-14). Meanwhile, the Uzbek side claims the country has reduced water extraction from 64 to 51 billion cubic meters per year, or almost twice per capita over the past 24 years (discourse fragment #127, lines #6-10) and $ 2 billion has been spent on rationalization of water use over the past 10 years (discourse fragment 131, lines #28-30). This was stated by the head of the State Committee for Nature Protection Bakhtiyor Abdusamatov during the ministerial conference "Water and good neighborly relations in Central Asia", held in Berlin. He noted that more than $ 2 billion has been allocated for the restoration and modernization of the drainage and irrigation structure, the introduction of water-saving technologies, the diversification of agriculture and the development of the system of integrated water resources management over the past 10 years (lines #34-39).

We may conclude that *Regnum.ru* performs the role of a platform where Central Asian countries put forward their claims over water and debate about mutually beneficial cooperation. In so doing, many articles from this source consider the problems associated with the sea shrinkage through the prism of economic cost of water and put water as a good that has its cost. By the same time much attention is

being paid to mutual beneficial cooperation among Central Asian countries in the field of water management. As they put it, "water resources of the Aral Sea basin should be equally shared among neighboring countries and improvement of current ecological situation and further sustainable development of the region depend only on mutually beneficial cooperation in the rational use of the regional water resources" (discourse fragment #114, lines #27-32).

6.4 Water as a peace and security issue

This new element of discourse stems from the previous one, Water as economic issue, and logically continues the discussion about the significance of water for the region, but through making other considerations applicable and relevant for the issue under the study. In this case regional water disputes over water are being presented as "a threat that can result in instability and water wars among Central Asian republics" (discourse fragment #125, lines #13-14).

Characteristic for this discourse are the statements about the link between water and insecurity in the Central Asian region. Such a discursive practice started to manifest itself after 2012, when Uzbek-Tajik conflict over the proposed Rogun dam reached a climax. Uzbekistan President Islam Karimov warned, though not clearly gesturing towards Tajikistan, that certain (water) projects may bring about a regional war in Central Asia (discourse fragment #114, title). Soon after, another article titled *The US predicts rising regional tensions over water in Central Asia* (discourse fragment #116, title) brought forth a new agenda: according to the recent assessment of US National Intelligence Council on Global Water Security, the countries located in the Amu Darya river basin will face water problems over the next 30 years and this will, in turn, result in "exacerbating regional tensions over water among countries" (discourse fragment #116, line #19). Another article named *Hillary Clinton called to make water management a priority of foreign policy* refers to the US report, that forecasts the situation until 2040, and says a decline in fresh water suppliers will cause many other serious problems to appear, among them food security and health conditions of people living around the Aral Sea who already suffer from the lack of water resources and ecological degradation (discourse fragment #117, lines #20-24). Citing Hillari Clinton, the US Secretary of State, *Regnum.ru* claims that a shortage of water in the region can lead to serious consequences in the field of security (lines #44-45).

Three years later *Regnum.ru* publishes another article that continues the discussion about regional tension and possible conflicts over water and asks whether water can make Central Asian states friends again (discourse fragment #125, title). The main message of the article is that lack of water overlaps with political and ethnic tensions among countries, provoking in turn serious tension in the region. The

article employs a classic image of the ship marooned in the sands, and one may see how the problem of the Aral Sea is being situated into the discussion about regional water problems. From the beginning there is an explicit attempt to set the tone: “Today there are a lot of publications about the threat of the invasion of Islamic state militants on the territory of Central Asia. Water problems present by no means less dangerous problem” (lines #11-14). The author’s emphasis is, that for people living in this area, water worth more than gold: “without it, it is impossible to develop agriculture, the majority of the local population involved in this sphere, that’s why the one who manages water, controls the region” (lines #14-16). Remarkably, some references to the archival documents kept at Russian archives are made to support the argument that water has always been a major cause of border conflicts and wars in this region. The concluding remark in the article is that the majority of water is consumed by the downstream countries, among them Uzbekistan consuming the most. This explains why increasing hydropower facilities by upstream countries is a sensitive topic for Uzbek authorities, who afraid that this project would give Tajikistan control of the river’s flow and could cause devastation if breached by an earthquake (lines #100-103). Thus, this upstream-downstream dichotomy is becoming a frame for developing discourse about water as a key factor of regional security.

Struan Stevenson, a representative of European Parliament, is portrayed as a key figure in these debates, and as someone who has an unbiased opinion. He visited Tajikistan to evaluate the site for the construction of the Rogun HPP in July, 2012 and gave his own perspectives: “World Bank invited German and Pakistani experts to evaluate the project. We hope that the final evaluation will be completed this year. My personal observations in Tajikistan indicate that this project is both safe and vital for the region” (discourse fragment #114, lines #19-24). He claims that Uzbekistan nullifies any attempt to save the Aral Sea: “In response to Tajikistan's construction of the Rogun hydroelectric power station, downstream countries started to build additional water reservoirs for water storage. Currently, there are more than 90 reservoirs in the Aral Sea basin, 55 of which are in Uzbekistan…Unfortunately, all these reservoirs are fenced with thickets, and therefore the water flows away through them. This gradual loss of water corners all attempts to stop the drying of the Aral Sea” (Ibid, lines #39-45).

So, one may see how a completely new element of a discourse is being formed here. The focus now is not on the environmental problem itself, but rather on the disputes over the proper management of water by both the upstream and downstream countries, as a major prerequisite to regional stability. The Aral Sea problem is intertwined with reflections about regional stability and security and is being extremely politicized.

6.5 Kazakh Aral versus Uzbek Aral

Within this interpretive storyline, the problem of the sea devastation is considered through the prism of two different approaches, implemented by two countries, Uzbekistan and Kazakstan. So, when talking about the problems associated with the Aral Sea shrinkage, they refer to two different parts of it, i.e. the Uzbek Aral and Kazakh Aral respectively. Today, the Aral Sea is no longer a single water body. By 1987, due to shrinking and desertification processes, the Aral Sea divided into the North (Small) Aral (located on the territory of Kazakhstan) and the South (Big) Aral (nestled between Uzbekistan and Kazakhstan), with the two possessing different hydrological regimes. In contrast to Uzbekistan, Kazakhstan is depicted as making substantial efforts to revive its part of the sea, in August 2005, within the framework of the World Bank's *Sir Darya and Northern Aral Project,* Kazakhstan completed construction the thirteen-kilometers Kok-Aral Dam, that separated two parts of the sea, Kazakh part (North Aral) from its Uzbek part (South Aral). This resulted in restoration of the northern Kazakh Aral, although isolating the southern Uzbek Aral from its only source of incoming water, the Sir Darya river. By 2012, Kazakh environmentalists claimed, it is possible to supply water to their part of Aral, even taking into account possible reduction of water resources in the coming years, and to fill the sea to the same size it had by 1965 (discourse fragment #119, lines #8-15). In 2015, the President of Kazakstan claimed that with the support of World Bank, they have already succeeded in restoring the northern part of Aral Sea (discourse fragment #128, lines #20-21).

The Uzbek side claims, this dam became a death warrant to the South Aral, on the Uzbek part; the images from the US space agency's Terra satellite in 2014 showed that its eastern part completely dried up (discourse fragment #126, lines #46-47). Another framing of an issue is that it is a deliberate policy of Uzbekistan that does now put restoration of the sea at the fore and led to its current state of affair. Uzbekistan is depicted as exploring for natural gas and oil on the dried bottom of the Uzbek part: "restoration of the Aral Sea is not beneficial to all countries in the region: for example, Uzbekistan with the involvement of investors is currently exploring the former water area of the Aral Sea for natural gas*"* (discourse fragment #128, lines #47-49). While Kazakhstan is portrayed as ensuring the continued existence of the Northern Aral Sea, and sustaining and increasing fishing industry:

- Discourse fragment #139, lines #13-18: "the catch of fish increased by 65% over the past four years, and exports tripled. Now the breeding and processing of fish are becoming a significant branch of the economy of the Kzyl-Orda region of Kazakhstan. However, such positive statistics are relevant only to the Kazakhstan part of the Aral Sea, in its Uzbek waters the situation is different: everything there is the same as 30 years ago"

As one may notice, characteristic feature of these discussions is an explicit confrontation and differentiation between the state of affairs in the Uzbek part of Aral (South Aral), and the Kazakh part (North Aral), and even the juxtaposition of two contrasting policies in these countries.

The article that I have chosen for the detailed analysis (discourse fragment #138) helps to add more thoughts about characteristics of this discourse. The article was published on July 4th, 2017 and it appeared in the *Economics* section. The heading of the article raises a provocative question: *Why Kazakhstan succeeded in saving the Aral Sea, while Uzbekistan did not?* The respective section, Economics, comes below the heading. Then a subheading says, "*Formerly it was cotton that had destroyed the Uzbek part of Aral and now it is oil"* (lines #3-4). The author (originally Kazakh) has a very clear position toward the issue under consideration: Kazakstan is making great effort to restore its part of the sea, and there are positive results of these initiatives. In contrast, Uzbekistan has deliberately chosen not to save its part in favor of oil and gas production on the territory of South Aral. So, he is accusing the Uzbek authorities of lacking the will to restore the sea level, because it is much easier to extract gas and oil in dry conditions. He provides many examples of how it could happen that: "in one part of the sea commercial fishery is taking place and the problem is already solved, while in its other part everything has remained as in 1980's and 1990's, when the Aral Sea reduced its water area" (lines #44-46). According to him, there are three reasons for that: 1. Kazakhstan is specifically taking measures to solve the problem of the Aral sea - for this reason the country attracted two World Bank loans; 2. the Syrdarya river basin, passing through the territory of Kazakhstan and feeding its part of the Aral, is much less populated than the Amudarya river basin, which feeds half of Uzbekistan and Turkmenistan. In addition, in Kazakhstan, the volume of cultivation of such water-intensive crops as rice and cotton is not cultivated to such extent as it is in comparison with Uzbekistan and Turkmenistan; 3. the availability of oil and gas fields on the territory Amudarya delta and on the bottom of the Uzbek part of the Aral Sea (lines# 52-70). The author covers in detail that third aspect, that is the production of gas and oil and, to that end, he presents many facts and statistics about state and foreign investments in the field of gas and oil production in Uzbekistan aiming, to bring the reader to the conclusion that it is a deliberate policy of Uzbekistan to move toward oil exploration in the drying South Aral seabed instead of the sea restoration (lines #109-113).

Interestingly, whatever happened to produce drastic environmental change in the area is presented through the interrelationship between the ecological and social conditions in this article. Three dimensions of this interrelationship might be revealed. The first took place in the Soviet era: "*Formerly it was cotton that had destroyed the Uzbek part of Aral*" (subheading). Here, the author explicitly links ecological change, i.e. *destroying the sea*, with the human element, *it was cotton* bearing in mind there is a direct interrelationship between shrinking of the water level with humans expanding cotton production. The second dimension is taking place in Northern smaller part of the sea: "Kazakhstan

specifically is taking measures to solve the problem of the Aral sea - for this reason the country attracted two World Bank loans... This project includes cleaning the Syrdarya to reduce water loss, the construction of a dam that allows water to be accumulated in the Small Aral Sea, and promotion of fishery in that area" (lines #53-63). Environmental conditions in and around northern Aral Sea are depicted as being greatly improved by humans: the people are changing the environment. And finally, the third dimension of the human-environment interrelationship approach could be seen in framing Uzbekistan's target exploration of the seabed and the intensification of gas and oil production there: "the investor got licenses and has the right to use subsoils and the right to extract and sell gas. Gas production is actively proceeding there" (lines #85-86), and "[t]he restoration of the Uzbek part of the Aral Sea would lead to the rise of groundwater in the delta of the former sea, and to the flooding of those parts of the bottom that are dried now, complicating all exploration and production works of oil and gas industry there. This in turn will affect whole economy of Uzbekistan. Thus, Uzbekistan chose not to save its part of the sea in favor of developing oil and gas industry there" (lines #109-113). In this context, humans are pictured as modifying and harming the environment and the author implicitly considers the Aral Sea problem as a case of human-environment interrelationship and interaction.

By dint of constant comparison between two different policies and approaches with regard to the Aral Sea problem, this article depicts Kazakhstan as succeeding in saving its part of the sea, while Uzbekistan failing to do the same. The author explicitly pictures a positive dynamic in Kazakhstan as a logical consequence of a state initiative and implementation of World Bank project to reduce water loss, and to promote fishing in that area, as comparing to Uzbekistan's one-side approach to the problem. Several other articles from this source also give two different perspectives regarding the future of the northern and southern parts of the sea (discourse fragments # 130, 134, 137, 138). Kazakhstan has chosen its policy of aiming to improve environmental and socio-ecologic conditions on its part of the sea. Since the completion of the dam and dyke, commercial fish harvests have increased, meaning a sense of hope and anticipation of more prosperous economic conditions in the future. In contrast, Uzbekistan, due to successful oil and gas exploration works on the former seabed, decided to develop this branch of economy, meaning that the ecological conditions in the area as well as health conditions of people living there most likely will not change for the better in future.

Such a juxtaposition and differentiation between the state of affairs in the Uzbek part of Aral and the Kazakh part of Aral, is a characteristic feature of this source. *Regnum.ru* not only portrays contrasting policies in these countries, but also what is more important, it employs two different entities, Uzbek Aral and Kazakh Aral.

CHAPTER 7

ANALYSIS OF DISCOURSE ELEMENTS FROM THEGUARDIAN.COM

7.1 General characteristics of the articles

There are 24 articles that were at the focus of mine in *TheGuardian.com.* The first is from March, 1999, the last is from May, 2017. The articles appeared mostly in the section *of environment* under different subsections, such as *wildlife* (discourse fragments #4), *climate change* (discourse fragments #6, #13) and *ethical and green living* (discourse fragment #17). Only six articles had the section *environment* and no subsection *(*discourse fragments #1, #9, #18, #19, #21, #22*)*. Another form of classification was the section *world* without subsections (discourse fragments #11 and #12) and with subsection *development* (discourse fragments #2, #16), *Africa* (discourse fragment #3), *Kazakhstan* (discourse fragment #5 and #7), *news* (discourse fragment #11), *Middle East* (discourse fragment #14), *Uzbekistan* (discourse fragment #15, # 20), *global development* (discourse fragment #16). Finally, one article appeared in the section of *science* (discourse fragment #10).

For the detailed analysis I have chosen the article from September 10^{th,} 2000, the same year that NASA started to document the sea level, although no results had been made available by that time. It appeared in the *World* section and to certain extent, it summarizes the main sub-topics and is the richest in terms of my codes. The article is typical in terms of the arguments, which have been put on the table while discussing the Aral Sea problem (it is a human made disaster, going back to the Soviet past, focus on the irrigational and agricultural plans that turned out to be dramatic mistake). It is also very typical in terms of the vocabulary. One major thing that makes it atypical is the absence of the photos and satellite images, that could be found throughout the discourse.

The vocabulary of *TheGuardian.com* is very different and changes over time. It is also interesting to observe how the use or misuse of scientific data reflects on vocabulary. After a dam between the northern and southern parts of the Aral Sea was built in 2005 in order to save northern part of the lake, we may see that a completely new vocabulary, full of optimistic expressions, was introduced. For example:

- discourse fragment #9, p.1, title: *"Life seeps back into the Aral Sea"*
- discourse fragment #4, p.1, line #6: *"One of the 20th century's great ecological disasters has been partly reverses"*
- discourse fragment #4, p.1, line #18-19: *"The return of the north Aral Sea shows that man-made disasters can be at least partly reversed"*

In 2014, when the satellite data documented that the south part of the Aral Sea has completely dried, the vocabulary changed dramatically: and 'disappearing' sea is turning into 'dried' or even 'dead' sea: *"Satellite images show Aral Sea basin 'completely dried" (*discourse fragment #5, title). The new vocabulary reflects a new line of argumentation.

It is worthwhile to mention that visual effects are very present in the majority of the articles in this source. Almost all discourse fragments use at least one primary image under the headline. These are pictures of camels (discourse fragment #2), deserts employed to picture the territory of the former sea (discourse fragment #15), and ships in dry harbor (discourse fragment #3, #9, #15, #20). All the images are very colorful and quite impressive.

One of most frequent category of illustrations is satellite imaginary (discourse fragment #4, #5, #6) taken by the US space agency's Terra satellite (NASA). These images play significant role in framing underlining that a large section of the Aral Sea has completely dried up. Four of 23 articles (discourse fragment #7, #21, #22, #23) are in fact visual sources with either interactive maps or satellite images and only a very short written texts accompany them. In order to increase the effect of desertification they use comparative perspective, so that the potential to be reader could see the 'original' size of the sea and compare how it had been changed over time, up to present. In doing so, they, as a rule, use the 'original' size of the sea from 1960s – the time when the large scale irrigation projects started to be implemented. Only few articles provide references to the changing size of the sea that historically varied dramatically, depending on the direction of the rivers that fed it, and discuss the impact of the seasonal precipitation in the process of desertification.

My analysis brought me to the five main interpretive storylines (Figure #3), four of them appear in almost every article of my corpus and are repetitive in their structure. Thus, the main subtopics that I carved out of these descriptions are the following: (7.2) Soviet 'mistake', (7.3) 'Wrong' agricultural policy, (7.4) Human made disaster, (7.5) Lessons of the Aral Sea, (7.6) Uzbek regime.

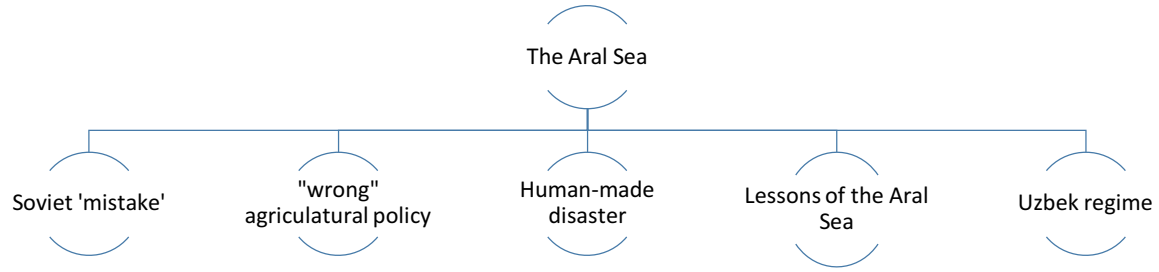

Figure #3

7.2 Soviet 'mistake'

In the majority of the articles a focus on the Soviet past is very explicit and present. This is especially the case for the earlier articles from this source. The authors refer to the mistake of Soviet authorities that caused such an ecological disaster. Especially when talking about the responsibility for this ecological disaster, one tends to underline that the decision to start a major water diversion project on the arid territories of Central Asian countries has been made by former Soviet authorities, and therefore implicitly recalls for their responsibility.

- discourse fragment #12, title: *"The Soviet dream that turned a sea to poisoned dust"*
- discourse fragment #12, p. 1, lines #14-16: *"The Aral Sea has shrunk by 75 per cent of its volume since 1960 as a result of the Soviet government diverting its source rivers to irrigate Central Asia's cotton fields"*

These last two passages are taken from the earliest article on the issue dating back to the year 1999. The combination of the words *Soviet* and *dream* does a great job in perception making, pointing out that it was a Soviet mistake. Also the second part of the title *'that turned a sea to poisoned dust'* brings us to the conclusion that this is the results of a decision made by Soviet authorities that led to the death of the sea. This is rather a simplistic category of framing that considers Central Asian countries as objects of previous Soviet mistake.

The article that has been chosen for the detailed analysis (discourse fragment #11) adds more thoughts about how the interpretive storyline about Soviet 'mistake' is being employed to discuss the Aral Sea discourse. The author moves on to blaming Soviet authorities who made a decision to irrigate vast desert areas resulting in the dramatic water shrinking. She widely uses the causal effect explanation and simplifies the complexity of the issue to the center made directive. The following two passages are of the particular interest:

- Discourse fragment #11, lines #23-29: *"In 1959, keen to boost cotton production in the dry plains of Central Asia, bureaucrats in Moscow conceived a brutally ambitious scheme to irrigate huge swathes of desert land and transform them into lush plantations. A network of unlined canals was built, water from the Aral Sea's two tributaries was diverted to the cotton fields and powerful pesticides were pumped liberally into the system. Twenty years later the region was producing nine million tones of cotton a year, but locals had noticed with alarm that the sea was shrinking".*

This paragraph aims to raise people's awareness of the problem and certainly has a potential to make a wider audience think about the real scopes of it. By dint of designating local socio-economic problems as the aftermath of actions that had taken place in the Soviet past, the article positions local people as a

passive object of wrong agricultural policy and does not call for personal responsibility at all. Moreover, author's utterly skeptical position toward future ecological situation in the Aral Sea as a direct consequence of Soviet 'mistake' might be trapped throughout the article. From the very outset the article claims that dust clouds from the sea are very dangerous for the health (headline and subheading). The author makes a strong argument that it is not only about negative impact of the quantity of dust, but rather about *"*highly poisoned toxins it contains and the sickness and disease it brings" (lines #12-13). In doing, so the author chose an emotional line of argumentation by drawing a picture of local people that "have come to fear the dust storms that sweep across this region, whipping up grit from the sandy basin of the dried Aral Sea" (lines #6-7). Another noteworthy point is that all ecological as well as socio-economic problems: desertification, collapse of the eco-system, heath problems, unemployment, poverty are depicted as a fact that does not need any further scientific evidence.

So, this element of the discourse as a rule emphasize that Central Asian people had been ignored and left forgotten by the Soviet planners of the 1950 -1960s. The main focus is on the power and authority of previous Soviet government to make decisions. So, overall the discourse this source tends to underline that is was the Soviet government led by Khrouchtchev in 1950s-1960s that deliberately deprived the Aral Sea of its main sources of water. Especially earlier articles from this source explicitly blame on Soviet (at present Russian) authorities, saying that it is the Soviet dream that turned the sea into poisoned dust (discourse fragment #12) or Soviet planning that has turned the Aral Sea into trash (discourse fragment #1).

7.3 'Wrong' agricultural policy

The subtopic of Soviet 'mistake' entangles with the sub-topic of 'wrong' agricultural policy. One may easily come across numerous references to the mismanagement of water resources for the needs of agriculture: *"*Cotton production linked to images of the dried up Aral Sea basin. The fashion industry is linked to the environmental devastation in the Central Asian inland sea – once the world's fourth largest lake, the Aral Sea 'completely dried' in August [2014]*"* (discourse fragment 6, subtitle, lines 3-5). In so doing, some authors refers not only to the previous agrarian policy but also to the current inefficient ways of Uzbekistan to cultivate conventional cotton, resulting to the devastation of the sea: "Yet 20 years after independence, agricultural practices in Uzbekistan – the second biggest cotton exporter in the world after the US – have hardly changed" (discourse fragment #2, lines #26-27). Although the word *wrong* is not explicitly mentioned, the arguments about false agricultural plans of previous Soviet authorities and current Uzbek regime could be seen throughout the discourse. The word *poor* is used instead*:* "The Aral Sea became a hallmark of poor agricultural water management in the Soviet era" (discourse fragment #14, p. 4, lines # 63-64).

We may see that conventional cotton gets agency and the capacity of influencing the process of communication and framing. It actively contributes to what is happening in the framing process. For example, this paragraph ascribes a great capacity to cotton as non-human actor that may influence perception making process:

- Discourse fragment #6, p. 2, lines #22-30: *"*The fashion industry is linked to this horror of dictatorships and environmental devastation by the fact that the crop being grown with the river water is cotton – 1.47m hectares of cotton. A hugely water intensive crop, one shirt can use up to 2,700 liters…. Conventional cotton (as opposed to organic cotton) has got to be one of the most unsustainable fibres in the world," says fashion designer and environmentalist Katharine Hamnett. "Conventional cotton uses a huge amount of water and also huge amounts of pesticides which cause 350,000 farmer deaths a year and a million hospitalizations".

Therefore, 'wrong' agricultural topic is presented as linked to the topic of Soviet 'mistake'. The emphasis is on the correlation between the current state of affairs in the region and an agrarian policy in Central Asian states, that traditionally put cotton production as its focus. Especially British source as comparing with Uzbek and Russian emphasizes that "[t]he waters of the Aral Sea have been receding for the past 50 years, sucked away by irrigation schemes". *TheGuardian.com* depicts how 'wrong' was an agrarian policy and irrigation techniques in desert regions surrounding the sea that aimed to favor agriculture. In so doing, it pictures the absurdity of drugging irrigation canals in the deserts that brought the decrease of water in the sea: "[t]he Qaraqum canal, which transports 3 cubic miles of water every year from the Amu Darya across the Karakum desert in Turkmenistan, loses up to 50% of its water every year" (discourse fragment #9, lines #42-44).

In terms of the images I may refer to typical representation of the ships sitting on the sand **(Photo #7)**. Such photos help to produce strong effect, proving that the irrigation plans to cultivate cotton destroyed a once 'flourishing' fishing industry and left behind fishing boats/ships rusting in the dustbowls of the former lakebed. In my opinion, it is also interesting to see how ships as have gained power and agency in the process of communication and framing.

Photo #7 (discourse fragment #9, p.1)

7.4 Human made disaster

There is an attempt to situate the Aral Sea crisis within "the framework of the nascent coupled human-environmental system (or coupled human and natural systems) analytical framework" (White, 2013b, p. 30) that might be observed in the majority of the articles. Amost all articles in *TheGuardian*.com depict the process of the water shrinking throughout human made disaster perspective and therefore frames the issue respectively:

- discourse fragment #2, p. 1, lines #19-20 "The Aral Sea disaster became a classic example of man-made damage to the environment"
- discourse fragment # 22, title: "The Earth from Space. A selection of spectacular satellite images, featured in Earth from Space, published by the Guardian and A&C Black, clearly shows man's devastating impact on our planet, from the disappearing Aral Sea to deforestation in Brazil…"

The article that had been chosen for the detailed analysis (discourse fragment #11) also goes to great lengths to show that what we are dealing with today is the consequences of our societal needs. In this regard, society is presented as focused on its own purposes and producing catastrophic effects in the environment, destroying the eco-system, and damaging flora and fauna. In the last part of the article it is mentioned that today there is an understanding of studying those who had suffered and creating appropriate conditions for them:

- discourse fragment #11, lines #46-49: "It is only now, with concern mounting over the fate of those left stranded by the desiccated seabed, that serious research into the health impact of the worst man-made environmental disaster is beginning".

Interestingly, only one article provides a short remark about possible natural factors that influence the inflow of water to the sea, and periods in history when the sea had completely dried, referring to Philip Micklin, a geographer from Western Michigan University: *"*And it is likely the first time it has completely dried in 600 years, since Medieval desiccation associated with diversion of Amu Darya to the Caspian Sea"(discourse fragment 5, lines 20-22*).* All other articles do not mention any facts about changing nature of the sea's surface area that varied depending on the directions of the two rivers and seasonal precipitation.

Especially after satellite images (discourse fragment #4, #5, #6) taken by the US space agency's Terra satellite (NASA) have been released, the storyline about human made disaster became very popular in analyzed source. These images became a tool for justification that it is human who is responsible for what we see now: a large section of the Aral Sea has completely dried up (**Photo 8**). Four of 23 articles (discourse fragment #7, #21, #22, #23) are in fact visual sources with either interactive maps or satellite images and only a very short written texts accompany them. In order to increase the effect of desertification they use comparative perspective, so that the potential to be reader could see the 'original' size of the sea and compare how it had been changed over time, up to present. In doing so, they, as a rule, use the 'original' size of the sea from 1960s – the time when the large scale irrigation projects started to be implemented. One may wonder how they determine what exactly should be taken as the 'original' size of the Aral Sea. No references to the changing size of the sea that historically varied dramatically, depending on the direction of the rivers that fed it, and no references to the impact of the seasonal precipitation are provided.

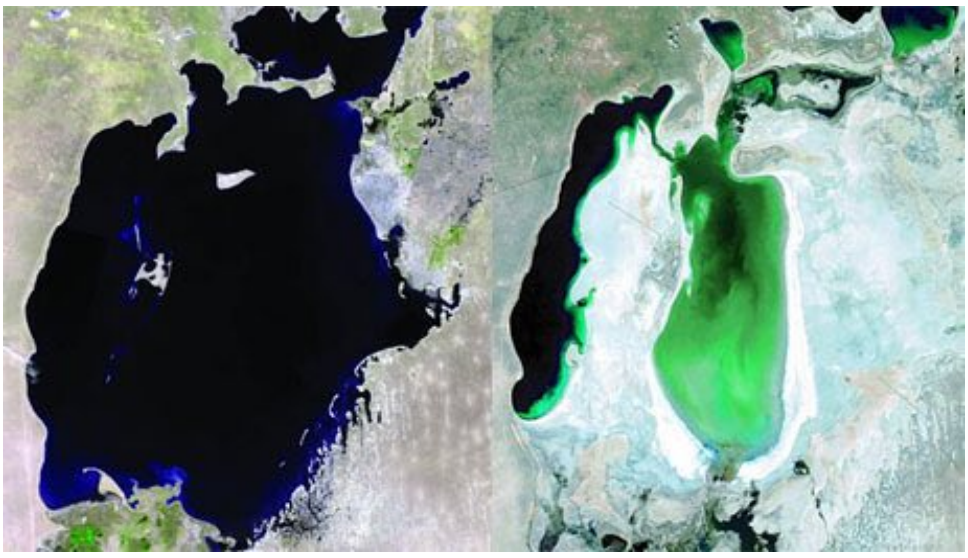

Photo 8 (discourse fragment #4, p.1)

7.5 Lessons of the Aral Sea

The Guardian.com not only claims that the case of the Aral Sea shrinkage is a world famous example of human mismanagement of natural resources, it also calls us to take the Aral Sea 'disaster' as an example, in order to avoid same environmental problems worldwide. So, when discussing irrigation projects in other part of the world, the parallels with the Aral Sea are made to emphasize that they could devastate fisheries and affects livelihoods as it has happened in Central Asia (discourse fragment #3).

Within this element of a discourse, the case of the Aral Sea is being used in different contexts, as an example to use its lessons in order to "avoid similar, looming disasters in other regions" (Blondel, 2014, p. v). I have found references to the Lake Urmia in Iran (discourse fragment #14) and the Lake Turkana in Kenia (discourse fragment #3).

- discourse fragment #14, p. 4, lines # 61: "The tragic demise of the Aral Sea in central Asia is a chilling precedent".
- discourse fragment #3, title: "Ethiopian dam's ecological and human fallout could echo Aral Sea disaster"
- discourse fragment #3, p.1-2, lines #19-22: "Ultimately, the 6,400 sq km lake could reduce to two small lakes. The picture that emerges from these predictions bears a striking resemblance to the recent disastrous history of the Aral Sea, which was once the world's fourth-largest inland water body"
- discourse fragment #3, p.2, lines #30-31: "The parallels [of the Aral Sea] with what might happen to the people and environment of Lake Turkana and a large part of northern Kenya are clear"

We may see, that *TheGuardian.com* explicitly aims to present this case study as an international example of environmental mismanagement: "The Aral Sea became an internationally famous example of environmental mismanagement after the then Soviet government decided in the 1950s to license a big increase in irrigation from the two rivers feeding the sea to increase rice and cotton production" *(*discourse fragment #4, p.2, lines 22-23*)*.

7.6 Uzbek regime

The later articles introduce a new discourse that considers associated with the Aral Sea problems through the prism of Uzbek politics. Especially after 2014, when the satellite images documented that the eastern basin has completely dried, we may see the new rhetoric that connects the topic of the environmental disaster with the development of fashion industry (discourse fragment #6). Going in the

lines with Gusfield's notion of responsibility (Gusfield, 1984) we may see how *causal responsibility* that looks to a causal explanation of effects and answers the question *how come* is not at the stake to such extent as before and there is a shift toward *political responsibility*, that is *what is to be done* question and is the matter of current policy. Thus, *TheGuardian.com* slowly shifts toward discussion of current local regimes that still base their economies on cotton cultivation (discourse fragment #6, from 2014). It is interesting to see how a new entity – a forced labor, arises and becomes linked to the topic of environmental destruction: "[t]he environmental impact of losing the Aral Sea is not yet known, what we do know is that the cotton that destroyed it, is cotton picked by forced labor and destined for European shops" (discourse fragment #6, p. 4, lines #83-85).

Therefore, this topic is characteristic for the recent articles, so within it journalists underline the need to change the whole Uzbek agricultural policy and talk about the specifics of the current Uzbek regime. The main argument here is that Uzbek authorities must develop sustainable land and water use methods and implement them in order to change the culture of water usage in the region. However, the current political regime in the country has another priorities and does not aim to change its focus on cotton production. For example:

- discourse fragment #6, p. 4, lines #42-85: *"*The harvest of Uzbek cotton is taking place right now… The harvest itself is a horror story, on top of the environmental devastation, this is cotton picked used forced labor. Every year hundreds of thousands of people are systematically sent to work in the fields by government…. Changing the policy that puts farmers and citizens in the position of forced labor to harvest cotton is the essential first step to addressing the overall picture… Farmers free to diversify their crops and escape local government controlled monopolies are the lynch pin to changing the ecological impacts…. The environmental impact of losing the Aral Sea is not yet known, what we do know is that the cotton that destroyed it, is cotton picked by forces labor and destined for European shops"

It is remarkable how the new entity, a forced labor, arises while talking about Uzbekistan policy in terms of cotton production. So framing of the issue is done through emphasizing forced, including child, labor. The two issues environmental destruction and forces labor are presented as intrinsically linked.
Unsurprisingly such a framing is not characteristic for the Uzbek source, *Gazeta.uz,* where cotton as a major cause of the former and current sea shrinking is not discussed at all.

CHAPTER 8

CONCLUSION

In this concluding chapter of my Thesis, I will compare how the problem of the Aral Sea is framed in three online newspapers. The first aspect I will discuss is the language and vocabulary in these sources. Then, I will lay out discursive position of every newspaper and discuss specific storylines and elements of the discourse characteristic for every source. Also, I will try to draw parallels and to see which similarities in framing the problems associated with the sea devastation could be found throughout the discourse in Uzbek, Russian and British media.

Vocabulary

In terms of the overall tone of the newspapers, the Uzbek online newspaper stands out as the most politicized. We can see that political and diplomatic vocabulary is being deployed o discuss an environmental issue. There are many references to the statements of politicians, and specific political events, such as conferences, UN meetings, and agreements. Information is framed in a such a way that the utility of international norms and laws in the field of water use for local settings is the focus, as well as something that is taken for granted. In so doing, it is the overall politicized language of this newspaper that helps to propel this environmental issue into the political arena. Throughout the discourse, vocabulary is actively used to support the main message of the source, and the potential reader gets few options to see the situation from different angles. Moreover, vocabulary does not reflect much background knowledge about this environmental problem, but rather presents the state official position as such

Regnum.ru, as a regional news website covering news from whole post-Soviet bloc, has many correspondents almost in all countries of the region. In spite of the variety of people employed by *Regnum.ru,* who gather, report, contribute and write news on the Aral Sea from a distance, the vocabulary seems to be very standardized. The issue under consideration is framed in a particular way, a way that assigns a politicized meaning to the topic, similarly to *Gazeta.uz*. Explicit references to the people, places, institutions constituting the political life of society could be found throughout the discourse. What makes the vocabulary of these two sources different is a focus on the diplomatic aspects in the case of Uzbek newspaper and the presence of socio-economic components in the vocabulary of the Russian newspaper.

The vocabulary of *TheGuardian.com* seems, at first glance, not to be as politicized as in the two other newspapers. One does not encounter political and diplomatic vocabulary to such extent as in the other

two sources. Much more background information is provided to help the reader to get the sense of the issue.

Discursive positions

The language of the articles in *Gazeta.uz* does a good job of situating the shrinking of the sea, as well as local water disputes among Central Asian countries, on the international policy agenda as an issue of common concern. If we compare the line of argumentation, in most cases, in the articles from *Gazeta.uz* with the publications in *TheGuardian.com,* one may encounter that the shrinking of the sea is not presented within the framework of "Soviet past" or "wrong agricultural policy" to such an extent as in British web source. Rather, the emphasize is on constructing the problem of the Aral Sea as a political issue of the present day that requires collective action. There is an explicit call for standardized (through the UN norms and practices of water use) and globalized environmental knowledge. Therefore, especially in this source, the problem of the Aral Sea is constructed as a global problem, and as an issue of global significance. If we step back and look at the argumentative storyline in this source, we can see how local and specific environmental issue, shrinking of the sea, becomes a global issue, singular and placeless (Tunhout, Dewull & Hulme, 2016). Therefore, as *Gazeta.uz* puts it, global support is needed to solve the problems associated with the Aral Sea shrinkage. We may assume that *Gazeta.uz*, integrates the problem of the Aral Sea into discourses about sustainability and climatic changes in order to attract the attention of the world community to the Aral as a place where climatic change has been already taking place. This, in turn, helps local authorities to get socio-political resonance and to generate political effects. Such framing also may allow to consider socio-economic problems in the region within the framework of global responsibility. International organizations and global actors become involved in finding solutions. The visits of the UN heads to the region undoubtedly have helped to gain credit to spreading new discourses about sustainability and climate change. Since their visits, the problem of the Aral Sea is being constructed as an issue of global importance that requires collective responsibility, therefore it is becoming part and parcel of global environmental politics.

In the three sources under analysis, one may encounter numerous references to the experts from the World Bank and the UN, statements of their officials, and reports prepared within the framework of their activity in the region. This source of knowledge is actively used when putting forward certain claims and getting credibility to the arguments It is especially explicit in *Gazeta.uz*, where the statements and evaluations given within the framework of global institutions, are used as a justification for placing this environmental problem on a global scale. Remarkably, in most cases, international organizations are seen as the authoritative bodies that produce evaluations about causes and consequences of this environmental 'disaster' but the local institutions are not. These international organizations are as also seen as determining what should be done to mitigate them. In my opinion, this tendency falls very much in line with Martello & Jasanoff's observation that in environmental issues, "mega-institutions such as

the United Nations and the World Bank took up the task of management on a global scale" (Martello & Jasanoff, p. 6).

Another critical point relates to the references to the cotton. Remarkably, when talking about the problems associated with the Aral Sea shrinkage, *Gazeta.uz* deliberately does not mention cotton at all. To reiterate, conventional cotton, as major non-human actor that is present in other sources, is not mentioned here at all. *Gazeta.uz* does not relate the loss of the Aral Sea specifically to cotton production. When talking about the causes of the decline, journalists refer to 'inefficient use of water resources taken place in the past,' not specifying that Soviet irrigation plans to transform Uzbekistan into a world producer of cotton and not mentioning the current one crop economy of the country at all. This is in sharp contrast to the other two sources of mine, *Regnum.ru* and *TheGuardian.com,* which do discuss this. Instead, we may see that two new, non-human actors are being employed to communicate the issue under the study, gas and eco(tourism). Both of them, to different extents, help to construct the future of the Aral Sea as stable and promising. For example, in 2013 *Gazeta.uz* cites Peter Zavyalov, Deputy Director of the Institute of Oceanology of the Russian Academy of Sciences, stating that the drying of the Aral Sea is slowing down and is stabilizing: "the analysis shows that the sea has now come close to equilibrium, since its mirror has decreased so much that the evaporation has decreased too, that even not very significant residual river runoffs, and also the underground drain allows balancing the sea," (discourse fragment #46, lines #19-22). It is emphasized here that, despite the extremely high salinity of water, the Aral Sea has its own very specific and very alive ecosystem. We can see that, in this context, scientific knowledge helps to build an argument about the region as having specific ecosystem. As shown above, this has helped to create a discourse about the need to develop ecotourism in the area.

Regnum.ru, like the Uzbek newspaper *Gazeta.uz*, tends to portray the story about the disappearing sea within a framework of regional water management. There are indirect and passing references to the previous irrational use of water resources, but, as a rule, these expressions are not presented in a way that brings to the fore the Soviet Union's ambitious plans to transform Uzbekistan into world's largest producer of cotton. One may find some allusions to so called "Soviet era reclamation of steppes and deserts," which is traditionally presented as a main cause of the devastation of the sea. But the overall focus is not on the past, but rather on the present. In *Regnum,* much attention is paid to covering issues related to the current economic issues in the region, i.e. natural water distribution, upstream-downstream dichotomy, and water consumption per country. Considerable attention is paid to underlining the significance of solving this environmental problem for stability in the region. One may conclude that, unlike previous sources, water here is assigned a new meaning. It is an issue of peace and security as well: the "[p]roblem with water becomes a threat that can result in instability and water wars among Central Asian republics. For people living here, water worth more than gold…. The one who manages water, controls the region" (discourse fragment #125, lines #13-16). Therefore, many explicit

statements are made that it is necessary to engage diplomatically when confronting water issues in Central Asia and to carefully coordinate diplomatic efforts to solve the Aral Sea problem. One of the central arguments is that a lack of water overlaps with political and ethnic problems among countries and provokes serious tensions in the region. The Uzbek-Tajik confrontation over water is being elucidated extensively. Much attention is also paid to the health problems associated with the devastation of the sea. The spreading of salt, sand and dust from the bottom of the sea is a serious issue. This is presented as a potential threat to the whole world: "[t]he disappearing Aral Sea poses a threat not only to our region, but to the whole world. As a result of its drying, the wind annually raises up to 75 million tons of dust and poisonous salt from the bottom, which are already found in Europe and Antarctica," (discourse fragment #128, lines #17-19).

The Guardian.com is the source that emphasizes the most the role of the previous Soviet government in causing the devastation of the sea. It tends to underline that is was the Soviet government in the 1950s-1960s that deliberately deprived the sea of its two main sources of water. Earlier articles from this source especially and explicitly blame the problem on Soviet (and at present Russian) authorities, saying that it is the Soviet dream that turned the sea into poisoned dust (discourse fragment #12) or Soviet planning that has turned the Aral Sea into trash (discourse fragment #1).

Also, it is *TheGuardian*.com that stands out as the source that widely employs a new particular form of scientific knowledge, a satellite imagery of NASA. It serves a legitimate basis for putting forward arguments about physiographic changes of the sea: “NASA satellite images show how an area of the Central Asian inland sea – one of the fourth largest in the world – became completely parched in less than 20 years” (discourse fragment #7, lines #3-5). Because of the unavailability, or the lack of reliable and consistent ground data, the media uses high-resolution satellite observations over the past few years to estimate the lake’s physiographic changes and to imagine future scenarios. Therefore, publishing satellite images from NASA became a way to add credibility to the discourse about ‘worst human-made environmental disaster’. The changing morphology of the Aral Sea was derived from satellite imagery for the different years and has been used to demonstrate the rapid desiccation process of the lake since 1960. This form of ‘scientific’ knowledge has been widely used to derive the actual sea level associated with each year's water surface area (Ressl & Micklin, 2004, pp. 79-80). Satellite images of the Aral Sea, like Jasanoff’s image of Planet Earth captured by the Apollo 17 astronauts in December 1972 that has achieved an iconic status (Jasanoff, 2004a, p, 38), and appears everywhere when communicating the problem of the Aral Sea. Moreover, they are used by the media to make model predictions about the sea’s further shallowing and to frame the issue as one of global importance. This is in line with Jasanoff’s observation that the image stands “*not only for a global associationism, but also for an awareness of the Earth’s environment as an integrated system*” (Ibid). In that sense, we may see how particular form of knowledge, such as satellite images, give rise to a rhetoric of the Earth’s fragility and ecological

interconnectedness (Jasanoff, 2001).

This source also uses the case of the Aral Sea as an example of human made disaster while talking about other irrigation projects worldwide and drawing possible scenarios with regard to Lake Urmia in Iran (discourse fragment #14) and the Lake Turkana in Kenia (discourse fragment #3). But unlike *Gazeta.uz,* it does not make explicit efforts to relate the problem of the Aral Sea devastation to the discourses around climate change and sustainable development discourses.

Another critical aspect, is that, unlike *Regnum* and *Gazeta* that extensively covered Uzbek-Tadjik confrontation over water management in the region, *TheGuardian.com* has not considered the problem of the Aral Sea through the prism of this confrontation. But this is not the case for Uzbek-Kazakh conflict, this topic is present in *TheGuardian.com* (discourse fragment #1), although not to such extent as in *Regum.ru*.

Regnum.ru and *TheGuardian.com* have similar arguments regarding current Uzbek regime in the country. The first source does a good job making comparison between Uzbek and Kazakh regimes and two different policies and approaches with regard to the Aral Sea problem. Uzbekistan is presented as failing and not willing to save its part of the sea. The latest underlines the negative impacts of the current Uzbek regime that puts cotton production as an agenda and nullifies any attempts to save the sea. Unsurprisingly, such a framing is not characteristic for local online newspaper at all. As mentioned above, cotton as a nonhuman entity that could influence the devastation of the sea sea is not even discussed in *Gazeta.uz*.

Thus, throughout my Master's Thesis, I have aimed to show that this case study may serve an example of how local environmental problems could be relocated, deliberately put into completely new scale, and considered within the framework of global environmental politics, such as Millennium Development Goals, climate change and sustainability. This brings a new agenda, new global actors involved and new political decisions to be made. In that sense, one may see how the production of scientific knowledge and its interaction with power critically determines the construction of both the local and the global. As Jasanoff and Martello put it, "*how we understand and represent environmental problems is inescapably linked to the ways in which we choose to ameliorate or solve them… And which issues are defined as meriting the world's attention has everything to do with who has power and resources, including scientific ones, to press for them*" (Jasanoff & Martello, p. 5).

By the same time, one has to emphasize that globalized re-presentations of the issue under the study are being used with different purposes and on a different degree in three analyzed sources. If we take the Uzbek newspaper, this process is quite explicit, and throughout the discourse there are attempts to

consider environmental problems associated with the sea shrinking only through the prism of collective responsibility. Such a representation not only helps to draw attention to the region but also to relocate local socio-economic problems on another scale too. The British source also does a good job in zooming out the problem of the Aral Sea, although a bit differently, through connecting it to the other ecological problems taken place in other parts of the world, and implicitly emphasizing interconnectedness of environmental problems. Satellite imaginary of the Aral Sea has helped to spread the image of the Earth as an integrated system. The Russian newspaper seems to be not as focused on linking the future of the Aral Sea to globalized institutions and global environmental knowledge, as the other two sources. As mentioned above, in *Regumn.ru* much more attention is given to emphasizing regional stability, since, as they put it, water has always been a major cause of border conflicts and wars in this region. Therefore, the future of the Aral Sea region is constructed as directly linked to the peace in the region.

The co-productionist lens that I tried to utilize throughout my research has enabled me to deconstruct these processes, while framing theory has revealed a major role of media in this interplay. Media, as such, both frames and is framed by global environmental politics itself.

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APPENDIX

Discourse fragment	URL	Title	Document Publishing Dat
discourse fragment #1	https://www.theguardian.com/environment/2003/oct/29/sciencenews.theguardianlifesupplement	Kazakh dam condemns most of the shrunken Aral Sea to oblivion	29.10.2003
discourse fragment #2	https://www.theguardian.com/society/2011/apr/26/sustainable-farming-water-uzbekistan-nabiyeva	Sustainable tree-planting helps to restored degraded land in Uzbekistan	28.04.2011
discourse fragment #3	https://www.theguardian.com/global-development/2014/mar/05/ethiopian-dam-gibe-iii-aral-sea-disaster	Ethiopian dam's ecological and human fallout could echo Aral Sea disaster	05.03.2014
discourse fragment #4	https://www.theguardian.com/environment/2008/aug/01/endangeredhabitats.conservation	Aral sea rescue plan a 'partial success'	01.08.2008
discourse fragment #5	https://www.theguardian.com/world/2014/oct/01/satellite-images-show-aral-sea-basin-completely-dried	Satellite images show Aral Sea basin 'completely dried'	01.10.2014
discourse fragment #6	https://www.theguardian.com/sustainable-business/sustainable-fashion-blog/2014/oct/01/cotton-production-linked-to-images-of-the-dried-up-aral-sea-basin	Cotton production linked to images of the dried up Aral Sea basin	01.10.2014
discourse fragment #7	https://www.theguardian.com/world/ng-interactive/2014/oct/02/watch-the-aral-seas-eastern-basin-disappear-interactive	Watch the Aral Sea's eastern basin disappear – interactive	02.10.2014
discourse fragment #8	https://www.theguardian.com/artanddesign/2014/jul/18/nadav-kander-russia-photography-nuclear-deserted-towns	Picture of the week: The Aral Sea I, by Nadar Kandler	18.07.2014
discourse fragment #9	https://www.theguardian.com/environment/2006/apr/07/science.russia	Life seeps back into the Aral Sea	07.04.2006
discourse fragment #10	https://www.theguardian.com/science/2005/apr/21/russia.internationalnews	Welcome to anthrax island	21.04.2005
discourse fragment #11	https://www.theguardian.com/world/2000/sep/10/ameliagentleman.theobserver	Millions fear killer dust clouds from dried-up sea	10.09.2000

discourse fragment #12	https://www.theguardian.com/world/1999/mar/31/4	The Soviet dream that turned a sea to poisoned dust	31.03.1999
discourse fragment #13	https://www.theguardian.com/environment/2001/oct/30/afghanistan.warinafghanistan2001	Drought-hit states facing famine	3.10.2001
discourse fragment #14	https://www.theguardian.com/world/iran-blog/2015/jan/23/iran-lake-urmia-drying-up-new-research-scientists-urge-action	Lake Urmia: how Iran's most famous lake is disappearing	23.01.2015
discourse fragment #15	https://www.theguardian.com/world/2015/feb/05/uzbek-separatist-movement-threatens-ancient-culture	Uzbekistan separatist movement threatens ancient culture'	05.02.2015
discourse fragment #16	https://www.theguardian.com/world/2006/sep/29/outlook.development1	In search of a paddle	29.09.2006
discourse fragment #17	https://www.theguardian.com/environment/2017/mar/05/the-eco-guide-to-female-friendly-shopping	The eco guide to female-friendly shopping	05.03.2017
discourse fragment #18	https://www.theguardian.com/environment/2009/jul/17/turkmenistan-golden-age-lake	Turkmenistan tries to green its desert with manmade lake	17.07.2009
discourse fragment #19	https://www.theguardian.com/environment/2012/oct/04/bring-back-wilderness	Can we bring back the wilderness?	04.10.2012
discourse fragment #20	https://www.theguardian.com/world/2014/jun/09/-sp-post-soviet-world-need-to-know-uzbekistan	Post-Soviet world: what you need to know about Uzbekistan	09.06.2014
discourse fragment #21	https://www.theguardian.com/environment/2014/aug/06/-sp-satellite-eye-on-earth-july-2014-in-pictures	Satellite eye on Earth: July 2014 – in pictures	06.08.2014
discourse fragment #22	https://www.theguardian.com/environment/gallery/2007/aug/08/2	The Earth from Space	08.08.2007
discourse fragment #23	https://www.theguardian.com/global-development-professionals-network/gallery/2016/dec/09/the-lakes-of-the-world-are-disappearing-in-pictures	The lakes of the world are disappearing – in pictures	09.12.2016
discourse fragment 24	https://www.theguardian.com/lifeandstyle/lostinshowbiz/2010/feb/22/sting-uzbekistan	Sting in the pay of tyrannical Uzbekistan regime	22.02.2010
discourse fragment #25	https://www.gazeta.uz/ru/2010/03/04/aral/	Фонд Арала расширит сотрудничесиво с ООН	03.03.2010

discourse fragment #26	https://www.gazeta.uz/ru/2010/03/23/un/	Узбекистан – за рациональное использование водных ресурсов	23.03.2010
discourse fragment #27	https://www.gazeta.uz/ru/2010/03/29/moon/	Генсек ООН посетит Узбекистан	29.03.2010
discourse fragment #28	https://www.gazeta.uz/ru/2010/04/05/unsg/	Пан Ги Мун шокирован Аралом	05.04.2010
discourse fragment #29	https://www.gazeta.uz/ru/2010/04/04/aral/	Генсек ООН ознакомился с Аралом	04.04.2010
discourse fragment #30	https://www.gazeta.uz/ru/2010/05/06/gas/	На Арале нашли первый газ	06.05.2010
discourse fragment #31	https://www.gazeta.uz/ru/2010/07/15/oilgas/	Инвестиции в нефтегазовую отрасль вырастут	15.06.2010
discourse fragment #32	https://www.gazeta.uz/ru/2010/09/09/aral/	Открылась фотовыставка «Аральские силуэты»	09.09.2010
discourse fragment #33	https://www.gazeta.uz/ru/2010/09/30/aral/	Принимаются меры по улучшению ситуации в Приаралье	30.09.2010
discourse fragment #34	https://www.gazeta.uz/ru/2010/10/07/dams/	Проблемы Арала – проблемы миллионов людей	07.10.2010
discourse fragment #35	https://www.gazeta.uz/ru/2010/11/02/ges/	Апелляции должны подкрепляться фактами	02.11.2010
discourse fragment #36	https://www.gazeta.uz/ru/2011/06/22/eco/	Экологи обратились к главе Европарламента	22.06.2011
discourse fragment #37	https://www.gazeta.uz/ru/2011/07/28/water/	Узбекистан призывает к рациональному использованию водных ресурсов	28.07.2011
discourse fragment #38	https://www.gazeta.uz/ru/2011/09/27/un/	Глава МИД Узбекистана выступил на Генассамблее ООН	27.09.2011
discourse fragment #39	https://www.gazeta.uz/ru/2011/10/05/un/	Узбекистан призывает к рациональному использованию водных ресурсов	05.10.2011
discourse fragment #40	https://www.gazeta.uz/ru/2011/10/14/aral/	Дно Аральского моря засадят лесами	14.10.2011
discourse fragment #41	https://www.gazeta.uz/ru/2011/10/14/climate/	Узбекистан адаптируется к изменению климата	14.10.2011
discourse fragment #42	https://www.gazeta.uz/ru/2012/06/23/rio/	Узбекистан примет стратегию устойчивого развития	23.06.2012
discourse fragment #43	https://www.gazeta.uz/ru/2012/10/25/aral/	«Утраченное море: уроки и выводы»	25.10.2012
discourse fragment #44	https://www.gazeta.uz/ru/2012/07/13/aral/	ООН начала программу по улучшению жизни в Приаралье	13.07.2013

discourse fragment #45	https://www.gazeta.uz/ru/2013/04/11/aral/	Главы агентств ООН в Узбекистане посетили Каракалпакстан	11.04.2013
discourse fragment #46	https://www.gazeta.uz/ru/2013/06/18/aral/	Российский ученый заявил о замедлении высыхания Арала	18.06.2010
discourse fragment #47	https://www.gazeta.uz/ru/2013/09/21/aral/	Узбекистан выступил в ООН с инициативой по Аралу	21.09.2013
discourse fragment #48	https://www.gazeta.uz/ru/2013/09/28/ga	Глава МИД Узбекистана выступил в Генассамблее ООН	28.09.2013
discourse fragment #49	https://www.gazeta.uz/ru/2014/09/08/aral/	Проблемы Арала обсудят в Ургенче	08.09.2014
discourse fragment #50	https://www.gazeta.uz/ru/2014/09/09/aral/	ВБ и Фонд спасения Арала подписали меморандум	09.09.2014
discourse fragment #51	https://www.gazeta.uz/ru/2014/09/29/aral/	Фото: Восточная часть Арала впервые полностью высохла	29.09.2014
discourse fragment #52	https://www.gazeta.uz/ru/2014/10/28/unsg/	Генсек ООН призвал активнее участвовать в спасении Арала	28.10.2014
discourse fragment #53	https://www.gazeta.uz/ru/2014/10/29/president/	Президент: Приаралью нужна новая многоплановая программа содействия	29.10.2014
discourse fragment #54	https://www.gazeta.uz/ru/2014/11/12/pink-floyd/	«Клип об Арале — как напоминание и как надежда»	12.11.2014
discourse fragment #55	https://www.gazeta.uz/ru/2014/12/29/aral/	Проекты на $3 млрд реализуют в Приаралье (список)	29.12.2014
discourse fragment #56	https://www.gazeta.uz/ru/2015/04/03/shield/	«Зеленый щит» из саксаула длиной 197 км создается в Бухаре	03.04.2015
discourse fragment #57	https://www.gazeta.uz/ru/2015/04/16/aral/	«Арал не вернуть, важно остановить негативные тенденции»	16.04.2015
discourse fragment #58	https://www.gazeta.uz/ru/2015/06/09/unsg/	Пан Ги Мун обсудит с главами стран региона трансграничные проблемы	09.06.2015
discourse fragment #59	https://www.gazeta.uz/ru/2015/07/13/aralsea/	Aral Sea может начать разработку месторождений углеводородов в 2017 году	13.06.2015
discourse fragment #60	https://www.gazeta.uz/ru/2015/09/09/water/	Узбекистан — за «прагматичный и реалистичный подход» к водным вопросам	09.09.2015
discourse fragment #61	https://www.gazeta.uz/ru/2015/09/26/aral/	Узбекистан предложил создать под эгидой ООН Трастовый фонд по Аралу	26.09.2015

discourse fragment #62	https://www.gazeta.uz/ru/2015/11/04/wb/	ВБ выделил $38 млн на устойчивость к изменению климата в ЦА	04.11.2015
discourse fragment #63	https://www.gazeta.uz/ru/2016/01/11/stamp/	Выпущена марка «Катастрофа Аральского моря»	11.01.2016
discourse fragment #64	https://www.gazeta.uz/ru/2017/01/12/un-aral-sea/	ООН запустила новую программу в Приаралье	12.01.2017
discourse fragment #65	https://www.gazeta.uz/ru/2017/02/10/aral-sea/	Новой программе в поддержку Приаралья дан старт	10.02.2017
discourse fragment #66	https://www.gazeta.uz/ru/2017/03/02/muynak/	Муйнак превратят в центр туризма	02.03.2017
discourse fragment #67	https://www.gazeta.uz/ru/2017/03/07/women/	Женщин Каракалпакстана обучат навыкам предпринимательства	07.03.2017
discourse fragment #68	https://www.gazeta.uz/ru/2017/04/13/aralsea/	Кораблям на дне Аральского моря дадут имена	13.04.2017
discourse fragment #69	https://www.gazeta.uz/ru/2017/04/17/muynak/	«Все люди должны увидеть эти погибшие корабли» — Стефан Приснер	17.04.2017
discourse fragment #70	https://www.gazeta.uz/ru/2017/04/21/carececo/	«Проблемы экологии не имеют границ» — глава РЭЦЦА	21.04.2017
discourse fragment #71	https://www.gazeta.uz/ru/2017/04/25/iskandar-abdullaev/	Интервью. Искандар Абдуллаев: «Мы живем в экологической среде, которую невозможно разделить административными границами»	25.04.2017
discourse fragment #72	https://www.gazeta.uz/ru/2017/05/25/aral/	Арал жив и ждет туристов (+фото)	25.05.2017
discourse fragment #73	https://www.gazeta.uz/ru/2017/06/06/un/	Генсек ООН посетит Узбекистан и другие страны ЦА	06.06.2017
discourse fragment #74	https://www.gazeta.uz/ru/2017/06/11/unsg/	«Аральская катастрофа — пример того, как человек разрушает планету» — глава ООН	11.06.2017
discourse fragment #75	https://www.gazeta.uz/ru/2017/07/10/rally/	Discover Rally Tour отправляется в путешествие к Аралу	09.06.2017
discourse fragment #76	https://www.gazeta.uz/ru/2017/07/27/rally/	Discover Rally Tour приглашает на заезд «Ташкент-Арал»	27.06.2017
discourse fragment #77	https://www.gazeta.uz/ru/2017/07/19/rally/	Аральское море ждет участников масштабного ралли «Ташкент — Арал»	19.07.2017

discourse fragment #78	https://www.gazeta.uz/ru/2017/08/14/rally/	Участники Discover Rally Tour завершили автопробег до Аральского моря	14.08.2017
discourse fragment #79	https://www.gazeta.uz/ru/2017/09/07/biodiversity/	«Природоохранные меры не будут работать без осознанного участия жителей»	07.09.2017
discourse fragment #80	https://www.gazeta.uz/ru/2017/10/16/aral/	Глава офиса ООН ознакомилась с Приаральем	16.10.2017
discourse fragment #81	https://regnum.ru/news/economy/587219.html	На восстановление экологии Аральского моря потрачено 330 млн.долларов	08.02.2006
discourse fragment #82	https://regnum.ru/news/economy/812109.html	Всемирный банк: Проект по восстановлению Северного Аральского моря начинает достигать поставленной цели	########
discourse fragment #83	https://regnum.ru/news/polit/1060958.html	Таджикистан и Узбекистан заявили в ООН свои позиции по водно-энергетической проблеме	26.09.2008
discourse fragment #84	https://regnum.ru/news/polit/1061248.html	Узбекистан призвал придать Фонду спасения Арала статуса наблюдателя при Генеральной Ассамблее ООН	28.09.2008
discourse fragment #85	https://regnum.ru/news/society/1110352.html	Международный фонд спасения Арала освоит осушенное дно моря и окружит его водоёмами	14.01.2009
discourse fragment #86	https://regnum.ru/news/society/1126368.html	Лесомелиоративные работы на дне Аральского моря позволят уменьшить вынос соли, песка и пыли более чем на 80%	18.02.2009
discourse fragment #87	https://regnum.ru/news/society/1157308.html	Президент Узбекистана: Спасти Аральское море вряд ли практически возможно	28.04.2009
discourse fragment #88	https://regnum.ru/news/polit/1075897.html	Различные подходы в водно-энергетической сфере приводят к экологическим катастрофам - МИД Узбекистана	28.10.2008
discourse fragment #89	https://regnum.ru/news/society/1092702.html	Катастрофа Аральского моря вызвала резкий рост заболеваемости населения	02.12.2008
discourse fragment #90	https://regnum.ru/news/society/1169307.html	В Узбекистане темпы потепления климата более чем в	28.05.2009

		два раза превышают средние по планете	
discourse fragment #91	https://regnum.ru/news/society/1185214.html	Аральское море окончательно исчезнет в 2020 году	12.07.2009
discourse fragment #92	https://regnum.ru/news/society/1207768.html	Узбекистан намерен подключить Южную Корею к решению проблемы Аральского моря	22.09.2009
discourse fragment #93	https://regnum.ru/news/society/1208117.html	Узбекистан и Таджикистан выступили с противоположными мнениями на Саммите по изменению климата в Нью-Йорке	23.09.2009
discourse fragment #94	https://regnum.ru/news/society/1209303.html	Казахстан намерен задействовать потенциал ОБСЕ для решения проблемы высыхания Аральского моря	23.09.2009
discourse fragment #95	https://regnum.ru/news/polit/1239043.html	Президент Узбекистана призвал объединить усилия в решении экологических проблем	27.12.2009
discourse fragment #96	https://regnum.ru/news/society/1245874.html	Экологи Узбекистана планируют озеленение осушенного дна Аральского моря	24.01.2010
discourse fragment #97	https://regnum.ru/news/society/1259739.html	В Ашхабаде подписан Меморандум между ООН и Исполкомом Фонда спасения Арала	04.03.2010
discourse fragment #98	https://regnum.ru/news/polit/1265929.html	Узбекистан и Таджикистан озвучили в ООН противоположные позиции по проблеме Аральского моря	23.03.2010
discourse fragment #99	https://regnum.ru/news/polit/1268455.html	Таджикистан покажет главе ООН строящиеся ГЭС, а Узбекистан гибнущее Аральское море	30.03.2010
discourse fragment #100	https://regnum.ru/news/economy/1269849.html	Туркмения предлагает подготовить комплексный международно-правовой документ по Аральскому морю	
discourse fragment #101	https://regnum.ru/news/polit/1269961.html	Генсек ООН стал первым высокопоставленным лицом в	04.04.2010

		мире, увидевшим катастрофу Арала	
discourse fragment #102	https://regnum.ru/news/society/1269952.html	Узбекский эксперт предлагает принять Конвенцию ООН по спасению Аральского моря	04.04.2010
discourse fragment #103	https://regnum.ru/news/polit/1316594.html	Туркмения предлагает создать международную группу по спасению Арала	19.08.2010
discourse fragment #104	https://regnum.ru/news/society/1320898.html	Осенью в Европарламенте планируется провести конференцию по проблемам Аральского моря	01.09.2010
discourse fragment #105	https://regnum.ru/news/polit/1326711.html	Президент Узбекистана примет участие в заседании Генеральной Ассамблеи ООН	18.09.2010
discourse fragment #106	https://regnum.ru/news/society/1336755.html	Японская сакура прижилась на бывшем дне Аральского моря в Узбекистане	16.10.2010
discourse fragment #107	https://regnum.ru/news/society/1337330.html	В Европарламенте обсудили экологическую катастрофу Аральского моря	19.10.2010
discourse fragment #108	https://regnum.ru/news/economy/1337552.html	За последние 10 лет Узбекистан затратил свыше $1 млрд. на локализацию Аральской катастрофы	19.10.2010
discourse fragment #109	https://regnum.ru/news/polit/1347603.html	Участники международной конференции в Узбекистане приняли Ташкентскую экологическую декларацию	18.11.2010
discourse fragment #110	https://regnum.ru/news/polit/1389948.html	Глава МИД Таджикистана призывает ОБСЕ решить водные проблемы Центральной Азии	01.04.2011
discourse fragment #111	https://regnum.ru/news/society/1469251.html	Кладбище кораблей в Узбекистане станет одним из новых маршрутов экотуризма	20.11.2011
discourse fragment #112	https://regnum.ru/news/polit/1493070.html	Президенты Туркмении и Узбекистана обсудили вопросы спасения Аральского моря	28.01.2012
discourse fragment #113	https://regnum.ru/news/polit/1506679.html	Профессор из США призвал Россию взять ответственность за водно-энергетическую проблему в Средней Азии	05.03.2012

discourse fragment #114	https://regnum.ru/news/polit/1543423.html	Президент Таджикистана: Водные ресурсы бассейна Аральского моря нужно распределять сообща	20.06.2012
discourse fragment #115	https://regnum.ru/news/polit/1551956.html	Струан Стивенсон: Ташкент, страхуясь от Рогунской ГЭС, сводит на нет попытки спасти Арал	16.07.2012
discourse fragment #116	https://regnum.ru/news/polit/1574824.html	США предсказывают рост региональной напряженности из-за воды в Средней Азии	26.09.2012
discourse fragment #117	https://regnum.ru/news/polit/1574889.html	Хиллари Клинтон призвала сделать водные ресурсы приоритетом внешней политики	26.09.2012
discourse fragment #118	https://regnum.ru/news/society/1593839.html	Премьер-министр поручил Минсельхозу разработать план восстановления северного Арала	15.11.2012
discourse fragment #119	https://regnum.ru/news/society/1594277.html	Существует реальная возможность восстановить Аральское море в границах 60 годов: эколог	16.11.2012
discourse fragment #120	https://regnum.ru/news/polit/1601952.html	Глава МИД Таджикистана призвал ОБСЕ решить водно-энергетические проблемы региона	07.12.2012
discourse fragment #121	https://regnum.ru/news/polit/1664694.html	Казахстан передал председательство в фонде спасения Арала Узбекистану	29.05.2013
discourse fragment #122	https://regnum.ru/news/society/1767778.html	Аральское море стало терять меньше воды: ученые	17.02.2014
discourse fragment #123	https://regnum.ru/news/society/1881422.html	Узбекистан направит более $3 млрд на экологические проекты, связанные с Аральским морем	29.12.2014
discourse fragment #124	https://regnum.ru/news/society/1912946.html	Ученые: Человек меняет Землю с потрясающими скоростью и масштабом	07.04.2015

discourse fragment #125	https://regnum.ru/news/polit/1946039.html	Может ли вода подружить страны Средней Азии?	25.06.2015
discourse fragment #126	https://regnum.ru/news/1930736.html	National Geographic: Как высушить Арал за полвека	04.06.2015
discourse fragment #127	https://regnum.ru/news/economy/1966977.html	За годы независимости Узбекистан снизил водозабор на более чем 20%	10.09.2015
discourse fragment #128	https://regnum.ru/news/economy/1980065.html	«Проблемы Арала – угроза всему миру»	28.09.2015
discourse fragment #129	https://regnum.ru/news/economy/2005434.html	ВБ выделит Узбекистану $14 млн на устойчивость к изменению климата	05.10.2015
discourse fragment #130	https://regnum.ru/news/polit/2010902.html	Узбекистан хочет привлечь ШОС к проблеме Арала и своих горных границ	12.10.2015
discourse fragment #131	https://regnum.ru/news/2019362.html	В Узбекистане производится самый большой в Средней Азии водозабор	24.10.2015
discourse fragment #132	https://regnum.ru/news/polit/2132004.html	Китай направит экспедицию к берегам Аральского моря	13.05.2016
discourse fragment #133	https://regnum.ru/news/society/2148740.html	ООН и МИД Узбекистана обсудили экологические проблемы Аральского моря	23.06.2016
discourse fragment #134	https://regnum.ru/news/economy/2232516.html	В Узбекистане создают Фонд развития Приаральского региона	30.01.2017
discourse fragment #135	https://regnum.ru/news/economy/2244844.html	На дне обмелевшего Арала в Узбекистане возведут грязелечебницу	02.03.2017
discourse fragment #136	https://regnum.ru/news/economy/2257825.html	Фонд развития Приаральского региона создан в Узбекистане	03.04.2017

discourse fragment #137	https://regnum.ru/news/polit/2286807.html	Генсек ООН облетел на вертолете акваторию Аральского моря	10.06.2017
discourse fragment #138	https://regnum.ru/news/economy/2296633.html	Почему у Казахстана получилось спасти Арал, а у Узбекистана нет?	04.07.2017
discourse fragment #139	https://regnum.ru/news/economy/2299324.html	Или Аральское море, или нефть. Узбекистан сделал выбор	13.07.2017
discourse fragment #140	https://regnum.ru/news/polit/2305044.html	Генсек ООН одобрил проводимые в Узбекистане реформы	28.07.2017
discourse fragment #141	https://regnum.ru/news/society/2316490.html	На месте Аральского моря образовалась пустыня площадью 5,5 млн га	01.09.2017
discourse fragment #142	https://regnum.ru/news/society/2333890.html	На побережье Аральского моря пройдут сразу три фестиваля	13.10.2017
discourse fragment #143	https://regnum.ru/news/polit/2369964.html	ООН: Аральское море – ужасающее напоминание Средней Азии	19.01.2018

Curriculum Vitae

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Education

2015 /2018	Master of Arts "Science-Technology-Society", Department of Science and Technology Studies, University of Vienna
2005 / 2011	PhD, Institute of History, Uzbek Academy of Sciences.
2002 / 2004	Master's Diploma. Department of History, National University of Uzbekistan
1998 / 2002	Bachelor Diploma, Department of History, National University of Uzbekistan

Additional Education

May / July 2014	German language course. Deutsch Akademie. Vienna, Austria (Level B2)
January / April 2010	English Language Course. English Language Institute, Michigan University, Ann-Arbor, USA
August / December 2009	German language course. Goethe Institute, Tashkent, Uzbekistan (Level B1)

Professional Activity

June 2018	International Atomic Energy Agency, Vienna, Austria. Position: Team Assistant.
February, 2010/ March, 2014	Uzbekistan Academy of Sciences, History Institute. **Position**: Senior Research Fellow
July, 2004/ February, 2010	Uzbekistan Academy of Sciences, History Institute. **Position:** Junior Research Fellow