

LOCAL ECO-ACTIVIST'S PERSPECTIVES ON ENVIRONMENTAL AWARENESS ISSUES IN KAZAKHSTAN

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Abstract. Environmental issues in Kazakhstan are one of the most undermined research areas in Kazakhstan, particularly if we are speaking about aspects on environmental awareness. This study asked Kazakhstani eco-activists to provide their expert-rich responses to eleven open-ended questions related to environmental awareness aspects in Kazakhstan, which were divided into five sections, namely 1) degree of the environmental problem in the country; 2) reasons for the existence of the environmental problem; 3) role of the government in environmental awareness aspects; 4) the role of civil society in environmental awareness matters; and 5) solutions and prospects. For that, ten eco-activists have participated in our study, who were selected from the social media website 'LinkedIn' via a convenience sampling method. As a data analysis, a content analysis approach was used. Our results have indicated that environmental awareness level has improved since 1990's and numerous factors ranging from low levels of ecological literacy and environmental activism were mentioned as reasons for existence of low level of environmental awareness. By now, there are practically no empirical data on how eco-activists view, comprehend and assess environmental awareness issues in Kazakhstan. Such primary data could help share valuable insight on important policy and research aspects, namely concerning ineffectiveness of government-initiated actions, role of civil society in pro-environmental projects, studying level of awareness for government-initiated environmental programs, or policy proposals in tackling low environmental awareness levels. Thus, our research could be both valuable for researchers in filling the research gap and for practitioners in proposing viable policy alternatives to address environmental awareness issues. Despite the study's research limitations concerning lack of international eco-activist's focus, social-desirability-response bias and low sample size representativeness, this study recommends conducting expert interviews with NGOs (e.g. UNECE or CARECECO), reintegrate environmental con-

cern and activism aspects as well as focus on policy solutions.

Keywords: *eco-activists; environmental awareness; environmental problems; Kazakhstan; content analysis; qualitative study.*

ВЗГЛЯДЫ МЕСТНЫХ ЭКОАКТИВИСТОВ НА ПРОБЛЕМЫ ЭКОЛОГИЧЕСКОГО ПРОСВЕЩЕНИЯ В КАЗАХСТАНЕ

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Аннотация. Экологические проблемы в Казахстане являются одной из наиболее малоизученных областей исследований в Казахстане, особенно если мы говорим об аспектах экологического сознания. В этом исследовании казахстанским эко-активистам было предложено предоставить свои экспертные ответы на одиннадцать открытых вопросов, касающихся аспектов экологической осведомленности в Казахстане, которые были разделены на пять разделов, а именно: 1) степень экологической проблемы в стране; 2) причины существования экологической проблемы; 3) роль государства в аспектах экологического сознания; 4) роль гражданского общества в вопросах экологического сознания; 5) решения и перспективы. Для этого в нашем исследовании приняли участие десять эко-активистов, которые были отобраны на веб-сайте социальной сети «LinkedIn» с помощью удобного метода выборки. В качестве анализа данных использовался подход контент-анализа. Наши результаты показали, что уровень экологической осведомленности улучшился с 1990-х годов, и в качестве причин существования низкого уровня экологической осведомленности были названы многочисленные факторы, начиная от низкого уровня экологической грамотности и экологической активности. К настоящему времени практически отсутствуют эмпирические данные о том, как эко-активисты видят, осмысливают и оценивают вопросы экологического сознания в Казахстане. Такие первичные данные могут помочь поделить ценной информацией о важных аспектах политики и исследований, а именно о неэффективности действий, инициированных правительством, роли гражданского общества в экологических проектах, изучении уровня осведомленности об экологических программах, инициированных правительством, или политических предложений по решению низкий уровень экологического сознания. Таким образом, наше исследование может быть ценным как для исследователей в восполнении пробелов в исследованиях, так и для практиков в предложении жизнеспособных политических альтернатив для решения проблем экологической осведомленности. Несмотря на ограничения исследования, связанные с недостаточной направленностью международных эко-активистов, систематической ошибкой, связанной с социальной желательностью и репрезентативностью выборки, в этом исследовании рекомендуется проводить экспертные интервью с НПО (например, ЕЭК ООН или ЦА-

РЭСЭКО), повторно интегрировать вопросы охраны окружающей среды и аспекты активизма, а также сосредоточиться на политических решениях.

Ключевые слова: эко-активисты; экологическая осведомленность; проблемы окружающей среды; Казахстан; Анализ содержания; качественное исследование.

ҚАЗАҚСТАНДАҒЫ ЭКОЛОГИЯЛЫҚ АҒАРТУ МӘСЕЛЕЛЕРІНЕ ЖЕРГІЛІКТІ ЭКОБЕЛСЕНДІЛЕРДІҢ КӨЗҚАРАСТАРЫ

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Аңдатпа. Қазақстандағы экологиялық мәселелер, әсіресе, егер біз экологиялық хабардар болу аспектілері туралы айтатын болсақ, Қазақстандағы ең нашар зерттеу бағыттарының бірі болып табылады. Бұл зерттеу қазақстандық эко-белсенділерден бес бөлімге бөлінген, атап айтқанда, 1) елдегі экологиялық проблеманың дәрежесі; 2) экологиялық проблеманың болуының себептері; 3) экологиялық ақпараттандыру аспектілеріндегі үкіметтің рөлі; 4) қоршаған ортаны қорғау мәселелерінде азаматтық қоғамның рөлі; және 5) шешімдер мен перспективалар. Ол үшін біздің зерттеуімізге «LinkedIn» әлеуметтік медиа веб-сайтынан ыңғайлы таңдау әдісі арқылы таңдалған он эко-белсенді қатысты. Деректерді талдау ретінде мазмұнды талдау әдісі қолданылды. Біздің нәтижелеріміз 1990 жылдардан бері экологиялық хабардарлық деңгейінің жақсарғанын көрсетті және экологиялық сауаттылық пен экологиялық белсенділіктің төмен деңгейінен бастап экологиялық сананың төмен деңгейінің себептері ретінде көптеген факторлар аталды. Осы уақытқа дейін эко-белсенділердің Қазақстандағы экологиялық хабардар болу мәселелеріне қалай қарайтыны, түсінетіні және бағалайтыны туралы тәжірибелік деректер іс жүзінде жоқ. Мұндай бастапқы деректер маңызды саясат пен зерттеу аспектілері, атап айтқанда, үкіметтің бастамашылық әрекеттерінің тиімсіздігі, қоршаған ортаны қорғау жобаларындағы азаматтық қоғамның рөлі, үкіметтің бастамасымен қоршаған ортаны қорғау бағдарламалары туралы хабардар болу деңгейін зерттеу немесе проблемалармен күресудегі саяси ұсыныстар туралы құнды түсініктермен бөлісуге көмектесуі мүмкін. қоршаған ортаны білу деңгейінің төмендігі. Осылайша, біздің зерттеулер зерттеушілер үшін зерттеу олқылығын толтыруда және тәжірибешілер үшін экологиялық хабардарлық мәселелерін шешу үшін өміршең саясат баламаларын ұсынуда құнды болуы мүмкін. Зерттеудің халықаралық эко-белсенділердің назарының жоқтығына, әлеуметтік қажеттілік-жауапқа бейімділігіне және іріктеу көлемінің төмен репрезентативтілігіне қатысты зерттеудің шектеулеріне қарамастан, бұл зерттеу ҰЕҰ-мен (мысалы, БҰҰ ЕЭК немесе CARECECO) сарапшылық сұхбаттар жүргізуді, қоршаған ортаға қатысты алаңдаушылық пен белсенділік аспектілерін қайта біріктіруді ұсынады. саяси шешімдерге назар аудару.

Түйінді сөздер: экологиялық белсенділер; экологиялық хабардар болу; экологиялық проблемалар; Қазақстан; мазмұнды талдау; сапалы зерттеу

Introduction

Environmental problems are one of the most urgent and pressing issues in the country of Kazakhstan that range from problems with deficiency of water resources and water pollution to land degradation as well as low biodiversity problem. Even before gaining independence, those pressing issues have become prevalent and have worsened ever since. Nowadays, many local Kazakhstani as well as international scholars have analyzed specific environmental problems in the country. However, not so many of them have assessed environmental awareness aspects in particular. Here, it should be noted that studies on environmental awareness have already been well-researched in the Western context, while in the context of Kazakhstan it had yet not gained much research attention. In terms of its definition, environmental awareness can be defined as a social term that can be understood as the individual's perception of their surrounding environment. In other words, environmental awareness studies deal with aspects such as the level of awareness for the environment, by which it may touch upon aspects related to environmental beliefs, attitudes, behavior and cognitive values.

The body of research literature on environmental awareness shows that most studies in the context of Kazakhstan have focused on aspects related to environmental education followed by studies on assessing the influence of media outlets; identifying the role of NGOs and civil society organizations; conceptualization of environmental awareness elements; role of environmental activism movements and awareness for health problems. While such studies did indeed provide some interesting findings and valuable primary data on various aspects, still to date there are no studies that have analyzed the views of eco-activists in Kazakhstan, especially within a qualitative research approach. Understanding the views of our eco-activists gives us some clues on how pro-environmentally active citizens of our country critically reflect about this problem. Moreover, as all of our eco-activists had and still have distinct and valuable life and practical experience on how pro-environmental policies or environmental awareness projects were carried, their contribution is immensely important.

It should be understood that eco-activists are active citizens of our country who positively promote, influence and critically reflect on environmental awareness issues in Kazakhstan, they can provide a different viewpoint on issues in comparison to ecological experts who are affiliated with government agencies. For instance, one eco-activist aimed to raise awareness for plastic pollution issues in the country after winning 2nd place in Samgau UPSHIFT mentoring program financed and organized by The Community of Youth Workers public association [1]. In another example, a young eco-activist helped Kazakhstani schoolchildren acquire green habits who received financial support from BeGreen Kazakhstan

Program of the United Nations Children's Fund [2]. Other eco-activists tackled the raising environmental awareness among citizens more creatively. The so-called online game 'Gorozhanyam' was launched by the civil society organization Eco Kultura headed by eco-activists in Almaty and supported by Eurasia's Foundation's Civil Society Support Program in Central Asia (CSSP), aimed to tackle the problem of lack of information on the question of how to solve urban environmental problems such as what to do if illegal tree trimming was discovered or what to do about garbage that was carelessly thrown onto the open streets [3]. Moreover, this civil society organization had also interviewed more than 900 Almaty residents (e.g. NGO representatives, general residents, city administration officials) in 2021 and found out that most people (approximately one in three residents) are concerned about the environment in comparison to issues such as housing and communal services (11%), education (9%) or transportation (14%) [3]. According to CABAR, eco-activists in Kazakhstan bring public issues to public discussion, and the most pressing issues that they deal with concerns protection of fauna, flora, raising awareness for pollution concerns, and protesting against hazardous and industrial pollution [4]. Moreover, the number of active eco-activists is increasing year by year and this tendency is likely to keep growing [4]. Thus, their important stance in our society should not be undermined but in fact recognized, supported and promoted.

This study aims to uncover the perspectives and views of eco-activists in Kazakhstan on eleven open-ended questions related to environmental awareness problem, which were divided into five sections: 1) degree of the environmental awareness problem in the country (total of four questions); 2) reasons for the existence of the environmental awareness problem (total of two questions); 3) role of the government in environmental awareness aspects (total of two questions); 4) role of the civil society in environmental awareness matters (total of one question); solutions and prospects (total of two questions). For that, this study used a mixed qualitative approach by conducting via a convenience sampling method a structured online interview with the respondents in order to receive their responses. In order to reach out to the eco-activists, we used 'Linkedin' as the social network platform to send out the interview requests. In the end, ten eco-activists have participated in this study and provided their feedback to all eleven open-ended questions.

Environmental Problems in Kazakhstan

Before gaining independence as well as up until contemporary time period, Kazakhstan was and still is plagued by various environmental problems. These have ranged from air pollution and water pollution issues to aspects of land degradation and destruction of biodiversity and endangered species. According to the paper written by White in 2019 on "Environmental Issues in Kazakhstan", many of the environmental issues that Kazakhstan faces to date are in reality the remnants of the Soviet past, while other environmental issues emerged after the post-independence periods as a result of poor governance and unprecedented

socio-economic developments [5].

Many different local scholars, international researchers and international organizations have addressed various environmental problems in the country. Most scholars agree on the following existence of the following environmental hot-spots in the country: land degradation and soil desertification issues [6]; negative impact on the environment as a result of industrial and oil industries [7]; water deficiency and water pollution issues [8-9]; air pollution problems [7] [9]; the infamous Aral and the Caspian Sea issue [5]; or negative radiation effects on health of local population [10].

Many international organizations also have also stressed the negative implications of environmental issues in the country on both the whole ecosystem as well as the health of the population. These include such organizations such as OECD [11], WHO [12] or the UNDP [13]. Besides that, scholars on the other hand have also pointed out the negative socio-economic implications that environmental issues have on the country [9].

Literature Review

Environmental Awareness: Origin

The concept of environmental awareness or as some say ecological awareness is not a new social term. In fact, it has been used since the last fifty to sixty years within the research community [14]. Its origin can be dated back to the early 1970's and 1960's environmental movements, when the social movement became from a local civic society initiative into a political movement driven by politicians, researchers, environmentalists and the public [14]. Moreover, according to Inglehart [15], the post-industrialization era also helped the society to refocus their attention to post-materialist values such as environmental concerns rather than materialist aspects. This was especially vibrant among western societies and within them among individuals who represented the higher social status [15].

Early waves of environmental movements were centered around the matter of understanding public's level of environmental concern towards support for pro-ecological government-related programs and policies [16]. Besides that, another research focus that was popular at that time were studies related to attitude and socio-psychological theories studying pro-social aspects [17].

However, in the 1980's the focus has changed and research became more centered around addressing aspects of environmental attitudes [16] [17]. Many scholars since then have established new theoretical frameworks, such as those proposed by Ajzen & Fishbein's 'theory of reasoned action' in 1980 [18].

The following decennial starting from the early 1990's, the research focus has once again shifted towards a new era of environmental science. From this new era on, research has shifted towards green growth aspects related to consumerism, studies of public perception, environmental behavior, and environmental knowledge [16]. Since then, the focus has also changed into studies related to environmental psychology, rational choice theory studies as well as

qualitative studies [16]. For instance, in terms of environmental psychology, some prominent works included studies on risk perception and consumer behavior, by which studies of environmental attitude and behavior have impacted social science and psychological studies that became crucial part of scholarly focus [16]. Nowadays, in our contemporary time period, the term environmental awareness has become within the academia a concept that has been and which is still used and applied in various research approaches, research fields and contextual settings [14].

Environmental Awareness: Definition & Research Scope

In terms of its definition, it can be defined in various ways. For instance, Handoyo et al. [19] defined environmental awareness as the aggregate sum of people's perception about environmental issues. According to them, these perceptions pertain different environmental values, beliefs and attitudes, such as environmental knowledge or personal attitude towards their surroundings [19]. It can also be explained from the point of view of a process of the interrelationship between the human and the natural environment [19].

Similar definitions were also provided by scholars such as Kollmuss & Agyeman [20]. Here, they referred to the concept of environmental awareness as one's reflection of people's attitude towards environmental surroundings of a person [20]. In other words, it is referred as the concept describing the state of people's awareness for environmental issues and who are knowledgeable and conscious about the environment they live in [20].

However, it should be noted that the concept of environmental awareness can be interchangeably used alongside other notions such as environmental concern and environmental consciousness [21]. For instance, environmental consciousness according to the scholars Sanchez & Lafuente [22] are defined as the level of how an individual is engaged towards pro-environmental behavior. Here the authors referred to the psychological factors that influence pro-environmental behavior. Similar definitions were provided by Schultz & Zelezny [17].

Besides providing definitions, scholars also have conceptualized it differently. According to Partanen-Hertell et al. [23] proposed theoretical model, the level of environmental awareness is made up of the following factors: motivation, knowledge, and skills. On the other hand, Sanchez & Lafuente [22] having proposed a broader framework, described environmental awareness as rather an environmental consciousness being influenced by the following psychological elements: affective, cognitive, active and dispositional. In another example Kaiser et al. [24] have introduced an expanded version of rational-choice model for measuring environmental attitude levels adding additional new domains of psychological elements measuring the level of environmental responsibility. Other theoretical models included, since the inception of this research focus, the so-called primitive models (e.g. environmentally responsible behavior model and reasoned action theory); planned behavior model; environmental citizenship model; model of human-nature interaction; value-belief norm (VBN) theory;

health belief theory and diffusion of innovation model [25].

Speaking of research scope, environmental awareness studies have been applied in many various research fields, most notably in the following: environmental attitudes and behavior [26]; gender difference studies [27]; environmental consumerism matters [28]; in relation with the concept of sustainability [29]; or environmental education aspects [30]. Hence, its research scope is extensive and stretches from aspects of public policy and media studies to corporate and health studies.

Developments in the context of Kazakhstan

In the research context of Kazakhstan, scholars have approached environmental awareness from various research fields. According to the literature review conducted by Kumar [31], as for the year 2022, approximately more than eighty research works on environmental awareness aspects have been written since 1991. According to the findings by Kumar [31], 44% of these papers were written in English, 22% in Kazakh and 34% in Russian. Besides that, the review of the literature also highlighted the distribution of all studies according to research focus. Here, the following can be concluded: environmental education (48.8%); ecological culture, literacy and consciousness (13.4%); case studies (9.8%); role of NGOs and social institutions (6.1%); mass and social media discourse (6.1%); country comparative analysis (6.1%); sustainable development (3.4%); environmental movements (2.4%); literature reviews (1.2%); information access (1.2%); and environmental behavior and value studies (1.2%) [31]. Thus, it can be concluded that most papers written on environmental education have focused on aspects of environmental education [31]. For instance, such scholars included works done by Aigul & Gaukhar [32] or Yessenamanova et al. [33].

Other research focuses on environmental awareness also included the influence of media outlets [34]; level of awareness for health problems [10]; its role in environmental activism movements and involvement of NGOs and civil society organizations [35]; or in terms of environmental codes [36].

Speaking of NGO's research campaigns, the UNDP had launched back in 2020 a social survey campaign in order to understand the perception of people in Kazakhstan on climate change matters [37]. This campaign targeted a total of 200 respondents and aimed to assess the level of awareness in Kazakhstan for climate change problems within the country as well as on a global scale [37]. While this survey was conducted offline, it was conducted in five different regions of Kazakhstan [37]. According to their findings from the survey, 63% of respondents viewed climate change problem as a serious threat, with air pollution regarded as one of the most concerning problems followed by waste management and water pollution issues [37]. Interestingly enough, 62% of respondents who have participated in this social survey were not aware of any awareness-raising initiatives on mitigation efforts on climate change issues in the country [37]. Thus, the findings showed that while on the one hand significantly more than half of the respondents viewed climate change as a serious environmental threat, on other

hand more than half also were not aware of any pro-environmental actions or initiatives conducted on a national level.

Other NGO projects also included early efforts conducted by local civic society clubs and environmental societies in 1990's [13]. One of such efforts were those of the local environmental organizations called 'The Karaganda Edelweiss' [13]. Other efforts also included the SPARE Program project conducted by Norwegian Society for Nature Conservancy in 2001 that aimed at teaching young but prospective teachers as well as students the aspects on ecology and sustainable development [13]. Similar projects were also launched by the UN in their GLOBE Program projects aimed at supporting volunteering efforts for ecological activists in Kazakhstan and Kyrgyzstan [13].

On a governmental level, several documents and state programs have addressed environmental awareness aspects in Kazakhstan. One of them included the so-called New Environmental Code of Kazakhstan, which was adopted in 2021 and that has replaced the previous 2007 version [36]. This New Environmental Code had replaced previous amendments with new legal provisions. For instance, these included the introduction of new environmental terms (e.g. environmental damage; environmental responsibility; polluters pay principle); legal amendments in aspects related to public participation processes concerning environmental control; introduction of new environmental permits; and toughening of state environmental monitoring procedures [36]. One of the few papers that have thoroughly and critically analyzed the New Environmental Code included the work done by Kumar & Makhmudova [36], have evaluated five main sections within the new code that touched particularly upon matters related to environmental awareness aspects. These mainly included the following sections: 1) environmental culture, education and awareness-building; 2) public environmental control; 3) public and state environmental review; 4) environmental information; and 5) environmental research [36]. For that, the paper has compared the legal novelties introduced in the new code with the older 2007 version.

Besides the New Environmental Code, the state has also launched a new program called 'Zhasyl Kazakhstan' in 12 October 2021 with an implementation period given until 2025 [38]. Its main goals included the improvement of the environmental situation in the country within the following four different pillars of strategic paths: Clean Kazakhstan, Economically Efficient Kazakhstan, Nature Kazakhstan, and Ecological Future Kazakhstan [38]. In terms of specific government efforts, these include supporting conservation initiatives with biodiversity issues; tackling water and air pollution levels; aiding waste management efforts, as well as in fostering environmental education processes related to raising public awareness and culture for environmental issues [38]. In terms of the latter, three main long-term objectives were outlined: 1) integration of environmental awareness principles in the educational system; 2) formation of eco-oriented informational basis in the country; 3) educating future ecologists and nurturing their knowledge [38]. Detailed information on specific government efforts were

provided in the document.

Other similar previous state projects also included early efforts conducted by Ministry of Natural Resources and Environmental Protection in 1998 with its Government Action Plan of the Concept of Environmental Safety of the Republic of Kazakhstan as well as the 2002 Concept of Ecological Education [13]. Such early state efforts were directed towards raising environmental education among preschool kids, secondary school children and among higher educational institutions [13]. These were outlined in detail in the UNDP 2004 report on 'Environment and Development Nexus in Kazakhstan' [13].

Research Methodology & Objective

For this qualitative research study, eleven self-administered open-ended questions were prepared that addressed the environmental awareness issue in the country. The target group for study were Kazakhstani eco-activists, of which a total of ten Kazakhstani eco-activists have participated in this study and who were all randomly chosen. For that, a convenience sampling method was used. It should be noted that eco-activists, who were knowledgeable in the broader fields of ecology, environmental science and environmental education, were chosen as target groups.

A qualitative research study in social science studies is mainly the idea of the researcher exploring meaning and insight in a given situation via various data collection techniques, which may include semi-structured or open-ended interviews [39]. In order to analyze the written responses, a content analysis was used for this study. A content analysis is defined here as a study of contexts and meaning of words, texts, messages, and recorded documents [40]. In addition, a content analysis makes meaning of the context and words as well as valid inferences from them.

In order to reach out and search for Kazakhstani eco-activists, the social media website 'Linkedin' was used as a primary search engine. 'Linkedin' is a business and employment-oriented online platform, which is primarily used for professional networking and career development matters. Since, many of the professional experts on ecology and eco-activists dwell around this social media networking site, has become a very valuable website tool to be used. The following keywords were used to type into the search bar of 'Linkedin' in all three languages of English and Russian: ecological experts Kazakhstan; environmental awareness eco-activists Kazakhstan; eco-activists Kazakhstan. As a criterion for choosing the proper research papers that corresponded and aligned with the topic on environmental awareness studies in the context of Kazakhstan, all keywords used in the search engine were used interchangeably when searching for eco-activists.

The request to fill out the eleven open-ended questions were based on two options: either via an online interview approach where all the respondent's responses were filled out by the interviewee independently when the interview

was conducted (e.g. via Zoom or WhatsApp video call), or via the respondent's own written responses that were then send out by the respondents to the interviewee personally. The questions to the respondents were send out in three language formats: Kazakh, Russian, and English. Alongside that, the respondents also could provide their responses also in those three languages, which were eventually then translated into English.

The objective of this study was to get an understanding on how eco-activists in Kazakhstan comprehended and how well-aware they were about environmental awareness issues in the country. The reason for choosing particularly eco-activists is that they could provide some rich expertise knowledge that are valuable for getting an in-depth knowledge of primary sources of information on environmental awareness aspects. For instance, these included answers to matters related reasons for why a low level of environmental awareness exists, role of government and civil society in environmental awareness projects or what solutions can be proposed to solve such a particular environmental problem. Since no primary source of information were available concerning eco-activist's perspectives in Kazakhstan on environmental awareness, such a study could give us an idea on their stances, perspectives and prospects about this particular topic, which would in return enrich our research on this topic as well as fill in the research gap.

The list of the eleven open-ended questions is illustrated below in Table 1.

Table 1 – Eleven Open-ended Interview Questions

Question	Section
1. Do you personally think that the problem of environmental awareness is a serious problem in the context of Kazakhstan? - Yes/or no, and please briefly explain why.	A
2. What environmental problems in Kazakhstan, in your opinion, are currently the most serious ones that require urgent attention? List three to five environmental issues (general or specific) and describe in detail the reasons why you chose them as the most pressing issues to be addressed.	A
3. From your personal and professional point of view, why do you think there is a problem of environmental awareness in Kazakhstan? Please name at least five reasons.	B
4. Do you agree or disagree with the following statement: “Environmental problems in Kazakhstan are the responsibility of the government to solve them”? How do you think, to what extent this statement corresponds to the mentality of the Kazakh society? Please answer these questions briefly.	C
5. Which theoretical model would best explain the low level of environmental awareness in Kazakhstan: Maslow’s hierarchy of needs, post-materialist theory, or world society theory.	B

6. Are you aware of any government-initiated environmental programs or projects? Do you think that the state-initiated environmental programs/projects/strategies were effective or ineffective?	C
7. From your own personal point of view, do you think the level of environmental awareness has increased since the early 1990s and 2000s? If it has improved, how can this improvement be explained?	A
8. From your own personal point of view, do you think there are significant gaps in environmental awareness research in Kazakhstan?	A
9. What is the role of civil society in raising environmental awareness levels in Kazakhstan? How effective were/are they? How will its role change in the future: will it become more or less important? More importantly, why exactly?	D
10. "Solving environmental problems is possible with large investments in environmental education". To what extent do you agree with this statement?	E
11. Do you think Kazakhstan will be able to become more environmentally conscious/aware in twenty years? Are you optimistic or pessimistic about it? Please clarify your answer with your own personal opinion on that.	E

The content of the questions was based on five main sections: The eleven open-ended questions were divided into five sections:

- Section A: Degree of the environmental awareness problem in the country (Questions 1, 2, 7, and 8)
- Section B: Reasons for the existence of the environmental awareness problem (Questions 3 and 5)
- Section C: Role of the government in environmental awareness aspects (Questions 4 and 6)
- Section D: Role of the civil society in environmental awareness matters (Question 9)
- Section E: Solutions and Prospects (Questions 10 and 11)

Results and Discussion Section

This section summarized all the findings from the online interviews conducted. The results are based on the interview conducted with ten Kazakhstani eco-activists.

Section A

All Kazakhstani eco-activists viewed the problem of environmental awareness as a serious matter to be dealt with in the context of Kazakhstan (Question 1). All of the eco-activists justified their arguments by stating that as a result of the negative ecological trends of the last decade like the Aral Sea disaster, drought in Mangystau, drainage of rivers and other eco-problems, more people should be aware of environmental problems.

Another eco-activist provided here an example of how environmental education plays and will play in the future a crucial role in promoting environmental awareness in the country: *"As children receive basic school education, the entire population should receive environmental education, regardless of age, social*

status, profession. An ecological culture should be formed both in the family and in society. Its absence is already evident, since only a small part of the population is aware of the need to sort their garbage and properly dispose of it... In addition to the usual municipal waste boxes, there are many organizations that will accept correctly sorted waste, waste paper, out-of-order office equipment, batteries, clothing, etc. Basically, people do not see the yellow boxes on which it is written that paper, glass and plastic should be thrown into them. Plastic, glass and paper mixed with food waste end up in a common container, which subsequently makes it difficult to properly sort it at landfills. And this picture is observed in the center of the capital, let alone what is happening in the regions. Environmental education should be instilled in everyone, since it is not only waste that is thrown away, but also the rational use of water, electricity, paper and other resources, regardless of where a person is: at work, at home, on a business trip or visiting. Also, this education should include the study of global and local environmental problems in order to understand all the causal relationships that occur in the world and in the country. We can and should talk a lot about this problem. Therefore, the problem of lack of proper and high-quality environmental education stands alongside the already existing serious environmental problems in the country.”

Speaking about environmental education, one highlighted that there are no environmental education programs with a tangible effect on the population, as the bulk of the people still do not understand the meaning of simple things such as what concerns aspects of separation of waste collection. Two eco-activists even personally have not yet noticed a single state project or NGO projects on environmental education. Moreover, even if such projects or initiatives exist, their target audience is a narrow circle of certain people, in view of which they do not bring tangible benefits.

Last but not the least, all ten eco-activists agree that (1) the general mass of the population might not be entirely environmentally aware, but the environmental awareness among the youth and urban citizens is rising; and (2) the degree of whether environmental awareness is a serious issue depends on social class and level of environmental knowledge by the individual. In conclusion, eco-activists view that the ecological situation in the country is aggravating and become more serious.

In terms of local environmental problems (Question 2), which need at the present time and in the future urgent attention, all ten eco-activists mentioned a total of ten main environmental problems. These included the following local problems: air pollution; solid waste problem; water pollution and quality of drinking water; deficiency of water resources; pollution of little lakes and seas (e.g. lake Balkhash); Caspian Sea Problem; trash burning in urban cities; lack of ecological culture; drought (e.g. summer drought of 2021 in Mangystau city); and soil erosion.

In the case for air pollution, this problem was present among all ten respondents and was highlighted as one of the main environmental problem in

Kazakhstan due to its adverse impacts it had on public health and local ecology. Moreover, three out of five eco-activists pinpointed the main pollutant cities affected by air pollution to be cities of Karaganda, Temirtau, Almaty, Zhezkazgan and Balkhash.

The second most urgent issue among eco-activists was regarding general solid waste management problem in the country. Here, one of the eco-activists mentioned the following interesting insight: *“Waste is country’s most underestimated threat. You can often see settlements where there are no solid waste landfills, but if they do exist, they provide spontaneous landfills without a clay pad and other sanitary requirements. This is dangerous due to the composition of the waste of these landfills, and disposal of hazardous waste are rarely properly done. Residents of remote settlements, due to the lack of bio-landfills and elementary environmental education, take animal corpses and hazardous waste to landfills.”*

Following that, the third most frequently mentioned environmental problem was regarding the deficiency of water resources issue. This problem according to six out of ten eco-activists will be the most acute problem in Central Asian region within the next fifteen years, especially surrounding the transboundary river regions. Such deficiency aspects could lead to energy security issues in the future. Moreover, while glacier melting was mentioned as one of the reasons for water resources depleting, the second eco-activist portrayed this problem as a more systemic problem: *“This particular problem can be linked to the systemic problem of lack of proper care and respect for groundwater; lack of geological research; lack of a rational and careful attitude to the existent vessel supplies of fresh water. Based on the above answer, the elementary irresponsible use of water by residents of cities leads to such waste of water and causes deficiency problems.”*

The next two most frequently mentioned problem concerned the problem of soil erosion and drought issue that was mentioned by six eco-activists. Soil erosion according to these eco-activists could result out of the complicated issue of transnational water deficiency problem in the region and improper handling of land in agriculture and cattle grazing. Moreover, since soil itself if contaminated with chemicals, requires special attention and could lead to food security issues as well as decrease of cultivation of agricultural land areas.

Lastly, ecological culture was the fifth most mentioned environmental problem. This specific problem was highlighted by five eco-activists to be a nationwide problem affecting practically everyone and was presented with the following statement: *“Due to the lack of ecological culture, people litter beaches, rivers, forests, and other places. People are not yet accustomed to separate waste collection; they do not know about their rights specified in the Environmental Code. According to the Code, the public is expected to participate in the examination or in public hearings, but public hearings are mostly fictitious, the people are simply not interested in them, and public examination is not practiced at all.”* Hence, for all five eco-activists, we can conclude that environmental prob-

lems in Kazakhstan are systemic issues and it is not important to rank environmental problems by priority, as there might be many other issues than just five or ten that need urgent attention.

The third question covered the respondent's viewpoint on whether the level of environmental awareness has improved since the early 1990's and 2000's (Question 7). Here, eight out of ten eco-activists pointed out that nowadays we can see some clear improvements compared to the early 1990's and 2000's. According to them, the greatest progress has been made within the last ten years that can be characterized as a result of the increased number of the eco-promotional campaigns initiated by the government and the introduction of environmental awareness classes in schools. Another argument that also stuck out was the existence of more data being available for the public compared to the past.

In contrast to this stance, two eco-activist mentioned that it in fact the level of environmental awareness did not change at all and that it got worse by now. In fact, it is argued that after the fall of the USSR, capitalism gave more rise to problems in ecological awareness, as one of the eco-activists recounts as: *"It remained the same, because during the 1990's there was no Internet, which did not allow us to monitor the situation not only in remote regions of the country, but also in the neighboring area of our own city. Then it might seem that there were fewer environmental problems and environmental education was higher, but this was not so. If all this were available, then a generation of people would educate the current generation in the right direction and instill in them the necessary skills, which has unfortunately has not become the case. From here make a logical conclusion."*

In terms of the question whether currently a huge research gap can be observed in environmental awareness studies in Kazakhstan (Question 8), here all ten eco-activists considered that there were in fact considerably huge research gaps. The main reason that stood true for all eco-activists is that there is no specific data base that could lay down the foundation for such studies. However, one important fact to highlight is that seven out of all eco-activists were not aware of the existence of the huge amount of environmental awareness studies but provided their viewpoint on what specific environmental awareness aspects research needed to be done. According to them, there is a lack of research on new natural resources as well as underground water aspects in cities such as Astana city. Other research gaps mentioned included the study on the effectiveness of environmental awareness campaigns initiated by the government and civil society organizations as well as the aspect concerning environmental education.

Section B

Among all eco-activists, there were mixed answers concerning the reasons for why a low level of environmental awareness exists in the country (Question 3). A total of twelve reasons were presented by all respondents. These included the following: imperfection of education system; weak competence of professors/teachers in ecology at schools; low ecological literacy levels; low eco-ac-

tivism level; weak environmental journalism; low level of focus on STEM research; loss of generation of valuable scientists and experts during the 1990's and 2000's; passive governmental position; lack of available information; Lack of a body or agency responsible for environmental education (the issue of responsibility); lack of civic family upbringing principles to encourage and nurture the care for ecology and nature.

If we look at the first reason of imperfection of education system, here the argument was about the weak theoretical base of knowledge to teach properly environmental education. Moreover, some eco-activists also stated that a more theoretical-based teaching methods were applied instead of practical ones. Four eco-activist mentioned the problem of low level of the society actively getting involved in pro-environmental actions and has reasoned it with the fact that not enough 'significant civic initiatives' have yet been conducted with a rather weak informative campaigns on the usage of pro-environmental tools on how to do solve specific household problems. For instance, properly sorting out waste in trash. Others have referred to other reasons such as lack of expertise and objective analysis within environmental journalism, and brain drain problem in the early 1990's and 2000's as a result of the fall of the Soviet Union, which resulted in the loss of very expertise, particularly in the area of hydrogeology.

In terms of 'passive' government position, the following quote can illustrate this notion: *"The positive shifts have emerged like promotion of 'environmental awareness' classes in school, and massive attention to environmental problems like the development of the new eco-protection regulations. Before it has mostly preferred to simply ignore the existence of environmental problems and as a consequence diminish the scale of these problems. That in turn led to the people's indifference towards environment."*

And last but not the least, another reason worth mentioning concerns the problem of 'lack of civic family upbringing principles' matter. Here, the following quote would well illustrate the problem: *"Upbringing in a family and the ability to follow an example from developed countries. Again, back to people who often travel abroad. There they see how foreign citizens take care of nature, sort garbage and know how to behave. Upon arrival, our citizens do not change, as if they did not return home. As such, there are no factors that impede awareness raising. It all depends on the person himself, his awareness and level of upbringing. A person behaves in society as is customary in a family. Therefore, just observe people and draw conclusions from this. I will not say that 100% of our population is like that, but unfortunately, there are very few environmentally oriented people in Kazakhstan who are conscious, correctly thinking and civilly behaving in society."*

Other reasons for low environmental awareness levels in Kazakhstan were also mentioned, which included the general socio-economic situation in the country as well as the high level of unemployment.

In the case with the question that asked respondents to choose out of three

theoretical models (Maslow's Hierarchy of Needs; Post-Materialism Theory; World Society Theory) that would best explain the low level of environmental awareness in the country (Question 5), the following interesting findings were provided. According to the respondents, significantly more than half of respondents (8 out of ten) chose Maslow's Hierarchy of needs as the main one for many reasons. First, according to respondents, 1) people do not have time and desire to think about ecological state of the country; 2) focus within the society is rather directed towards survival needs and money; 3) Worsening of economic conditions and high level of unemployment; 4) Low pro-ecological and progressive thinking. One scholar though provided a rather mixed answer and chose to not side with any of the theories provided. Instead, she provided the following remark: *"Degradation of society and the fall of moral and ethical principles. It's not even about the social status of people. Both people from well-off families and middle- and low-income level people equally litter and lack awareness. Both of these categories of citizens are equally wrong in front of nature and ecology. The same situation is observed in their behavior and attitude towards general traffic rules. The problem is the lack of upbringing. You can have a good education and position, but not there is no guarantee that you get a proper upbringing and people become responsible citizens."*

Section C

When respondents asked whether they agree that environmental problems in Kazakhstan the government's responsibility to solve it (Question 4), they responded in the following manner. Their answers are grouped into three main statements. According to three eco-activists, this statement was described as a double-edged sword, because *"...there is always a clash between the area of government responsibility and individual responsibility. Thus, government should do whenever it is in their area of responsibility like state ecological legislation and oversight function while it is not diminishing the contribution of the individual to solving the problem..."*

Another group of four eco-activists argued that everyone is responsible and that not one specific group, person or organization can be blamed for it. According to them, it is *"...difficult to make someone responsible and someone not. In fact, everyone is responsible. Sometimes, ecological problems exist and there is not enough manpower and resources to solve them. For instance, if people expect the government to solve it, how would for instance at the local level like Astana city where just in the mayor's office 900 people work, expect to solve a cities problem. In Kazakhstan, focus is more on social problems rather than ecological for now."*

Others partly (two respondents) agreed with the statement and highlighted the importance of the state's role as well as legal basis in the country. According to it, the state *"...should at least provide a legal foundation and strong education for the understanding of these rights for the people in order for them to understand their role in environmental problem solving matters. To create a*

lasting pro-environmental mentality, as in South Korea or Japan, it is necessary to take the same tough measures, starting with the requirements for garbage disposal, etc. I do not believe that our mentality affects the environmental ignorance of our people, since environmental education does not exist, or it exists but is very ineffective.” Here, one eco-activist also added the idea that for country-scale environmental issues, the government is responsible. Local problems lie in the area of responsibility of the population. Shifting all the blame on the government, when next to your doors, hallways are littered, speaks of the flawed thinking of the population. Local problems also include the inability of the people to behave with respect to nature, when people leave their garbage, do not follow fire safety rules. In this regard, it is not entirely the government’s fault when people lack the right pro-ecological thinking and habits to act consciously.

Last but not the least, only one eco-activists did indeed view the role of the state as a responsible one by mentioning the following. According to the activist, it is the government that is able to make significant positive changes and drives the ecological trends, as they have the funds and access to expertise alongside political will and strong lobbying laws.

When respondents were asked the question “Are you aware of any government-initiated environmental programs or projects? If yes, do you think that they were mostly effective or ineffective” (Question 6), the following interesting responses must be brought up. First, five out of ten eco-activists were of government initiatives, while the other half were unaware of government-initiated programs or projects. Second, most felt it difficult to judge whether it was ineffective or not, but most agree that to some extent they were in general effective, while few mentioned that government policies were overall ineffective. Besides that, most hope that recently approved and adopted New Ecological Code will positively influence the overall environmental policies. Moreover, another group of eco-activist suggested that level of awareness could be raised if environmental education begins at the levels of kindergarten and primary schools, but it could be ineffective if the teachers themselves do not have the proper level of knowledge about ecology. There is also a need for vivid practical examples not in words, but in deeds of pro-environmental campaign. Such deeds need to be done not for the sake of PR and as a political catchphrase, but rather with pragmatic objectives.

Besides these responses, the eco-activists also provided their own reasons for why government initiatives were somewhat ineffective. To sum up, the following five main reasons were provided:

1. No post-analysis of the initiatives (e.g. green initiatives of putting new trees but not taking care of them in the long-run).
2. Good and well-intentioned initiatives, but not objective evaluation.
3. Government is following “passive” position towards ecology, or perform some actions only as a response to public discontent and public pressure. Thus, government tend to create an agenda but not react to

- solve the problem directly.
4. Criticism regarding legislative aspects such as the Environmental Codes and government implementation of environmental projects. There is the problem of policy implementation and objective assessments of effectiveness of government programs.
 5. There is some behavioral change towards pro-ecological initiatives, but not sufficient political will.

Section D

Concerning the questions related to the role of the civil society in addressing environmental awareness issues in Kazakhstan (Question 9), all eco-activists stated that the civil society organizations in Kazakhstan have so far been effective in addressing this particular issue. According to them, within the current state of ecological society in Kazakhstan, civil society organizations are the main trend-setters and agenda-makers in the eco-agenda of the country. The oversight functions such as monitoring the violation of the state eco-legislation and serious cases of environmental pollution are mainly performed by the CSOs (civil society organizations). Findings also suggested that currently with the more active involvement of the state environment actors, eco-activists expect the role of CSOs to slightly increase, however despite the existence of high level of corruption and red tape in the governmental agencies, CSOs are expected to have considerable power. One powerful example, where the role of the civil society played a major role in raising awareness for environmental problems, was the Kok-Zhailau ski resort construction case, which is located in the city of Almaty. Here, due to the active engagement of the general public and the local civil society to protest against the construction, the project was temporarily postponed. One eco-activist even mentioned that “...*Their (CSOs) presence and increase by now is pleasing. If the number of such people and organizations grows, the role of environmental education will also grow...*” Some of the civil society organizations that will significantly impact the way how the problem of environmental awareness will be portrayed in the future included the UNDP, IUCN and CAREC. However, one eco-activist did conclude with the following statement that without the support from the population the civil society’s role becomes in the future insignificant and would have no tangible and visible positive impact: “*Only the society with its people can make a difference and the role of the civil society will expand in the future alongside the younger generation’s contribution.*”

Section E

From the analysis of the interview results, it was found out that seven out of ten eco-activists were rather optimistic about Kazakhstani society becoming more environmentally aware within the next twenty years, while the other two took a pessimistic and a neutral stance (Question 11). Considering, the recent changes in regulations, reconsideration and implementation of the changes in educational programs, optimists firmly believe and hope that the government has finally decided to consider the issue of environmental awareness seriously,

and thus, expecting positive outcomes and changes. Furthermore, many young people are seriously becoming more aware of the problems of ecological disaster. Although this is far from an active pro-ecological culture, with the right policy directions, many useful narratives can be introduced, at least for young people.

However, according to the eco-activists who shared a pessimistic outlook, there were five reasons for why Kazakhstan would not be able to become pro-environmentally aware in the future. One of the first reasons included the ever-increasing role of geographical location of Kazakhstan, where the country is susceptible for climate, migration and water crisis within the next twenty years. Hence, not only are environmental problems becoming serious matters, but also socio-demographic aspects.

The second reason is the absence of a strong political will of government to value pragmatism (practicality) over idealism (theoretical). This concerns especially the way how unattainable policy objective are formulated or policies are implemented.

The third reason is that there is no guarantee that environmental problems can be resolved within the next twenty years, as issues such as water supply and air pollution are long-term problems that need to be addressed systemically, and so does the issue of environmental awareness. Since also environmental awareness is a socially constructed term, it can change over time.

The fourth reason concerns the role of the civil society. While the civil society's role will likely increase in the future and might stretch its influence to the general public more by making them more environmentally informed, it might not solve the problem itself. In fact, only a small portion of the population might be aware of the positive impact a civil society has concerning environmental awareness aspects. Hence, an informed citizen does not always equal an environmentally-aware citizen.

The final fifth reason concerned the simple issue of the general public in lack of knowledge and will on how to solve environmental problems. In other words, the majority of the society is likely to be not interested to get informed about environmental awareness aspects in the future, and thus may not productively and constructively support any pro-environmental actions.

Finally, the neutral stance (or also a realist viewpoint) supported both arguments presented by the pessimist and optimist, but differed its future outlook with the following statement: *"You can be as optimistic as you like, but if the words and beautiful loud slogans are not supported by the actions of the government or each individual citizen, then there will be no benefit. Progress will not be achieved either in 20 years or in 30. In this regard, a quote from the great German philosopher Hegel comes to mind: "The laurels of only desire are a substrate of their dry leaves that will never turn green." Nothing will change from my optimistic or pessimistic attitude if each of us does not take actions to increase our own ecological culture and illumination, and does not transfer our*

knowledge and skills to the people around us. An environmentally conscious society can become both in two years or not at all.”. In this regard, the eco-activist does not concern itself with predicting the future and trends, but is rather focusing on changing the approaches being used as of present time.

Last but not the least, the eco-activists were asked to ponder about the two solutions of environmental problems of investment into environmental awareness studies and environmental education processes (Question 10). Here, mixed answers and some insightful viewpoints were provided. While six eco-activists fully agreed that investments both into environmental education and research are crucial, others were unsure concerning this policy proposal, especially on how to systemically provide an efficient environmental education and how it could solve directly environmental awareness issues. Instead it was proposed to direct the investments towards specific local projects involving the nudging principle.

Another interesting aspect worth highlighting were the possible problems and barriers such investments could raise. For instance, according to one eco-activist, it might be sometimes very difficult to introduce new initiatives into government activities, such as on where to get additional finances and balance the different priorities of investment targets between environmental and social aspects within national budgeting. In this regard, it was claimed that the issue is not in investments and amount of finances, but the way problems are approached and how finances are properly spent. Moreover, since environmental policy ideas are big, there is a possibility for problems with implementation of policies as well as tracking and monitoring their progresses to emerge.

Speaking of environmental policies, there is also a need to introduce transparent oversight measures of how efficiently investments are invested and spent. Last but not the least, all eco-activists sided along with the following general statement presented by one of young eco-activists: *“Even if environmental awareness might rise in the future due to investments into environmental education, this does not mean that people are becoming more pro-environmentally active. There still might be bad policy implementations.”*

Conclusion and Research Limitations

In conclusion, our results from our analysis of responses have shown us some interesting and new findings on the topic of environmental awareness issue in Kazakhstan. According to questions related to the degree of the environmental problem in the country (Section A), all ten Kazakhstani eco-activists acknowledged the fact that environmental problems in the country are serious issues to be dealt with on both local and national level, with a special focus on raising awareness for them. Some eco-activists have stated the importance of ecological education playing a vital role in forming an ‘ecological culture’ among the entire population of Kazakhstan and that everyone should be able to receive environmental education regardless of age, social status, or profession. It is also worth noting that one eco-activist. Following that, most eco-activists highlighted the following five environmental problems to be the most urgent

one that need to be given attention by both the state and the society (Question 2): 1) air pollution and its effects on public health and local ecology (e.g. high pollution levels within cities of Karaganda, Temirtau, Zhezkazgan, Balkhash and of course Almaty); 2) solid waste management problem (e.g. composition of hazardous waste in landfills and lack of bio-landfills); 3) deficiency of water resources issue that could lead to energy security issues (e.g. transboundary river regions; glacier melting issue; lack of geological research and rational use as well as management of water supplies); 4) soil erosion and drought problems as a result of poor handling and cultivation of land in agriculture and due to soil contamination; 5) low level of ecological culture. In terms of the latter point, it is worth pointing out that according to one eco-activist, the society is not yet 'accustomed' even to simply separate waste collections. Besides that, they also pointed out that many citizens were not aware of their rights according to the environmental code and how the public could exercise public hearings and public monitoring in the form of public environmental control processes. Following that, in terms of the question covering whether the level of environmental awareness has improved since 1990's and 2000's (Question 7), eight eco-activists saw an improvement due to state efforts and environmental education processes, while only two saw a worsening of the situation. And lastly (Question 8), all respondents did agree that there is a huge research gap in the research field on environmental awareness aspects in Kazakhstan, while seven of ten respondents were not aware of any environmental awareness research works, particularly what concerned for instance underground water research, effectiveness of environmental awareness campaigns by both the state and NGOs, and on environmental education processes.

Even more valuable information was provided concerning the reasons why a low environmental awareness level exists in the country (Section B), a total of twelve reasons were provided. The first three reasons concerned the ecological education processes, where eco-activists highlighted its weak system as well as the weak staff of teachers and professors teaching ecology in educational institutions. According to the arguments provided by the eco-activists, the existence of a weak theoretical knowledge base and the practice of outdated and ineffective theoretical-based teaching methods. All this has also resulted in low ecological literacy levels among the society, which also was accompanied by weak informative campaigns for pro-environmental actions and low environmental activism. Others have mentioned other reasons such as the problem of weak environmental journalism; brain drain of ecological and scientific expertise in the early 1990's and 2000's; passive governmental position towards addressing environmental problems; lack of STEM research as well as lack of fostering civic family upbringing principles that encourage pro-environmental attitudes and values. Particularly what concerned the latter argument about the role of the family in fostering pro-environmental attitudes and values, one eco-activist mentioned the fact that the main difference between developing states and de-

veloped states is in its approach to raise upcoming young generations based on pro-environmental values. Last but not the least, most eco-activists chose Maslow's Hierarchy of Needs as the best model that would theoretically explain the issue of why Kazakhstani society has low environmental awareness levels (Question 5). For that, eco-activists shared the justifications that 1) people don't have time to think about ecology, 2) it is not a prioritized as one of basic needs; 3) people are dis-incentivized due to bad socio-economic situations in the country; 4) no progressive thinking; 5) low moral and ethical values.

In terms of state responsibility and its role in fostering environmental education and awareness levels (Section C), the following conclusions can be drawn. First, while the majority of respondents agreed that not only the government is responsible for solving environmental problems in the country but also the society itself, others have highlighted the state's crucial legal rule in providing legal foundation and strong educational basis for educating the citizens about environmental rights as well as in nurturing a pro-ecological mentality. One activist even noted that country-scale environmental issues are majorly the government's responsibility, while local problems are the responsibility of everyone involved, including local administration, mayor's office and the individuals living there. However, one agreed that the government must play the stronger role here, as they only can generate and create positive changes with its political will, huge funds and expertise. Secondly, half of eco-activists were aware of government-initiated environmental programs and projects, while the other weren't aware of it (Question 6). And thirdly, if asked about its effectiveness, here the majority agree that the programs and/or projects that were so far implemented were considered as effective, especially when we are speaking of the newly adopted New Ecological Code. However, speaking of its ineffectiveness, five main reasons were presented, which included the inexistence of post-project analysis; no objective policy assessment; weak policy implementation; insufficient political will to solve specific environmental problems.

What concerned the role as well as its effectiveness of civil society in raising environmental awareness levels in the country (Section D), all eco-activists viewed the activities of the civil society organizations so far as effective. One of the most effective policies that they have so far been able to implement and introduce successfully into the country concerned its oversight function in being able to monitor violation of state eco-legislations and environmental pollution. Moreover, the respondents also pointed out the successful example of the role of the civil society movement in protesting against strong construction agencies (e.g. Kok-Zhailau case). Most agree that their role will likely grow in the future, particularly those NGOs such as UNDP, IUCN and CAREC, but its strengthened role may also depend on how much support they will be able to receive from the society as well as they youth of the nation.

Lastly, the last questions asked the respondents to openly state first their views on whether they viewed the future of the society's environmental aware-

ness as optimistic or pessimistic (Section E), and whether investments into environmental awareness studies and environmental education processes would help it in the future. In terms of the former, seven eco-activists were optimistic about the future, while viewed the future as rather bleak due to the following five main reasons: 1) countries increased susceptibility to increased issue of socio-demographic aspects as a result of migration, climate and water problems in the region; 2) absence of strong state's political will for pragmatism; 3) problem of systemic environmental problems (e.g. water and air pollution issues); 4) an environmentally-well informed citizen does not equal environmentally-active citizen; 5) prevalence of the majority of the society being passive and non-supportive for pro-environmental actions. When respondents were asked regarding question 10, mixed answers were provided. While on the one side eco-activist agree that investment into environmental education and research are crucial, others were unsure of such a policy effectiveness due to issues related to weak policy implementation, low finances as well as no tracking and monitoring of progresses made. Instead, some proposed to invest more into so-called nudging programs of small but specific local projects.

In sum, all these findings suggest that the level of awareness for environmental problems in the country among local eco-activists have risen and all of them who participated see it as a serious problem that needs to be tackled at both governmental as well as on the civil society level. In this regard, eco-activists level of environmental concern is on the highest level, meaning that they are emotionally invested in the problem and seriously care about it [41]. If in the future more eco-activists start to raise more and more aspects of environmental issues in our country, the outreach of awareness for it will pass on to the next generation and the youth will be even more eager to become not only pro-ecologically aware but also pro-environmentally active. As has Central Asian Bureau for Analytical Reporting predicted, the number of eco-activists in the future is likely to grow as same as its importance in our society [4]. The same can also be said about the number of NGOs in the country, as this tendency has been noticed since the early 1990's when the number of organizations started with 400 and had ever since grown to more than 1600 in 2019 [35].

According to Erhabor & Don [42], an environmentally aware and empowered youth serves in the society as one of the strongest agents for positive change in long-term objectives to lead and create a more pro-ecological culture. It is noteworthy to mention that since Kazakhstan has yet not developed, built and formed a new culture of environmentalism and see eco-activists as nuisance, supporting them is crucial and even necessary in order to recognize them as an important part of our society and value their views, criticisms and policy proposals [4]. Recognition of eco-activist's activities and their criticisms also ensures that they are able to provide the government an option of counterweight that balances the state's views towards environmental policy formation with eco-activism-based policy alternatives [35]. The examples of successful

eco-activist activities, such as those by United Nations Children's Fund with their BeGreen Kazakhstan Program [2], Samgau UPSHIFT mentoring Program by UNICEF Kazakhstan [1], or the 'Gorozhanym' online project by Eurasia Foundation Organization [3], have shown us that we need to include and acknowledge the eco-activist's voices as well as their pro-environmental activities. This has also been supported by the views of [35] who have mentioned that so far ecological activism movements and eco-activists in Kazakhstan have faced many obstacles and its full potential has yet to be fully realized. Such obstacles included the issue with weak political will on a high political level; weak environmental lobbyism; and weak cooperative link between the so-called triad of 'expert community – the state – the public' [35]. Besides that, the authors also mention the existent problem of public's political apathy towards forming and providing public support for pro-environmental policies by both the state as well Kazakhstani eco-activists [35]. It should be noted that this is also one of the reasons why it is important to raise environmental awareness for environmental causes among the public, as it will drive on the one hand public's receptiveness and responsiveness for pro-environmental policies while at the same time spur within the expert community a drive to solve the problem of lack of public access to statistical and official data on environmental activism movements [43].

All in all, this study provided a comprehensive and informative document of primary research data that for both scholars and practitioners, particularly for concerns scholars who can use this data to make meaning of how Kazakhstani eco-activists view, evaluate and comprehend environmental awareness projects. Moreover, such studies should be able to contribute not only as a valuable empirical data in order to fill in the research gap, but also foster civil society movements in support for pro-ecological projects, programs and movements by understanding the views and solution proposals of local eco-activists. Based on our study findings, the government bodies who are responsible for pro-environmental matters as well as civil society organizations should be able to identify different reasons for why overall the environmental awareness programs so far have been ineffective, and identify which environmental problems is prioritized over the other. Thus, our study is both rich in research-based empirical data but also rich in experience-based practical solution proposals for tackling the issue of low environmental awareness in the country.

Despite our study findings, it is noteworthy and even essential to point out that some research limitations that were encountered. One of the obvious limitations of this study concerns its low number of eco-activists who have participated to respond to the eleven open-ended questions. Since, our results will likely not be sufficiently representative enough of the Kazakhstani eco-activist's population, future studies should focus to include more eco-activists. Moreover, since our research also did not look into the difference of viewpoints of local eco-activists residing in different cities or regions within the country, this might also be worth looking into in the future.

Another research limitation of this study concerns its strict sample focus on Kazakhstani eco-activists. Since, no international eco-activists have participated in the study, there is a lack of international perspective on this particular matter. Thus, it is recommended to include them into relevant future research studies and take it into consideration.

Last but not the least, in terms of responses that were provided by the local eco-activists, the issue with how foreign and social concepts can be differently interpreted or understood in the context of Kazakhstan, must also be taken into consideration [44]. Social concepts and their meanings such as those of ‘environmental activism’, ‘environmental activism’ or ‘environmental actions’ may change in mono-cultural contexts due to differences in cultural and linguistic reasons [44]. Besides that, the so-called social-desirability response bias (SDRB) may also have prevailed to be existent in the responses presented by our respondents. Here, the social concept of SDRB can be defined as the situation when respondents portray a specific problem in a more sympathetic image than in reality [44]. In other words, it is also referred to the tendency of respondents, particularly within an open-ended interview, to answer question in a manner that will be viewed favorably by others [44]. In other instances, sometimes respondents also have the tendency to respond to questions with emotions rather than constructively and factual-based approaches.

Further Research Suggestions

In terms of research suggestions, the following three points can be suggested. First, since this study has only looked at the perspectives and opinions of Kazakhstani eco-activists, it could prove very valuable if other group of people could participate in such studies. These may include professors and teachers of environmental, ecological and sustainability studies; government experts well-versed in the inner workings of the Ministry of Ecology, Geology and Natural Resources; experts representing NGOs and local civil society organizations, particularly speaking of the regional offices such as UNDP, UNECE, CARECECO or the Green Women Movement Association.

Another research suggestion worth bringing to the table is the fact that a similar study could be conducted concerning aspects of environmental activism questions or in understanding the level of environmental concern for particular environmental issues. Especially what concerns the latter, an online survey could be conducted among hundreds of Kazakhstani eco-activists in order to understand more clearly which specific environmental issues are of a biggest concern at the current moment. The bigger the sample, the more representative it will be to make generalizations for this particular sample group.

Last but not the least, one more future research recommendation is dedicated to probably expand this list in future studies and include at the same time in its questions more in-depth focus on policy solutions to particular environmental problems. Since Kazakhstani eco-activists on the one hand are likely to be more aware of various environmental issues than the general population,

they could provide more progressive and also most likely a more interesting alternative solution proposal to solve specific environmental problems. Being able to acquire such unique solution proposals, we could compare them to the ones proposed by the government and evaluate them comparatively. Moreover, since one of this study's limitations concern its specific focus on 'Kazakhstani' eco-activists, future research could also include international non-Kazakhstani eco-activists in their sample in order to extend our sample outreach to foreign expertise as well as acquire an international perspective or point of view on these issues. The very fact that international experts could provide and share more in-depth and most probably also more refined responses, they could prove very valuable for local researchers.

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