

Ecological Migration: A Qualitative Study on Social Studies Teachers' Views*

Sibel Öner

Sinop University, Turkey

 <https://orcid.org/0000-0003-1524-1176>

OPEN ACCESS

Volume: 10

Special Issue: 1

Month: August

Year: 2022

E-ISSN: 2582-1334

Received: 18.03.2022

Accepted: 22.07.2022

Published: 18.08.2022

Citation:

Öner, Sibel. "Ecological Migration: A Qualitative Study on Social Studies Teachers' Views." *Shanlax International Journal of Education*, vol. 10, no. S1, 2022, pp. 116–27.

DOI:

<https://doi.org/10.34293/education.v10iS1-Aug.4796>



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

* An early version of this research was presented as an oral presentation at Istanbul International Geography Congress held online between June 17-20, 2022.

Abstract

Ecological migration can be defined as the forced abandonment of the place where people live in order to continue their lives after the deterioration of the ecological balance for various reasons as a result of the negativities they have experienced. In this study, it was tried to determine the views of social studies teachers about migrations due to ecological reasons. There search was carried out with the voluntary participation of teachers working in Ankara, Istanbul, Eskişehir, Isparta, Kocaeli, Mersin, Ordu, Yozgat and Sinop. Descriptive analysis, one of the qualitative research methods, was used in the research. Interview questions were sent to teachers over the internet. Interview questions consist of open-ended questions. As a result of the data obtained, teachers found the subject of ecological migration inadequate in the social studies textbooks, that the subject was not directly mentioned in the program, that the knowledge, skills and behaviors that students would gain by teaching this subject would reduce environmental problems, and there were also reasons why people would have to leave their place of residence due to ecological reasons will be disappeared. When there lated field is examined in the literature, a suggestion has been made to fill the gap in the field due to the lack of any study in the field of education on this subject.

Keywords: Ecological Migration, Geography, Social Studies, Teacher Opinions.

Introduction

Migration, a population movement, is defined as people's leaving their hometown permanently or for a certain period of time. People who participate in this migration are also called immigrants. Migrations can be from rural areas to cities, from rural areas to rural areas, from cities to cities, or from cities to rural areas within the country. Migration that happens in this way is happened in the country and it causes different population densities in different parts of the country. In migrations from one country to another, the population of the countries changes and at the same time, there may be derangement in the distribution of population in the world.

Migrations can be classified based on the distance traveled, the regions visited, and the duration of the journey, or they can be classified based on the reasons behind the migration (Tümertekin & Özgüç, 1998). The International Organization for Migration (IOM) defines the concept of migration as a movement of displacement of a person or a group of people within the borders of their own country or crossing the international boundary, regardless of its duration, structure, and reason (Perruchoud, & Redpath, 2013). Many various factors have been successful in the displacement of population, whether individual or mass, from the past to the present. When we examine the causes of migration in general, economic, educational and health opportunities, excessive population growth in rural areas, wars, political pressures, and security problems, etc. occur due to these reasons. Uyar (2021), it is stated that after the 1970s, new migration flows such as "lifestyle migrations""retired migrations", "climatic migrations", "ecologic migrations" and "climate migrations" comes up.

Droughts, floods, volcanic eruptions, earthquakes, tsunamis, and the harmful consequences of global warming have all threatened people's lives in recent years, forcing them to migrate individually or in groups in order to survive. Ecological migration refers to movement that occurs in this way (Mutlu, İrdem & Üre, 2015). The first definition in the literature for people who migrated for ecological reasons belongs to El-Hinnawi. It defines them as people (natural and/or human-induced) who are forced to leave their habitats temporarily or permanently due to a significant environmental degradation that endangers their existence (El-Hinnawi, 1985). IOM defines an ecological migrant as a person or group who has to leave their home, temporarily or permanently, or chooses to do that so, and relocates within or outside the country, because sudden or gradual environmental changes affect their lives or living conditions adversely. (Perruchoud, & Redpath, 2013).

Global warming is severe enough, according to the IPCC study (Intergovernmental Panel on Climate Change), to compel millions of people to abandon their homes. With the "International Convention on Combating Desertification" published in Africa in 1994, the environment-migration relationship was clearly revealed for the first time; it was stated that governments should be supported to meet the immigration demands of the governments whose existence is under threat due to climate change, based on scientific record at the International Conference on Population and Development held in Cairo of even date. Before the climate summit held in Copenhagen, the International Organization for Migration stated in its report that 200 million people will be expected to migrate in 2050 (Duyamaz, 2019). Nine (2010) opined those disasters related to climate change will remove millions of people, and therefore, the number of ecological refugees among the total refugees will increase in the coming years.

It is thought that migrations that will occur due to environmental factors will mostly affect the populations living in the island countries. It is predicted that the majority of the world's population lives on the coasts at altitudes between 200 m. and 500 m. and as a result of global warming, the sea level will rise and the islands and cities at sea

level will be flooded. Mainly in Asia and Africa, global warming can force millions of people to leave their homes and migrate to other places (Biermann & Boas, 2008; Doğanay, Özdemir & Şahin, 2020; Farbotko & Lazrus 2012). According to Swain (1996), an ever-increasing population puts pressure on all renewable natural resources, makes it difficult for people to access clean water, causes malnutrition and hunger, and thus increases deaths. Environmental degradation such as deforestation, desertification, degradation, climatic changes, and the increase of greenhouse effect threaten the survival of present and future generations.

Bates classified the environmental migrations in three different ways such as migrations due to natural disasters, due to expropriation and environmental degradation (Neuteleers, 2011). Mutluer and Südaş (2013) grouped the causes of environmental migration under five headings. These are: (1) degradation of agricultural lands, (2) natural or man-made disasters, (3) climate changes, (4) wars, and (5) forced migrations. Lonergan (1998) has grouped the factors that can cause environmental migration and stated that natural disasters are at the top of these factors. Disasters such as earthquakes, volcanism, tsunamis, floods, avalanches, and storms can emerge suddenly, as well as drought, climate change, global warming, and rise in sea level are disasters that occur gradually. Adamo (2010) states that regardless of the rate of occurrence, all these disasters can cause people living in the affected area to relocate within the country and for a short time, and in case of repetition of these events, long-term migration takes place. Especially in developing countries, it affects the income of families living in rural areas and as a result earning their living from agriculture causes migration.

Each year between 2000 and 2004, more than 262 million people were impacted by natural catastrophes. More than 98 percent of this settles in poor nations; natural catastrophes disproportionately impact South and East Asia, Sub-Saharan Africa, and tiny island states, with natural disasters accounting for almost 70 percent of deaths in Asia (Laczo & Aghazarm, 2009). According to EM-DAT (CRED's Emergency Events Database), Between 2000 and 2019, totally 1.2 million people lost their lives, and

7348 natural disasters happened, which affected more than 4.03 billion people. Among these events, the disasters that mainly affected people were in turn floods (44%), storms (28%) and earthquakes (8%) (UNDRR, 2020). By the end of 2020, 7 million of the 55 million migrations around the world were due to disasters (IDCM, 2021).

In addition to environmental degradation caused by natural disasters or anthropogenic effects, individuals may decide to migrate temporarily or permanently inside or outside the country because of environmental degradation due to climate change, basic livelihoods, inadequate health conditions, desertification, or habitat change (Black, 2001). Whatever the case may be, migrations due to ecological reasons have occurred all across history, had an active role in the establishment or collapse of many empires, and changed the balance of power. As a result of advances in industrialization and technology, rapid increases in environmental problems, excessive consumption of natural resources, and the inability to meet the needs of an expanding population will become issues in the future, not only in developing countries, but also in developed countries. Because ecological migration is linked to human displacement, it is a matter of human geography, and if we look at it as a reason for formation, we can see that it is linked to environmental education. When the relevant literature is studied, it is discovered that there is no research in the educational field on the issue of ecological migration. This research is expected to benefit the literature and associated scholars.

The aim of the research is to determine the views of Social Studies teachers on the concept of ecological migration. For this purpose, answers to the following questions were sought:

1. How do Social Studies instructors feel about the notion of ecological migration?
2. What are the perspectives of the Social Studies

professors on the causes that drive ecological migration?

3. What are Social Studies teachers' thoughts on the effects of migration of the environment?
4. What are Social Studies teachers' thoughts on preventing migration of the environment?
5. What are the views of Social Studies instructors on the significance of ecological migration in terms of environmental education?
6. Do you believe that the social studies course provides adequate information on the issue of ecological migration? Why?
7. What can be the knowledge, skills, and behaviors that students can acquire by teaching migration of the environment sufficiently in Social Studies lesson?

Methodology

Research Design

This research is an on quantitative study to determine the views of Social Studies teachers on the concept of "ecological migration". The phenomenological pattern called "phenomenology" was used. Studies in this design has been focused on facts that we are aware of but do not have a deep knowledge (Doğanay and the others, 2012). It is aimed to investigate the knowledge of the participants deeply on ecological migration in fact they are actually aware of.

Participants

The sample of this research consists of Social Studies teachers working in public schools affiliated to the Ministry of National Education. Participants were determined by purposive sampling method, one of the non-probability sampling methods (Aziz, 2010). Of the 14 social studies teachers reached, 10 are female and 4 are male teachers. Demographic information of the participants is presented in Table 1.

Table 1 Distribution of Demographic Information of Participants

		Frequency	%
Gender	Female	10	71,43
	Male	4	28,57
Working Place	Ankara	5	35,71
	İstanbul	1	7,14

Working Place	Eskişehir	1	7,14
	Isparta	1	7,14
	Kocaeli	1	7,14
	Mersin	1	7,14
	Ordu	1	7,14
	Yozgat	1	7,14
	Sinop	2	14,31
Years of service	0-5 year	1	7,14
	6-10 year	6	42,85
	11-15 year	2	14,29
	16-20 year	3	21,43
	21-25 year	2	14,29
	26 year and more	-	
Graduated department	Social Studies Education	8	57,14
	Geography Education	3	21,43
	History Education	1	7,14
	History Department	2	14,29
	Geography Department	-	

Data Collection Tools

An interview form consisting of semi-structured questions was prepared in order to reveal the ideas of Social Studies teachers on the concept of “Ecological Migration”. The e-interview technique, which is the most widely used in qualitative research has been used, which provides the opportunity to meet people who are geographically away or who are difficult to interact even if they are geographically accessible (Salman Yıkımsı, 2020). The research questions were prepared by means of “googledrive” and a link was created. The research link was sent to the social studies teachers who voluntarily participated in the research, and the data were obtained by their responses.

Before preparing the questions, the relevant literature was reviewed. No similar study was found in the field of education, but studies on ecological migration were scanned. The draft questions, which were created as a result of the examination of the studies conducted in the national and international field, were broached to the expert. Readjustments were made in the questions in line with the suggestions of the experts. A pilot study was conducted with two Social Studies teachers working in Mamak District of Ankara province and the interview form was finalized. In order to increase

the validity and reliability of the data, as Yıldırım and Şimşek (2008) stated, participants from different provinces and different schools were selected to increase the diversity of data.

While preparing the interview questions, it was cared to choose open-ended questions, easy to be understood by the participants, and not guiding the participants (Bülbül et al., 2013). In line with the purpose of the study, the main theme of the interview questions was the causes and consequences of ecological migration, the relationship between ecological migration-environmental education and ecological migration-social studies course.

Data Analysis

Content analysis method was used in the data analysis. Quotations from the statements taken from the participants’ expressions were included in the study at times. The responses given via “Googledrive” were downloaded and each form was coded as T1, T2, T3... in order to keep the identities of the teachers secret and not cause confusion. Grouping was made according to the research questions and the responses given by the teachers were classified within themselves according to their similarities and differences. Codes were created from the responses given by the participants and expert opinion was

referred. Reliability analysis of the opinions of the experts was conducted with the researchers. According to the reliability formula determined by Miles & Huberman (1994), the reliability result of the study was determined as 93%. This result shows that the research is reliable.

Results

The findings prepared in line with the themes that form the framework of the research and interview questions will be mentioned in this section.

Findings Regarding the Social Studies Teachers’ Ideas on the Concept of Ecological Migration

The views of the social studies teachers participating in the research on the concept of ecological migration and the frequencies of these responses are remarked in Table 2.

Table 2 Social Studies Teachers’ Ideas on the Concept of Environmental Migration

	Frequency	%
Natural Disasters	4	15,38
Wars	5	19,23
Disruption of ecological balance	8	30,78
Anxiety of people exposed to ecological migration	2	7,69
Forced migration	5	19,23
Mass migrations	2	7,69

When the answers given by the participants are examined in order to reach the findings of the first sub-problem of the research in Table 2, we come to the conclusion that the social studies teachers mostly expressed their views on the concept of ecological migration as “deterioration of the ecological balance, wars, forced migration”. The adaptation of human actions that occurred as a result of the breakdown of the ecological balance to the new order was the widespread perspective of teachers. Two of the teachers emphasized that environmental migration has also occurred in the past. Some of the teachers’ views on this subject are given below.

“Although ecological migration comes to mind as natural disasters and disruption of ecological balance, today’s migrations caused by also

wars. In the geographies in which have an ongoing war, agricultural policies deteriorate, and the people are unable to make a living. However, human beings still feed on the products they produce in the ecosystem, and when this opportunity disappears, they migrate to a geography in which they can move on. In other words, we don’t only think of natural disasters, earthquakes, floods, tsunamis, and volcanoes when we mean ecological migration”(T1)
“There were various migrations due to natural disasters in the past. Because of global warming’s negative effects, it can lead to mass migration today. Climate change is one of the most important problems nowadays. After telling the nowadays epidemic period experts have predicted that the most important problem of humanity will be the adverse circumstances created by climate change, the decrease in clean drinking water resources and related to these we will experience mass migration.”(T9)

“Since it is a forced migration event, people who encounter this situation face many problems such as social, cultural, economic, and political. This situation affects both the immigrants and the areas in which they migrate.”(T11)

“It refers to forced migration to another environment in conditions where the ecosystem is not suitable for life”. (T13)

Based on the expressions of the teachers, ecological migration is illustrated as the situation in which people have to leave their home town compulsarily from past to present (environmental, political, social, cultural, wars).

Findings Regarding the Social Studies Teachers’ Ideas on the Factors Causing Ecological Migration

The ideas of the social studies teachers participating in the research on the factors causing ecological migration and the frequencies of these responses are indicated in Table 3. According to the table, we see that social studies teachers demonstrate “climate change and global warming” as the main factor causing ecological migration.

Table 3 Opinions of Teachers on the Factors Causing Ecological Migration

	Frekans	%
Climate Change	8	17,78
Desertification	3	6,67
Aridity	4	8,89
Flash floods	1	2,22
Natural disasters	4	8,89
Wars	4	8,89
Global warming	7	15,55
Erosion	4	8,89
environmental problems	4	8,89
Decreased water resources	1	2,22
Nuclear accidents	2	4,44
Destruction of natural vegetation	3	6,67

When the answers given by the participants are examined, environmental migration is fueled by factors such as global warming, climate change, dwindling water supplies, environmental issues, desertification, tsunamis, earthquakes, and biological and nuclear weapons used in warfare. Examples of teachers' views on this subject are given below.

“Climate changes come the first among the factors that cause ecological migration. Climate change causes events such as desertification, drought, flash floods and tsunamis. Global warming is another reason for ecological migration. (...) I also find ecological migration very relevant to wars. For example, the atomic bomb on Hiroshima in Japan deteriorated the ecosystem there, causing great damage to the soil and living things. For this reason, people had to migrate, and life could not return to normal for a long time.” (T1)

“The factors that cause ecological migration are various. We can list these factors as war, climate change, natural disasters, global warming.” (T6)

“The most important cause of ecological migration is wars. If we want to prevent this migration, we must take a stand for peace as the world.” (T7)

“Global warming and climate change are the leading factors that cause ecological migration. At the same time, environmental problems,

nuclear accidents, deforestation, and famine are among the factors that cause ecological migration. (T13)

Findings Regarding the Opinions of Teachers on the Consequences of Ecological Migration

Table 4 Opinions of Teachers on the Consequences of Ecological Migration

	Frequency	%
Water Wars	1	4
Hunger	1	4
Epidemic Diseases	1	4
Cultural degeneration – assimilation	5	20
The shrinking of the Earth's habitable areas	1	4
Disruption of ecological balance	3	12
Excessive and rapid urbanization	4	16
The deterioration of the economic, social, and political structure of the receiving country	2	8
Increasing environmental problems	2	8
Imbalances in population distribution	3	12
Infrastructure issues	2	8

In the third sub-problem of the research, “What are the thoughts of social studies teachers on the consequences of ecological migration?” the response has been examined. Teachers stated that because of ecological migration, natural life is deteriorated, cultural assimilation will be experienced, concretization in the migrated regions, rapid urbanization and environmental problems will increase in the migrated regions. At the same time, they stated that there have been many migrations in history, including environmental reasons, and that these had important political consequences. T1 and T4 explained that ecological migration can lead to both negative and positive results. They expressed their sight on this issue as follows:

“First of all, sheltering, health, language and culture problems will appear. Migrant

citizens become refugees when they go to another country, and it takes time to adapt. If the migrating population is small, the problem of assimilation arises, and their own culture is lost. They may be subject to political pressure. If their number is large, they disrupt the economic, social, and political structure of the country in which they move. This causes the country to weaken. For example, the great migration known as the migration of tribes in history, took place as a result of the deterioration of the ecological balance of the citizens living in Central Asia (drought, inability to find grassland, epidemic disease, population growth, insufficient pastures, etc.). As a result, the powerful Roman empire was divided into two, the Western Rome was destroyed, and the Eastern Rome was able to survive on a small piece of land. In that case, the political consequences of ecological migration may also occur. If we look right-down, they provide the recognition and spread of the plants from the seeds that they have with them to the geography they move. They also provide cultural variety in their food, clothes etc.

“We can evaluate the results as favourable and unfavourable. Peoples leaving their homelands, having difficulties in foreign cultures, loneliness, mental problems, and the imbalance in the distribution of the population can be given example to the negative sides. Cultural interaction, being able to live freely in better conditions without fear can be given example to favourable reason.” (T4).

Other social studies teachers who participated in the research emphasized only the negative impact of ecological migration. Some examples on this subject are given below.

“While population density will decrease in some places, it will increase in the others. This will cause an uneven distribution of the population in the world. At the same time, there will be an increase in the number of cities.” (T3).

“It is estimated that ecological migrations due to global warming and climate change will reach serious dimensions in the future. The decrease in water resources on earth may cause water wars, and this situation will affect agricultural

production, so hunger and epidemics may spread further. The habitable areas of the earth may shrink, and millions of people may die.” (T9).

Findings Regarding the Opinions of Social Studies Teachers on the Prevention of Ecological Migration

Table 5 Opinions of Social Studies Teachers on the Prevention of Ecological Migration

	Frequency	%
Maintaining the ecological balance	11	36,66
Creating a world policy	5	16,67
Making peace in the world	2	6,67
Using renewable energy sources	3	10
Raising environmentally conscious individuals	5	16,67
Using natural resources carefully	4	13,33

As can be seen in Table 5, in the fourth sub-problem of the research, “What are the thoughts of social studies teachers on the prevention of ecological migration?” codings of the responses are included. Social studies teachers stated that ecological migration can be prevented by making it a world policy to protect nature and ecological balance. In addition, they stated that ecological migration will be prevented by altering fuel consumption patterns, reducing concreting, adopting long-term peace options, and raising environmentally conscious individuals. Some examples of teachers’ thoughts on this sub-dimension of the research are as follows:

“The most important thing to do in order to prevent ecological migration is to minimize the behaviors and lifestyles that have negatively affected and continue to affect the ecological balance, and to transform the protection of nature and natural balance into a world policy.”(T2)

“In order to prevent ecological migration, the most important thing is to provide reducing the behaviour and the lifestyles that affected the ecological balance before or still affecting it, nature and protecting nature must be turned into a world policy (T2).

“We must raise conscious individuals to avoid ecological migration. These individuals will not harm their environment they live in, and they are in favor of peace, and take measures to minimize the destructive effects of natural disasters. Therefore, ecological migration would have disappeared.” (T7)

Findings Regarding the Opinions of Teachers on the Importance of the Concept of Ecological Migration in terms of Environmental Education

Table 6 Thoughts of Social Studies Teachers on the Importance of the Concept of Ecological Migration in terms of Environmental Education

	Frequency	%
Environmental awareness	8	44,44
Usage of Natural Resources	2	11,11
Waste management	3	16,67
Environmental problems	3	16,67
Maintaining the natural balance	2	11,11

In Table 6, responses of Social Studies teachers regarding the importance of the concept of ecological migration in terms of environmental education and the frequencies related to these responses are indicated.

Environmental education should begin at a young age, according to the social studies teachers

who participated in the study, and educators and media tools, as well as families, have significant responsibilities in this respect. According to them, increasing environmental awareness will eliminate the reasons that promote ecological migration. T10 expressed his/her opinion on this issue as follows:

“The correct use of water resources or the correct evaluation of waste materials can be prevented partially by bioremediation.”

Examples of other teachers’ ideas over the fifth sub-problem of the study are as follows:

“Environmental awareness is very important. People must take care of the environment in which they live. The first way to do this will be through the education that is given by the family at a young age. The education that is thought by the family can be continued in schools through teachers, and also through mass media.” (T2)

“It is an important concept in the field of environmental education and geography, which needs to be emphasized and researched.” (T12)

“Do you think that enough information is taught about Ecological Migration within the scope of Social Studies Course? Why?” Findings Regarding the Thoughts of Social Studies Teachers Over the Question

Table 7 Teachers’ Ideas on Whether Enough Information About Ecological Migration is Taught in Social Studies Lessons

		Frequency	%
I think it's enough		1	3,45
I think it's not enough		13	44,82
Reasons	Not directly involved in the curriculum	7	24,13
	Not enough Importance given to Geography subjects	6	20,69
	Lesson hours are less	2	6,89

The teachers stated that the social studies course hours were insufficient, the geography subjects were insufficient in the curriculum, and the subject related to ecological migration was indirectly included. One of the social studies teachers participating in the research stated that sufficient information was submitted about ecological migration within the scope of social studies lesson (T8). One of the social studies teachers, T1 stated that sufficient information was not placed and suggested a solution to the

issue. *“I do not think that sufficient information is placed on ecological migration in the social studies course. It is not directly included in the curriculum; it is mentioned indirectly. I suggest there will be a class called Documentary, in this course, which is not graded, the documentary should be watched and interpreted every week, at least one unit of this course should be reserved to the subject of ecological migration.” T6, one of the participants, explains the reason for not providing enough information as*

follows. “(...) Because if enough information had been taught, the perspective on people who had to migrate due to environmental reasons would have been differed in. The fact that the course hours are short, and the scope of the subject is wide is also

effective in this.”

“What Knowledge, Skills and Behaviors Can Be Gained by Students with Adequate Processing of Ecological Migration in Social Studies Lesson?” Findings Related to the Question

Table 8 Views on the Subject of Ecological Migration and the Knowledge, Skills and Behaviors that Students Can Gain

Theme	Category	Frequency	%
Information	Learns the causes and consequences of ecological migration.	2	33,33
	Knows that the ecosystem has a dynamic structure.	1	16,67
	Understands the cultural characteristics of societies.	1	16,67
	It offers solutions to prevent ecological migration.	2	33,33
Skill	The ability to protect the natural environment develops.	5	55,56
	Gains empathy skills towards immigrants/refugees.	3	33,33
	Gains multidimensional thinking skills.	1	11,11
Behaviour	By increasing environmental awareness, it develops environmental protection behaviors.	8	33,33
	Actively participates in waste management.	4	16,67
	Uses the acquired knowledge in daily life.	2	8,33
	It works on afforestation.	4	16,67
	It uses natural resources effectively.	3	12,5
	It respects every living thing in nature.	3	12,5

Social Studies teachers expressed that students will be more sensitive to the environment, they will have achievements on the subject of empathy and understanding people, they will comprehend the cultural properties of society and they will become conscious about recycling and usage of renewable energy resources, and they will leave more livable environment to future generations, and their awareness to the nature, climate, wars and disasters will expand and thus the reasons of forced displacement such as ecological immigration will be disappeared. Some of the teachers’ views are given below.

“If the subject of ecological migration is adequately taught in the Social Studies course, students will learn what causes migration and try not to do the things that cause migration. For example, they will not waste their batteries to the ground, and reduce the amount of plastics the use, and dream the future electric automobile. They will gain awareness on the subjects of nature, climate, wars and disasters, they will propose solution over them and shape their

behaviours.”(T1)

“Socities may have significant gains in understanding the cultural characteristics and understanding and empathizing with people.” (T7)

“They pay more attention to environmental awareness. At least, if they see a piece of paper on the ground while walking down the street, they may feel a necessity to pick it up and throw it in the trash. Individually, they can use water resources more carefully and be more sensitive about energy savings in their homes.” (T10)

Discussion, Conclusion and Recommendations

The results of the research undertaken to disclose the thoughts of Social Studies teachers on the idea of ecological migration are presented in this section. When the relevant literature is examined, no study has been found in the literature on the subject of education one before. In this context, it is thought that the study will be important because it is the first in the literature.

When the answers given by the social studies teachers to the first sub-problem of the research are examined, it is seen that as a result of ecological migration that occurred due to natural or human reasons, people have to go to better living areas and therefore individuals who have to migrate face many social, economic, cultural and political problems. It is revealed that they think that they are left alone, that they are anxious and in a difficult process. Black (2001) supports the view of social studies teachers by pointing out that individuals have migrated throughout history due to environmental problems.

Secondly, in the research, social studies teachers were asked “What are their opinions about the factors that cause ecological migration?” question was addressed. When the responses of the teachers are examined, environmental problems, especially global warming and climate change, wars, floods, desertification, destruction of vegetation, natural disasters, decrease in water resources, erosion are among the causes of ecological migration. Studies on the subject support teachers’ views (Bates, 2002; Myers, 2002; Stojanov, 2004). Happy et al. (2015) in their study on ecological refugees emphasized that the resources would decrease depending on environmental conditions, and that the war and conflicts experienced as a result would trigger migration. Steiner (2008) stated that environmental degradation and climate changes will cause migration as the most obvious result.

When the Social Studies Teachers’ responses to the results of ecological migration are examined, it was concluded that the difficulties in having a legal gap will rise because of migrating ecological reasons, becoming loneliness, and having mental problems, and also environmental problems will increase under the impact of rapid urbanization, they will have more problems in sheltering, economy and culture. Artan & Uzun (2017) emphasized that a consensus has not yet been reached on the status of individuals who have been exposed to migration due to environmental factors. The results of global warming and triggering each other will lead people to the brink of a great disaster (Mutlu et al., 2015). Homer-Dixon (1994) stated that individuals migrating due to ecological reasons may also cause armed conflicts and instability.

The perspectives of teachers on how to avoid ecological migration were investigated. They presented an opinion to analyze the ecological migration in global extent and it must be taken part in government policy, raising conscious individuals to protect the ecological balance, to carry on studies to work out environmental problems and thus the migrations related to the ecology can be worked out. Studies have emphasized the need for necessary regulations in worldwide level (Demirdelen & Odman, 2017; Ekşi, 2016).

Social studies teachers’ views on the importance of the concept of ecological migration in terms of environmental education were asked. Social studies teachers believe that environmental education is an education that should be given from an early age and should continue throughout life; they stated that when environmentally conscious individuals are raised, environmental problems will decrease and most of the factors that cause ecological migration will disappear by themselves.

“Do you think that adequate information is taught on the subject of ecological migration within the scope of the social studies course? Why?” The responses of social studies teachers were examined. 13 of the 14 teacher participants of the research agreed that adequate information is not provided. The fact that the duration is short, the scope of the subject is wide, and it is not directly included in the program is demonstrated among the reasons of the issue.

The last sub-problem of the research constitutes “What information, skills, and attitudes may students learn if the subject of ecological migration is appropriately taught in the social studies course?”. In that research, teachers stated that by teaching the subject of ecological migration, students will learn the factors that cause ecological migration and in what consequences individuals will encounter as a result of these migrations, they will understand the cultural characteristics of societies and they will propose solutions to prevent ecological migration. At the same time, they expressed that by learning the subject, students will gain skills to protect the natural environment, approach immigrants more tolerantly, gain empathy skills, and gain multidimensional thinking skills while dwelling on the causes and consequences of events.

When we look at the behavioral dimension, it has been revealed that the students think that they will develop environmental protection behaviors by increasing their environmental awareness (planting trees, using water economically, not throwing garbage on the ground, etc.), they will participate in waste management effectively, they will use the knowledge they have gained in daily life, and they will start to use natural resources effectively.

As it was stated before, there is no work on the subject in the educational section. In order to support national and international projects on the subject and to raise awareness, symposiums, panels, etc. events can be arranged at university. Meetings can be held within the Ministry of National Education in order to raise awareness in schools. Ecological problems can be shown to students through simulations. The results that may appear after these problems can be told. Experts can answer students' questions through forums. Since the subject is both related to the geography and environmental education, suggestions can be made to fill the gap in this section with the other works to be done.

References

- Adamo, Susana B. "Environmental Migration and Cities in the Context of Global Environmental Change." *Current Opinion in Environmental Sustainability*, vol. 2, no. 3, 2010, pp. 161-65.
- Artan T., and K. Uzun. "A Discussion on Green Social Work in the Context of Climate Refugees." *Journal of Current Researches on Social Sciences*, vol. 7, no. 4, 2017, pp. 171-84.
- Bates, Diane C. "Environmental Refugees? Classifying Human Migrations Caused by Environmental Change." *Population and Environment*, vol. 23, 2002, pp. 465-77
- Biermann, Frank, and Ingrid Boas. "Protecting Climate Refugees: The Case for a Global Protocol." *Environment: Science and Policy for Sustainable Development*, vol. 50, no. 6, 2008, pp. 8-17.
- Black, Richard. "Environmental Refugees: Myth or Reality?." *UNHCR Working Paper No. 34*, 2001.
- Bülbül, Tuncer, et al. "Teacher Perception of School-Based Evaluation: A Descriptive Analysis Study based on Teacher's Wives." *Educational Sciences in Theory and Practice*, vol. 13, no. 4, 2013.
- Demirdelen, Özge, and Mustafa Tevfik Odman. "One of the Problems Caused by Global Warming: The Legal Status of Climate Refugees." *The Journal of Social Sciences*, vol.13, 2017, pp. 470-97.
- Doğanay, Hayati, et al. *General Human and Economic Geography*. Pegem Publishers, 2020.
- Duymaz, S.Y. *Climate Change, Disasters and Human Rights: Environmental Forced Migration*. Marmara University, 2019.
- Ekşi, Nuray. "Climate Refugees." *Journal of Migration*, vol. 2, no. 4, 2016, pp. 10-58.
- El-Hinnawi, Essam. *Environmental Refugees*. United Nations Environmental Program, 1985.
- Farbotko, Carol, and Heather Lazrus. "The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu." *Global Environmental Change*, vol. 22, no. 2, 2012, pp. 382-90.
- Homer-Dixon, Thomas F. "On the Threshold: Environmental Changes as Causes of Acute Conflict." *International Security*, vol. 16, no. 2, 1991, pp. 76-116.
- IDMC. *Global Report on Internal Displacement 2021*. Internal Displacement Monitoring Centre, 2021.
- Laczko, Frank, and Chirstina Aghazarm. *Migration, Environment, and Climate Change: Assessing the Evidence*. International Organization for Migration, 2009.
- Mutlu, Ahmet, et al. "Ecological Refugeeism." *Homeland Politics Management*, vol. 10, no. 23, 2015, pp. 79-118.
- Myers, Norman. "Environmental Refugees: A Growing Phenomenon of the 21st Century." *Philosophical Transactions the Royal Society: Biological Sciences*, vol. 357, 2002.
- Neuteleers, Stijn. "Environmental Refugees: A Misleading Notion for a Genuine Problem." *Ethical Perspectives*, vol. 18, no. 2, 2011, pp. 229-48.

- Nine, Cara. "Ecological Refugees, States Borders, and the Locke an Proviso." *Journal of Applied Philosophy*, vol. 27, no. 4, 2010, pp. 359-75.
- Perruchoud, Richard, and Jillyanne Redpath. *Glossary of Migration Terms*. International Migration Law, 2013.
- Salman Yıkıms, Meral. "E-Interview Technique in Qualitative Research." *Trakya University Journal of Social Sciences*, vol. 22, no. 1, 2020, pp. 183-97.
- Swain, Ashok. "Environmental Migration and Conflict Dynamics: Focus on Developing Regions." *Third World Quarterly*, vol. 17, no. 5, 1996, pp. 959-73.
- Tümertekin, E., and N. Özgüç. *Human Geography; Human Cultural Space*. Cantay Bookstore Publications, 1998.
- UNDRR. *The Human Cost of Disasters - An Overview of the Last 20 Years 2000-2019*. Centre for Research on the Epidemiology of Disasters.

Author Details

Sibel Öner, Sinop University, Turkey, **Email ID:** soner@sinop.edu.tr