

**WATER AS A DRIVING FORCE OF NATURE AND POWER
(HYDROELECTRIC POWER PLANTS [HEPPs] AND THE DILEMMA OF
DEVELOPMENT AND ECOLOGY FROM AN ANTHROPOLOGICAL
PERSPECTIVE)**

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PLAGIARISM

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ABSTRACT

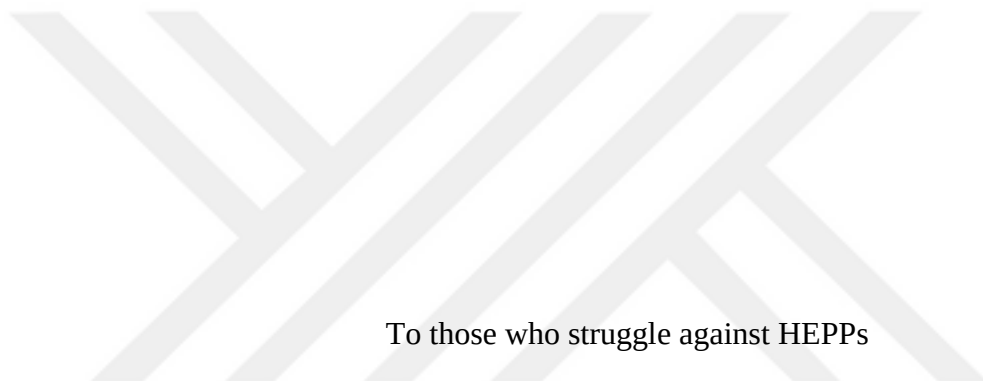
While two indispensable components of life, water and development, continue to shape each other constantly, human beings have always attempted to control water for food supply, irrigation, energy etc. throughout history. Huge dam and hydroelectric power plant projects have been initiated as one of the most important elements of development, an idea that was initiated in Western countries, and then ‘exported’ to developing countries particularly following the Industrial Revolution. The result is almost no freely flowing rivers remaining on Earth. There are many benefits these power plants provide for requirements of the modern life, while rapidly growing world population and gradually decreasing freshwater resources, their effects on the ecosystems surrounding rivers, as well as their social, cultural and environmental effects are not taken into account, which, as a result, make the alleged clean and renewable hydroelectric energy not sustainable. This study discusses hydroelectric power plants (HEPPs) within the framework of Development and Ecology from an anthropological perspective and evaluates the impact of two river-type hydroelectric plants on the daily lives of local people in the Aksu Valley located at the İspir District of Erzurum.

Keywords: Anthropology of Development, Ecological Anthropology, HEPPs

ÖZET

Yaşamın iki vazgeçilmez bileşeni olan su ve kalkınma birbirlerini sürekli biçimlendirirken insanlar da tarih boyunca besin ihtiyaçlarını karşılamak, sulama yapmak, enerji elde etmek gibi nedenlerle daima suyu kontrol altına almak istemiştir. Batılı ülkelerde ortaya çıkan ve daha sonra özellikle de Endüstri Devrimi'ni takiben gelişmekte olan ülkelere 'ihraç' edilen devasa baraj ve hidroelektrik enerji santrali projeleri kalkınmanın en önemli unsurları olarak hayata geçirilmiştir. Sonuç, yeryüzünde özgürce neredeyse akan hiçbir nehrin/derenin kalmaması olmuştur. Bu santraller modern yaşamın gereklilikleri için pek çok fayda sağlamaktadır, ancak hızla artan dünya nüfusu ve giderek azalan taze su kaynakları, santrallerin nehirler etrafındaki ekosistem üzerindeki etkileri ve aynı zamanda toplumsal, kültürel ve çevresel etkileri hesaba katılmadığından sonuçta elde edileceği iddia edilen temiz ve yenilenebilir hidroelektrik enerjinin sürdürülebilirliği kalmamıştır. Bu çalışma, Kalkınma ve Enerji çerçevesinde antropolojik bir bakış açısından hidroelektrik enerji santrallerini (HES) tartışmakta ve iki nehir tipi hidroelektrik santralinin Erzurum'un İspir yöresindeki Aksu Vadisi'nde yaşayan yerel halkın gündelik yaşamlarına etkilerini değerlendirmektedir.

Anahtar kelimeler: Kalkınma Antropolojisi, Ekolojik Antropoloji, HES



To those who struggle against HEPPs

ACKNOWLEDGEMENTS

While the universe we live in preserves its mystery to a great extent, we have come a long way to learn about the beginning of life. Water and life, two indispensable concepts, are essential to each other. Since ancient times, water, which is of vital importance to living things, has been shaped, controlled and made a part of physical, economic, social, even artistic life by humans in order to meet the requirements of our bodies and daily life. As one of the most important scales of advance and development, civilizations who have been trying to rehabilitate rivers initially confined them to their immediate requirements, while mega water projects that have been launched along with industrialization and urbanization after the 18th century have focused on diverting all resources to human-oriented consumption.

I have been interested in history and archaeology since my childhood, and during my excursions to archaeological sites in Anatolia with a very rich background of civilizations, I have particularly noticed the endurance and functionality of ancient water structures. While inland waters controlled by such structures have contributed to the development of civilizations for centuries, the hydropower, which is claimed to be a sustainable resource, has become a key component in the development plans for governments around the world with increased energy use along with increased demands based on globalization, industrialization and development goals.

While water management has been considered as a technical, scientific and economical issue for a long period of time, its social, political and environmental context and social, cultural and environmental impacts have been largely overlooked all over the world. In addition to providing support for energy production, dams and hydroelectric power plants (HEPPs) are claimed to increase employment opportunities, and mobilize local economies, however increasing environmental awareness as a result of these plants' impacts on daily life practices of people and the environment, socio-economic developments, pollution and global warming, which have been associated with social movements in urban and rural areas has revealed that the relationship between humans and environment should be an important part of these plans. In addition, continuing to adopt an anthropocentric approach in the context of production and consumption results in ignoring the water requirements of other living organisms. Changing the natural flow of a water course leads to changes in the natural water cycle (hydrological cycle) as well as in the habitats of living

species, posing a threat to biodiversity, plant and animal species and climatic conditions.

When I put all these together, my admiration for water structures in the archaeological sites that I have visited has turned into a concern, considering their irreversible effects on the life spaces. Our government's recent motto "Water Flows, Turk Builds" to replace the phrase "Water flows, Turk Watches" indicates their strong will to handle water management by market forces in response to growing population and developing economy. That is why I wanted to study and observe the impacts of contracting these water resources the so-called 'renewable energy sources' to private companies without taking into account their social, cultural and environmental impacts on the daily life of local people around these plants who have been using water resources in a sustainable way with deep knowledge based on thousands-years of cultural background.

The main theme of this study is to share and evaluate the information I obtained by observation and interviews during my fieldwork in July and August 2012 to gain insight about the experiences of local people before and after the construction of two hydroelectric power plants in Aksu Valley, District of İspir, Erzurum. I was unable to revisit the field in order to evaluate and/or observe changes since 2012 because of the restricted timeline in the valley during summer months with expats from big cities, and my heavy working conditions.

First of all, I would like to thank the inhabitants of Aksu Valley, who accepted me and Cengiz in their community, opened their minds and houses to me. Especially, I cannot thank enough to Huri Aksu, who cooked and made us taste their fantastic local cuisine with great enthusiasm. This dissertation would not be possible without my parents Ergül and Mustafa Yanıkkaya who always encouraged us to stand on our own feet, and my dear sisters, Prof. Dr. Gülderen Yanıkkaya Demirel, Associate Professor Dr. Zerrin Yanıkkaya and Prof. Dr. Berrin Yanıkkaya, who persuaded and encouraged me to study for master's degree in Anthropology years after my graduation from the university. My partner Cengiz Aydemir was always supportive and helpful throughout my classes and writing process, and he made life easy for me with his great help while I was trying to establish a balance between school and work, and he even enjoyed accompanying me during my fieldwork. I also want to express my heartfelt gratitude and thanks to my advisor Dr. Banu Koçer Reisman for her patience and meticulous approach to my study, and each one of the members of my

dissertation committee, Dr. Ayşe Hilal Tuztaş Horzumlu and Dr. Sibel Baykut for their encouraging support.

It is important to see that HEPPs and their social, environmental and cultural impacts other than economic aspects have been addressed by various disciplines and by means of civil society in the absence of any coverage in mainstream media during the long period between completion of my fieldwork and completion of my thesis. I hope that this thesis will contribute to all present and further theoretical discussions and accounts of fieldworks on this subject from an anthropological perspective.



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ABBREVIATIONS

AAA	American Anthropological Association
AD	Anno Domini
AVKDYKD	Aksu Valley and Villages Society for the Protection of Natural Life (Aksu Vadisi ve Köyleri Doğal Yaşamı Koruma Derneği)
BC	Before Christ
BORUSAN	Pipe Industry Corporation [Boru Sanayii Anonim Şirketi]
BOT	Build-Operate-and-Transfer
DDP	Dams and Development Project
DİSK	The Confederation of Progressive Trade Unions of Turkey [Türkiye Devrimci İşçi Sendikaları Konfederasyonu]
DOT	Do-Operate and Transfer
DP	Democratic Party [Demokrat Parti]
DSO	State Industrial Office [Devlet Sanayi Ofisi]
DPE	State Planning Institute [Devlet Planlama Enstitüsü]
DPT	State Planning Organization [Devlet Planlama Teşkilatı]
DSİ	Directorate of State Hydraulic Works [Devlet Su İşleri Müdürlüğü]
ECOSOC	United Nations Economic and Social Council
EİE	Electric Power Resources Survey and Development Administration [Elektrik İşleri Etüt İdaresi]
EU	European Union
GDP	Gross Domestic Product
KHGM	General Directorate of Village Services [Köy Hizmetleri Genel Müdürlüğü]
GLOTHRO	Globalization and Transnational Human Rights Obligations

GNP	Gross National Product
GWh	Gigawatt hours
HEPPs	Hydroelectric Power Plants
ICB	Industrial Credit Bank
ICOLD	International Commission on Large Dams
IHP	Intergovernmental Hydrological Program
IMF	International Monetary Fund
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
AKP	Justice and Development Party [Adalet ve Kalkınma Partisi]
MFWA	Ministry of Forestry and Water Affairs [Orman ve Su İşleri Bakanlığı - OSİB]
MW	Megawatt
NATO	North Atlantic Treaty Organization
NGOs	Non-Governmental Organizations
NREAP	National Renewable Energy Action Plan
NUTS	Nomenclature of Units for Territorial Statistics
OECD	Organization for Economic Co-operation and Development
PEE	Public Economic Enterprises [Kamu İktisadi Teşekkülleri-KİT]
RPP	Republican People's Party [Cumhuriyet Halk Partisi-CHP]
SAA	Society for Applied Anthropology
SYGM	Directorate General of Water Management [Su Yönetimi Genel Müdürlüğü]
TMMOB	Union of Chambers of Turkish Engineers and Architects [Türkiye Mühendis ve Mimar Odaları Birliği]

TÜBA	Turkish Academy of Sciences [Türk Bilimler Akademisi]
TÜSİAD	Turkish Industry and Business Association [Türkiye Sanayicileri ve İşinsanları Derneği]
SUEN	Turkish Water Institute [Su Enstitüsü]
UN	United Nations
UNEP	United Nations Environment Program
UNCSD	United Nations Conference on Sustainable Development
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN Water	United Nations Water
US	United States of America
WCD	World Commission on Dams
WINS	Water Information Network System
WWC	World Water Council
WWF	World Water Forum

1. INTRODUCTION

*And it is a river, insomuch a river that,
it constantly flows.*

*Then, it becomes the greatest seas.
See, then these greatest seas,
start where the sea ends.*

This road leads to human.

Edip CANSEVER

1.1. Research Topic

In line with neoliberal policies introduced in Turkey since the early 1980s, the Law on the Utilization of Renewable Energy Sources for Electricity Production No. 5346 issued in 2005 (Official Gazette, May 2005) as an extension of the Build-Operate-and-Transfer (BOT) model initiated in the energy sector in 1984 and amendments in this Law in 2011 (Official Gazette, January 2011) have rendered public institutions such as *İller Bankası* (Provincial Bank), *Devlet Su İşleri* (DSİ, State Hydraulic Works) inactive in utilizing hydrological resources in order to address increase in energy and food production in connection with increased population and industrialization and development, and the transfer/privatization of water management to multinational/national companies as it is across the world has been associated with many economic, political, sociological, ecological and anthropological issues.

The privatization process, which has been fueled by financial and moral support of international actors such as World Bank, OECD and European Union for this radical shift in policy from developmentalism to neoliberalism, has empowered large multinational and national investors, who have considered government's

purchase guarantee as an incentive, to turn their eyes into streams and brooks across Anatolia suitable for construction and operation of hydroelectric power plants (HEPPs) other than rivers such as Dicle (Tigris), Fırat (Euphrates), Sakarya (Sagrophos), and Kızılırmak (Halys), which are suitable for dam construction. Instead of developing 'renewable' energy resources such as hydro-, solar and wind-power for the public good, giving their control to profit making companies poses a threat for the future as it means giving control of the water, the 'blue gold',¹ to private companies while it has become increasingly important due to global warming, rise in world's population, and scarcity of resources. Water policies, which take advantage of turning this opportunity into profitability, have been designed without consulting any universities, non-governmental organizations, professional associations and communities living in the regions where these projects will be implemented (Kibaroglu et al., 2009, p.288), and they are only dealt with at technical level while their social, cultural, and ecological consequences are disregarded.

According to DSİ data, usable annual water potential in Turkey for irrigation, drinking and utility water purposes, is around 112 billion m³, including 94 billion m³ surface water and 18 billion m³ underground water (DSİ Annual Report, 2019, p.52). Turkey has 25 river basins. In the near future, it will slip from being one of the water-stressed countries down to water scarce countries since the water usable per capita which is around 1600 m³ at present, is expected to be reduced to 1,000 m³ by 2023 with an estimated population of 100 million (DSİ, 1954-2018, p.33).² At present the total volume of water consumed by various sectors is around 59 billion m³ in Turkey,

¹ A term coined by Maude Barlow and Tony Clarke, the authors of *Blue Gold: The Battle Against Corporate Theft of the World's Water*, Routledge 2003.

² The United Nations World Water Development Report 4 indicates that an area is 'water stress' when annual water supplies drop below 1,700 m³ per person, 'water scarce' when it drops below 1000 m³ per person, and 'absolute scarcity' when it is below 500 m³ (2012, p.124)

with 43 billion m³, 8 billion m³ and 8 billion m³ used in the agriculture, households, and industry, respectively (p.34).

With a claim of growing energy demand and dependency on imports, the National Renewable Energy Action Plan (NREAP) issued in December 2014 in Turkey (Ministry of Energy, 2014, national renewable energy strategy, Article 3) indicates that it has been agreed to ‘take necessary measures in order to make maximum use of hydroelectric potential and regularize into the national economy by means of private sector’. Based on this strategy, hydroelectric energy power is expected to increase 34.000 MW per annum (91.800 GWh) by 2023. Within the same year, a resolution issued in the Official Gazette No. 290086 paved the way for construction of hydroelectric power plants in natural protected areas, which are considered not to have ‘superior feature’ although seemingly it prevents construction in such areas. In addition, with the Water Usage Rights Regulation in order to Operate in the Electricity Market, issued in the Official Gazette no. 29274 dated 21.02.2015, private companies have been given the opportunity to establish unlicensed production plants on dams used for drinking waters and water conveyance lines and force mains through municipalities.

In Turkey, as well as the rest of the world, the most important element that has been ignored in the plans and projects prepared to achieve these goals is that the water, which is considered as a renewable energy source is, in fact, not always sustainable. For example, overuse of water in agriculture, ignorance of ecological limits, and poor management skills during the Soviet period have led to severe ecological consequences by turning 80% of the Aral Sea into a desert (Sehring & Diebold, 2012, p.23). Over-cropping and overirrigation have resulted in some serious ecological problems, such as shrinking of oasis and desertification of grasslands in

north and northwest China (Du et al., 2013). Although mostly termed as a green source, hydropower has several disadvantages including its social impact, displacement of people, flooding of the former natural environment, water drainage from lakes and watercourses, hydroelectric structures' effect on river body's ecology by disturbing the ecological continuity of sediment transport and fish migration or potential methane gas formation in areas where substantial plants or tree covers are flooded (Owusu & Asumadu-Sarkodie, 2016, p.6). Thus, irreversible effects of HEPPs on the environment and people living nearby during the construction and operation process outweigh the benefits from energy production (WWF, 2013). Demirsoy (2012) reports that the areas where large amounts of water are stored in certain seasons are likely to silt up with sediments and become swamps after a while. According to the 4th World Water Development Report by United Nations, climate change is most likely to influence water systems and these systems become the main indicator of changes in temperatures (UNESCO, 2012, Chapter 19: The global nexus of energy and water). Certain types of renewable energy such as wind and solar photovoltaic power consume little water so that they have very low carbon prints while concentrated solar power and biofuels can consume large quantities of water (UNESCO, 2014, p.16). In addition to pollution with industrialization and population growth, there are problems such as decreasing resources of drinking water with climate change, rising ocean levels, drought and/or floods associated with changes in water assets, massive migrations, water control becoming strategically important, water becoming a means of war, and difficulty in supplying water to ever growing big cities (Su Hakkı Kampanyası, 2017) while changes in streambeds for water supply and/or energy leading to threat on the aquatic life and ecosystem result in

deterioration of the precipitation-transpiration- condensation and evaporation cycle, which are the four main components of the water cycle.

Similar neoliberal policies implemented in many countries of the world such as Turkey are not only a threat to the ‘ethnosphere’³ which was defined by anthropologist Wade Davis (2001, p.8) as humanity’s great legacy, but they also led to invalidation of the water use as a basic human right and loss of its public property with a social and strategical value so that water has now become an item of trade and an economic good, resulting in the formation of a new sector called the ‘water economy’ (Karakılçık & Gökdemir, 2012, p.82).

It becomes increasingly more evident that water management should embody culture, geography and economy altogether. Although water resources comprise the basis of water-energy-food nexus, and they are limited at the global level, the construction processes of dams and hydroelectric power plants have been surging in Turkey since 2002. The social, ecological and anthropological impacts of these constructions have been studied by many disciplines, including Ecological Sciences (Akbulut 2016; Eren, 2016, 2018; İlhan, 2009; Ürker & Çobanoğlu, 2012;), Environmental Engineering (Turhan, 2016), Political Sciences (Aslan, 2016; Hayırsever Topçu, 2011; Ulaş, 2010;), Political Science and Public Administration (Şengül, 2017; Şengül et al., 2017; Yaman & Haşıl, 2018; Şendeniz, 2017), International Relations (Arı, 2013; Atvur, 2014), Philosophy (Aksu, 2016; Kocagöz, 2016), Forest Engineering (Kurdoğlu & Özalp, 2010; Uzun, 2011), Geography (Başkaya & Türk, 2015; Orhan & Gök, 2016; Sönmez, 2012), Forest and Marine Sciences (Kocabaş et al., 2012), Economics and Administrative Sciences (Kaya, 2011; A. Y. Kaya, 2016), Social Sciences (Islar, 2012, Özerol et al., 2013; Islar, 2013,

³ It is defined by Davis as the sum total of all thoughts, beliefs, myths and institutions made manifest today by the myriad cultures of the World.

2016), Law and Engineering Associations (İstanbul Bar, 2011; TMMOB, 2011), Anthropology (Akgül, 2013; Deniz, 2016; Oğuz, 2016; Evren, 2016; Akbaş, 2016; M. Bozok, 2016; Oğuz, 2016), Sociology (Eryılmaz, 2012; Işıl ve Aslan, 2014, Erensü, 2011, 2016; Akbaş et al., 2016; N. Bozok, 2016; Büke, 2016; Z.C.Eren, 2016; Gültekin, 2016; Yaka, 2016), Civil Engineering (Aras, 2012; Turhan, Çağatay & Keçeci, 2015), Psychology (Hasta & Sözen, 2017), Educational Sciences (Sever & Ulu Kalın, 2011).

In the Anthropocene, considering the rapidly increasing population, and accordingly the increase in energy and food demands, interventions to nature, air pollution, and global warming, it seems impossible for the water cycle to continue steadily as climatic conditions change, leading to irreversible consequences for the living conditions of all organisms. Based on this, this study will address the impacts of hydroelectric power plants on the daily life of people living near these plants, discussing the arising issues on the axis of water and development from the perspective of the Anthropology of Development; and water and life from the perspective of the Ecological Anthropology.

1.1.1. Significance of the Study

The rapid growth of world population as well as the inappropriate use of water resources trailing to a new global conflict, which has been gradually climbing up as water scarcity, make it obligatory to evaluate the ecological impacts of development and globalization on human life. This relationship between the human race and culture should be addressed with a comprehensive ecological perspective avoiding nature/culture dichotomy, a legacy from the Enlightenment Period (Latour, 1993, p.96). And, as anthropologists we need to have a firsthand ethnographic study

of people who experience dramatic and radical changes in their immediate environment.

Many small towns and villages in different regions of Anatolia have been undergoing significant transformations in their socio-economic, cultural and social life resulting from dramatic changes in their physical environment caused by hydroelectric power plant projects as part of development plans, and unfortunately local people and the government come up against each other at most of the project sites. Ongoing expropriations and resettlement plans are in the immediate agenda of the authorities. In addition to the assessments on the impacts of HEPP projects carried out from engineering and social viewpoints, dynamics of the changes and conflicts between the locals and the government as well as among the locals need to be studied from an anthropological perspective.

1.1.2. Focus of the Study

Water, essential to all living organisms, is experienced both physically and culturally. When we consider development in relation to water resources, it is not only an economic phenomenon, it also has social, political and cultural dimensions both in urban and rural areas. The water connects different domains of life in such a way that it produces interdependency. It heavily relies on the involvement and initiative of the local people.

In many examples experienced all over the world with respect to the management of water resources, some local people in the community may have something to lose while others may have something to gain. For example, although the construction of a river-type hydroelectric power plant does not necessarily require any changes in the structure of the community, it may affect their power relations, daily-life settings, gendered economic activities, social activities, etc. While

administrators and some people from the local community may see this construction as a service and benefit to their daily life, some others may not favor such a radical change and disturbance in their daily life.

This study focuses on trying to gain insight and understanding viewpoints of local people in relation to changes they experienced in their daily life as a result of intrusions and unexpected guests in their life spaces.

1.1.3. Objective of the Study

Steadily taken away from its ‘natural’ state, the water and its hydro-social cycle become an inevitable subject of power relationships, leading to a social and economic struggle for control and appropriation of this vital natural resource. Thayer Scudder argued that although river basin development and hydroelectric power are usually given economic justifications, they have important political and psychological attributes (1973, p.45). Back in 1973, he was talking about the long term implications of such modifications in different environmental zones as dams and large artificial reservoirs are associated with grand-scale ecological modifications, and he was complaining about insufficiently studied major water projects, which did not consider ecological changes in the nonhuman environment and their social costs. Arguing that dam construction accelerates change in certain areas of human behavior, he suggested carrying out baseline studies before any relocation occurs so that changes can be identified with their implications traced through subsequent restudies. This may allow observing dynamics of change and continuity in the affected communities, leading to analysis of potential psychological, physiological and sociocultural components before resettlement.

On this basis, I carried out a 2-month fieldwork in the Aksu Valley of İspir District, Erzurum (See **Appendix A**) where two HEPPs were already constructed by a

private company (BORUSAN), and two further plants have been contracted to another company (İŞ-SU) on the same stream. There are a few reasons for selecting this site for my fieldwork. First of all, it is an isolated place, located in bountiful nature and a biologically diverse ecosystem. Although geographical conditions are rough, the locals try to continue their subsistence and life just like their ancestors did. Secondly, initially there were protests against the constructional activities, but then the local people conceded, and the projects were completed. I wanted to understand the dynamics in the valley leading to this concession. Thirdly, as a *Dadaş* region, the fieldsite is rich in folklore, cuisine, customs and traditions, and interestingly located in a transitional zone, where most of the inhabitants consider themselves from the Black Sea region. I tried to make use of powerful analytical tools of anthropology for integrating into one analytical framework this community's culture, power, history, and economy on the basis of locals' relationship with water.

1.2. Research Methods

1.2.1 Methods and Techniques

My fieldwork included common tools of anthropology including participant observation, focus group studies and in-depth interviews during a period of 2 months. The scope of my research included 4 quarters, namely Kadıbağı, Gılok (Otluca), Massırdap (Yolbilen), and Dereagzı which were under the impact area of the two HEPPs constructed in the Aksu Valley. The period mainly depended on the short duration of summer in this region, where the main traffic of people is between July and August. My main tool was participant observation since it aims to have an idea about the physical, social, cultural and economic aspects of daily life in the site of study with an emic approach. My key contact and informant was the President of the

Aksu Valley and Villages Society for the Protection of Nature (AVKDYKD). I contacted him on social media one month before my fieldwork, and he arranged for my stay and the consent of the villagers. As the subject of the study was a controversial and sensitive one, I paid utmost care not to take sides among the villagers, and other parties involved.

After obtaining preliminary data based on participant observation, I prepared a question guide to be used during in-depth interviews and focus-group sessions. I completed a total of six focus-group sessions consisting of at least six people each, with a total of 17 women and 18 men as separate groups of participants (See **Appendix C**). I had two reasons to conduct these focus-group studies with men and women separately; first to avoid patriarchal domination in the course of discussions, and second, to study specifically women's role and reactions during the construction of the plants. The news and stories shared in the media about protests against HEPPs always showed women at the frontline. However, although most of the women in Aksu Valley actively participated in the protests, I couldn't see sufficient clues which would support their agency compared to men during my observations and interviews. Although I planned to conduct a total of eight focus-group sessions, I found out that the fourth quarter, Dereağzı, would be abandoned soon since it would be flooded due to a dam project at the confluence of Aksu Stream and Çoruh River, and most of the residents were living in the upstream quarters during the summer. However, I was able to conduct in-depth interviews with two (one female and one male) inhabitants of Dereağzı, who were still living in the quarter to irrigate their crops. As the interaction between the moderator and the group as well as between group members serves to elicit more information and insight, focus group sessions were very helpful for me to have collective information for a better analytical approach. I made audio recording

during each of these sessions after getting participants' permission. I informed all participants of the subject of the group-activity and acknowledged that I will keep their personal information confidential and anonymous during and after the study. I sought for voluntary participations in each quarter through acquaintances.

In addition to participant observation and focus groups, I conducted a total of 10 in-depth interviews with prominent figures of the village who were involved in the protests, both advocates and opponents of the HEPP projects, along with a representative of the construction company, the mukhtar, and an activist from Rize to get their thoughts, feelings, experiences and opinions in detail. I also conducted a life-history interview with a popular figure from Yedigöl village, who is known as “Dağların Oğlu” in the village, for a potential future study.

In addition to these observations and interviews, I was able to attend and record some of the activities held in the valley every year, including an outdoor activity of cooking mulberry molasses, which is very important for the inhabitants of the valley for consumption in the winter and as a source of income, and a picnic, which has become traditional with the participation of people from all quarters of the valley after foundation of the Aksu Valley Conservation and Beautification Society in the valley. Furthermore, I made audio and video recording of Aşık Mustafa, a singer-poet from Massırdap quarter. I planned another recording with Aşık Ayşe, the only woman singer-poet of the village, however we had to cancel it due to the loss of her husband after a tragic accident two days before our appointment for the recording.

1.2.2. Ethical Considerations

Ethics can be defined as a set of moral principles and rules of conduct and in social research, it mainly focuses on five principles: 1) Public's right to information, 2) Researcher's right to seek and reflect the truth, 3) Individual's right to privacy and

security, 4) Individual's right to give and withdraw an informed consent, and 5) Role of the researcher (Kümbetoğlu, 2008, p.174-175). Ethical behavior is essential in helping the anthropologist to protect individuals, communities and environments. It is mainly the researcher's responsibility to act in accordance with moral principles and rules of conduct as study participants may not be aware of the consequences or predict any potential harm that may arise out of the verbal, visual or auditory content they share with the researcher. The most recent statement by the American Anthropological Association (AAA) on Ethics describes that "As a social enterprise, research and practice always involve others— colleagues, students, research participants, employers, clients, funders (whether institutional, community-based or individual) as well as non-human primates and other animals, among others (all usually referred to as 'research participants' in this document). Anthropologists must be sensitive to the power differentials, constraints, interests and expectations characteristic of all relationships. In a field of such complex rights, responsibilities, and involvements, it is inevitable that misunderstandings, conflicts, and the need to make difficult choices will arise. Anthropologists are responsible for grappling with such difficulties and struggling to resolve them in ways compatible with the principles stated here. These principles provide anthropologists with tools to engage in developing and maintaining an ethical framework for all stages of anthropological practice – when making decisions prior to beginning projects, when in the field, and when communicating findings and preserving records" (AAA, n.d.).

In addition to international and national scientific or disciplinary guidelines, the individual anthropologist should be familiar with the Universal Declaration of Human Rights (1948), United Nations Convention on the Elimination of All Forms of Discrimination Against Women (1983), United Nations Convention on the Rights of

the Child (1987), United Nations Declaration on Rights of Indigenous Peoples (2007), and temporary scientific programs organized by European Science Foundation such as the Globalization and Transnational Human Rights Obligations (GLOTHRO) Networking Program. Such codes of Ethics or Conduct developed by scientific organizations like the American Anthropological Association, the Society for Applied Anthropology or the Turkish Academy of Sciences can only serve as a tool to preshape anthropologists' mechanism of social control and improve their anthropological practices. As a rule, anthropologists who do fieldwork should care deeply for the well-being of the people they live with as guests and appreciate the diversity of people and ways of thinking (Chacon and Mendoza, 2012, p.viii). However, human actions demonstrate extraordinary variability in a more complex way today than before and societal boundaries become less sharply defined than ever. Even those communities considered 'isolated' are in contact with the 'external' world where they see the contrail of a plane in the sky, experience the products raised thousands of kilometers away, feel the impact of changing climate, or experience other 'worlds' through media and the Internet where the exchange of ideas has no boundaries. Furthermore, within the context of global contacts and cultural diversity, there may be different value systems to deal with. Therefore, the disciplinary ethics need to anticipate and respond to the contradictions and ambiguities of today's societies and cultures.

Based on these considerations, the ethical problems and constraints I experienced in Aksu Valley during my fieldwork were as follows: After I selected my field site and obtained the consent of my contact and his fellow country people to visit and stay in their valley for two months, my husband Cengiz and I decided to experience this "remote" geography together. This decision had both advantages and

disadvantages for me. If I would go alone, I would probably have had less contact with people in their private daily life conditions in houses because man of the house would probably have been disturbed by my presence or would have found an excuse to leave or most importantly I wouldn't have been able to participate in the gazebo chats of village men every day. Everybody welcomed Cengiz's presence and our stay in the lodgement of the school. The lodgement was located in the yard of the only primary school in the valley at the center of Kadıbağı quarter, only a few steps away from the gazebo 'the best observation place', and the grocery across the stream 'the second-best observation place'. However, I believe that they felt disturbed by Cengiz's absence in Friday prayers unlike all village men, and although nothing was ever said to me or Cengiz, I imagine it was a conservation material in casual talks. While I was wandering around alone in Kadıbağı quarter, I think sometimes walking with Cengiz or driving alone to Massırdap or Gılok might have created a distance between me and the inhabitants of these two quarters. Furthermore, I feel that I might have missed the opportunity to have more intimate conversations with women of the valley since I wasn't alone.

Besides, during the interviews and casual talks, I took utmost care to show my impartiality, not to make any comments, and not to respond verbally or bodily in order to make them talk comfortably about the disputes and disagreements they had among each other during the construction of the plants. Although they are all relatives in one way or another, I paid attention not to narrate the conflicts between quarters that they communicated to me. These conflicts were likely to be associated with socio-economic differences. Towards the end of my stay, I was very surprised with a sudden change in the attitude of the primary school teacher (local) towards me when I was trying to fix an appointment date with him as we agreed before. Later on, I was

told that some of the villagers believed that I was working for Borusan and trying to profile everybody. He was very disturbed and didn't want to give an interview to me. I respected his decision. Besides, at that time I had a conjunctivitis problem, most probably because of the tap water. When I visited İspir State Hospital, I found out that conjunctivitis was a common problem during summer in the region. Since I was usually wearing lenses, I struggled to finish my fieldwork wearing glasses during the last few days of my stay. After what they went through even between their fellow countrymen and countrywomen with the arrival of HEPP contractors in the valley, I have found it very normal for some to have suspicions about the objective and motive of my work. Furthermore, I sometimes felt that the duration of my stay seemed too long to them, considering that even those people in big cities were able to come and visit their homeland for a couple of weeks or more only.

By keeping the conservative mindset of the locals in mind, I paid utmost attention to my clothing during my stay. I always wore trousers and long-sleeve shirts and used neck-scarves even in very hot temperatures. Since my fieldwork ran into Ramadan, I accepted several invitations for fast-breaking meals, and attended tarawih prayers several times. Additionally, I tried not to ask direct questions to the locals about the Armenians, the Armenian names of the quarters, and the history of the valley beyond what they told me since I noticed their sensitivity in these respects during my communications with them in the first days. In the meantime, some children were interested in learning English, when they saw me helping the daughter of the grocer in Kadıbağı quarter for her university exam. Therefore, I gave English lessons to a couple of boys who played football in the school's yard throughout the summer. Although their attendance was not remarkable, I had the opportunity to have an insight from their perspective about the changes in the valley. Unfortunately, I

failed to conduct a focus-group session with them. During my house visits, I gave small authentic gifts like towels and tablecloths I bought from my hometown, Kastamonu to thank for their hospitality.

In the next section, the concept of Development and anthropological conceptualizations about development as well as the complex relationship between water and development will be addressed.

2. WATER AND ANTHROPOLOGY OF DEVELOPMENT

2.1. Development: A Conceptual and Theoretical Excursion

In *The Development Dictionary*, Gustavo Esteva, who defines and explains the term development, indicates that evolution and development were used interchangeably by scientists in late 1700s and early 1800s (2010, p.4). From 1768, Justus Moser, a social theorist, used the term *Entwicklung*⁴ to allude to the gradual process of social change, describing the transformation of some political situations as almost a natural process. In 1800s, this term began to appear as a reflexive verb, and the term self-development became popular. A few decades later it became the central category of Marx's work, revealing itself as a historical process that unfolds with the same character of natural laws (Esteva, 2010, p.4). Esteva argues that the term development with its subsequent common uses of 'urban development' and 'colonial development' during the twentieth century cannot be dissociated from its original meanings such as growth, evolution, maturation, and it "always implies a favorable change, a step from the simple to the complex, from the inferior to the superior, from

⁴ 'Development' in German (p.y.a)

worse to better” (2010, p. 6). While development refers to changing and renewing social, cultural and political structures as well as the economic structure of an underdeveloped society, the most significant difference between development and growth is that growth is based on the existing structure, whereas development is not satisfied with the existing economic structure, and changes and improves it (Küçükoğlu, Taş & Ercan, 2018, p.2621).

With developmentalism, the optimism of American hegemony and competitiveness of the cold war after 1945 made economic development and the presumed modernization the foremost goal and expectation of societies (Keyder, 2004, p.9). At present, globalization and development are often used interchangeably. As a post-World War II phenomenon, development emerged with globalization, and they both have their roots in colonial histories (Banerje *et al.*, 2009, p.8). Said argues that postcolonial approach uses a “retrospective reflection on colonialism” to understand contemporary problems in developing countries since it focuses on radical criticism of colonialism, imperialism and neocolonialism (cited in Banerje *et al.* 2009, p.8). It has been widely recognized that neocolonialism is a continuation of Western colonialism with political, economic and cultural control mechanisms, but without any territorial control. Hertzfeld, highlighting that development is both a symbol and one of the most effective tools of Western hegemony, refers to Akil Gupta’s statement that although respect to local knowledge is worthy, it serves the supportive choice in international capital projects rather than hearing out local voices, criticizing the looting of their surrounding and the deterioration of their lives (2012, p.199).

In fact, globalization can be traced back to the initiation of first maritime activities during the Neolithic Period. People who have built civilizations and expanded all over the world have been in an economic mobility through trade

networks like Silk Road crossing Asia from one end to another and ending up in Europe, and the Eastern Mediterranean trade routes established for wine and olive oil. However, it can be said that the process of globalization has, in fact, accelerated in the mid-nineteenth century when the flow of trade became intensified between countries and a worldwide trade network was formed. The intellectual, cultural and social changes that have been brought by the 1789 French Revolution had also important effects on the political systems and modes of production, and new social classes emerged in the late nineteenth century. As mechanization and increase of capital has accelerated, the struggle of social classes has become sharpened.

With the arrival of twentieth century, development of industrialization and technology at an unprecedented pace has led to social and political changes, making anthropology, which was engaged in the 'other' during colonialism, give a different account of the concepts of universalism and localism. Anthropologists were no longer researchers who participated in the lives of 'isolated' peoples living in remote and exotic places, and transferred information about them to 'modern' society, but focused on the new state of non-Western societies who had been 'displaced' by globalization and forced to make contact (Özbudun et al., 2006, p.380). In fact, as a result of these developments, ethnographic research and writing style, which was instrumental in the development of Anthropology as an academic discipline in the twentieth century, has tended to 'return home'. Marcus and Fischer suggest that this has been associated with multiple facts, including cuts in funding for ethnography studies abroad; nations seeking to preserve their nationalism make it more difficult to obtain research permits; it has been realized that the domestic functions of Anthropology are as convincing and legitimate as those outside the country; the fear of the vanishing exotic other has fizzled out; you find cultural diversity wherever you

look for it; and documentation of the domestic is much more important than documenting those overseas (2013, p.165).

Many of the definitions for globalization mainly refer to economic aspects. Ted Lewellen (2002) has attempted to give an anthropological definition of globalization: “Contemporary globalization is the increasing flow of trade, finance, culture, ideas, and people brought about by the sophisticated technology of communications and travel and by the worldwide spread of neoliberal capitalism, and it is the local and regional adaptations to and resistances against these flows” (p.7). Lewellen indicates that each definition should employ the word ‘contemporary’ or the phrase ‘current phase’ because globalization must be thought of as an ongoing process. However, the idea of globalization is viewed from the reverse of this definition. According to this ‘reverse’ assumption, when the Third World countries carry out the specific prescriptions given to them, their standards of living will be raised, therefore certain forms of global capitalism is good. On the other hand, globalization is viewed as a disaster since it exacerbates inequality, marginalizes the poorest people and countries, and creates an increasingly concentrated elite of wealth and power (p.9). Lewellen argues that Eric Wolf is the first anthropologist who made an anthropological study of globalization, documenting the intense and lasting impact of the economic processes on indigenous people (p.12).

In his book *Europe and the People without History*, Eric Wolf (1982), claimed that even the most remote populations were interconnected through capitalist mode of production, and argued that communities defining themselves as culturally distinct had kinship or ceremonial allegiance, establishing trade networks from East Asia to the Levant, across the Sahara, from East Africa through the Indian Ocean to the Southeast Asian archipelago. He said if there were any isolated society, they were

temporary since they were “pushed to the edge of a zone of interaction and left to itself for a brief moment in time”. Thus, for him, the social scientist’s model of distinct and separate systems, and ‘precontact’ ethnographic present did not adequately depict the situation before European expansion (1982, p.71).

Taking Wolf’s claim one step forward, Immanuel Wallerstein argued that perhaps isolated communities have never existed, and described a world system where local communities are always part of a larger system in the global scale. According to Wallerstein, the Modern World System is a capitalist world economy which has emerged during the sixteenth century, initially covering a vast majority of Europe and certain parts of the Americas and expanded within centuries incorporating other parts of the world into its own division of labor (2009, p.44). Based on a capitalist world economy shaping the relationship among countries, Wallerstein divides these countries into three groups with different economic and political power: ‘core’, ‘semi-periphery’ and ‘periphery’. The geographic center or core includes the strongest and most powerful nations such as the United States, Germany and Japan that rely on sophisticated technology and mechanized mass production while semi-periphery nations such as Brazil, India and China have less power, wealth and influence than the core nations although they are also industrialized. The periphery includes the world’s least privileged and powerful countries that produce raw materials, agricultural commodities and human labor for export to the core and the semi-periphery, such as Bangladesh, Guatemala, Haiti and Madagascar (Gezon and Kottak, 2016, p.191).

In this system, it is suggested, the workers of the industrialized nations have reached a level of prosperity in which they benefited from and exploited the raw materials and human labor of the periphery and semi-periphery countries thanks to the

capital obtained from the trans-oceanic trade during the eighteenth century colonialism period. For example, Sidney Mintz argues that based on the sugar trade between Europe-Africa and the Americas during the seventeenth century, with the transition of sugar from a luxury item to a mass consumption item, the fate and destiny of slaves at plantations became linked to the working class in Europe (as cited in Özbudun et al., 2006, p. 236). The contrast between core and periphery can be best described by demographic and economic data; the global core, in other words, 'the Western world', contains approximately 15% of the world population, however, according to World Bank data, it gets almost 75% of the world's annual income in terms of gross national income. As such, the core states are not only the richest on the planet, but also attract a tide of migrants from the periphery and semi-periphery for work and wages since their power continues to permeate the countries of the periphery (De Blij, 2009, p.13). This establishment, based on capitalist world economy, incorporates a division of labor which requires business division flows, commodity flows, capital flows and labor flows around the world, and allows economic and political elements as well as cultural elements to be incorporated to the world system (Avcioğlu, 2014, p.108).

According to Marcus and Fischer, the world-system proposal came at a time when it met the needs of all social scientists who had lost their confidence not only in reigning theoretical paradigms, but in the reign of paradigms itself, sensing a world in transition, and it was simple, yet attractive with a macro view of society and history, and simplistic theoretical formulations, but interpretation of concepts in historical detail (2013, p.129).

In this world order where North America and Europe, housing the majority of industrialized countries, are assumed to constitute a development model for Asia,

Africa and Latin America, and the transition from periphery to semi-periphery and semi-periphery to core countries is possible, development projects aiming to address economic and social problems in ‘underdeveloped’ regions - the so called Third World countries - have failed over the years. The evidence of this failure is persistent global inequality at both national and international levels, the increasingly deepening imbalance between industrialized and underdeveloped countries, overpopulation, poverty and consequent threat of starvation, low literacy rates, displacement of people as a result of large-scale environmental degradation due to neoliberal policies and political and ecological factors, and the failure of international institutions such as United Nations, World Bank and Development Bank, which were established to ensure that the world does not experience again any destruction after the World War II to fulfill their duty. According to Sachs, “development has changed the face of the earth, but not in the way it had intended”; in 1960, the Northern countries were twenty times richer than the Southern countries, but in 1980 they became forty-six times richer (2010, p. xvii).

The Dependency theory which seeks to describe the causes of underdevelopment depending on the development process of developed countries while analyzing the links between ‘being developed’ and ‘underdeveloped’, is a theory mainly developed by the social scientists in Latin America and the US with an emphasis on ‘Political Economy’ (Özbudun et al. 2006, p.234). According to this theory, the Western world makes ‘emerging’ new nation-states dependent by constantly exposing them to exploitation of labor and surplus value. For example, in Latin America along with the conquest, the entire continent underwent a state of economic dependence, which resulted in the transformation of economic and class structure including the culture, producing a policy of underdevelopment. Accordingly,

developed core countries advocate free trade for the products they predominate while employing a protectionist policy for goods they do not predominate, and in this process, the World Trade Organization which has been established to liberate the world trade system, serves as an important pillar of neoliberal globalization (Karaş, 2017, p.261).

During the period following the World War II, development projects initiated through several independently acting and specialized agencies of the World Bank, which is affiliated with the United Nations, played a pivotal role in international economy and economic stability in many countries. However, although it is forbidden by its charter to take a political stance in carrying out its responsibilities to promote economic development and reduce poverty, “the World Bank actors and actions often have profound political impact” (Johnston, 2012, p.296). This impact can be traced even in the first loan granted by the World Bank to Chile, an ‘underdeveloped’ country in 1948. The initial loan application made by Chile in a booklet of seven pages bound in black Morocco leather was described as “a completely undigested list of projects’ by World Bank officials, and the agreement was signed only after World Bank economists put pressure on Latin American social scientists and government officials to change the scope and format of their work in order to fit it to the needs of their own development apparatus (Escobar, 1995, p.86). The economic assistance which is based on the conditionality principle requires transformative changes in national economies such as privatization of industries, reduction of domestic expenditures, raised interest rates, devaluation of the currency, deductions in expenditures on social programs regarding health and education, lowering or removal of food and energy subsidies, and cutting the size of workers in public services. These changes result in increased poverty and political conflicts. Furthermore, the oversight

mechanisms have a tendency to serve as a means to reduce the liability of the creditor instead of protecting the health and wellbeing of vulnerable groups and the environment they live in due to the fungible⁵ nature of the aid (Johnston, 2012, p.297).

In the meantime, a new ethnoecological model has emerged in response to changing conditions with neoliberalism: sustainable development, which aims at culturally appropriate, ecologically sensitive, self-regenerating change (Kottak, 2006, p.43). Although the concept of sustainable development has become a very popular approach in planning and development projects, there are only a few examples of successful sustainable development projects since outsiders attempt to remake landscapes and cultures in their own image and attack local people as well as their landscapes, ideas, values and traditional management systems. A common objective is that development would bring prosperity while protecting the natural resources and biological diversity, however as highlighted by Kottak “[D]evelopment projects often fail when they try to replace native forms with culturally alien property concepts and productive units” (2006, p.43). Given the fact that the concept of development can no longer be considered separate from sustainability, according to Rosen, making development sustainable is a challenging and complex initiative involving a range of parameters including economy, environmental protection, technology, people, communities in which they live and work, social aspirations, government strategies, procedures and policies (as cited in Yıldırım & Nuri, 2018, p.4).

Agenda 21 action plan that has been released following the UN Conference on Environment and Development (Rio Conference) that was held in 1992 in Rio de Janeiro highlights the fact that development can be sustainable if the ecosystem is

⁵ Fungibility means that money, once allocated to the donor party, can be used for any purpose.

compatible with the varying production potential. Such a development requires three dimensions which should have a balanced integration: economic, social and environmental. Looking at the history of the concept of sustainability (Yıldırım & Nuri, 2018, p.7-13), global milestones which make sustainable development an indispensable part of development plans and international projects include the 1972 United Nations Stockholm Conference, 1976 United Nations Conference on Human Settlement (Habitat I), 1980 World Conservation Strategy, 1987 Our Common Future (Brundtland Report), 1992 United Nations Conference on Environment and Development (Rio), 1996 The United Nations Conference on Human Settlement (Habitat II), 1997 Rio +5 Conference, 2002 United Nations World Summit on Sustainable Development (Johannesburg Summit), 2012 United Nations Conference on Sustainable Development (Rio +20 Conference) and 2015 G20 Antalya Summit.

Since the term *development* has several meanings including growth, evolution, maturation, etc. some anthropologists suggest that Development Anthropology and Anthropology of Development should be distinguished (Lewellen, 2002 p.66. emphasis in the original). Defining Development Anthropology as “planned change introduced by outside agents, usually at the community level”, Lewellen (2002, p. 67) claims that this definition is nearly identical with applied anthropology, which refers to the work done by anthropologists employed by development agencies. Also, according to Lewellen (2002), the Anthropology of Development has a more inclusive sense of the social sciences where development refers to “changes, planned or unplanned and at any level of society, through the processes of modernization, such as industrialization, increased communication, and increased use of technology”, and this type of development has been perceived in a negative sense (2002, p.67). Lewellen (2002) indicates that this negative impression results from the fact that

development has often devastating outcomes for indigenous peoples studied by anthropologists, where peoples and cultures have been wiped out, ecosystems have been destroyed, and inequality between and within nations is increasing, whereas, according to the 1993 UNDP data, the life expectancy is increased, nutrition conditions are better, literacy rates are higher, and there is a significant emergence of democracy. He points out that “development benefits some and devastates others, empowers some and disempowers others, provides employment for some and marginalizes others, creates democracies in some places and military dictatorships in others” (p.67).

Similarly, Ferguson (2005) claims that the antipathy of anthropology for development may result from its uncomfortable intimacy with it rather than its critical distance from development (p.141). Moreover, Hertzfeld (2012) indicates that anthropology of development makes the silent violence materialized in the discourse of development, and describes that development anthropologists focus on project cycles, use of information in accordance with the culture and equipment of those who benefit from the project and potential contribution to the needs of the poor, while corporate tools, ties to the power built by expert knowledge, criticism of modern structures through ethnographic analysis and potential contribution to secondary political projects are central to the analysis by anthropologists of development (p.211). Olivier de Sardan (2005) highlights that development cannot be understood in isolation since it is just another form of social change, and thus anthropology of development cannot be dissociated from anthropology of social change (p.23).

One of the post-development theorists, who objects to the idea that all countries would be developed following the capitalist framework of the West, anthropologist Arturo Escobar (1995) indicates in the Introduction part of his book

Encountering Development: The Making and Unmaking of the Third World, that debt crises, the Sahelian famine, increasing poverty, malnutrition and violence are the most pathetic signs of failure of development, and then tells the story of how development dream has increasingly become a nightmare. According to Escobar (1995), in many countries which started to see themselves as ‘underdeveloped’ following World War II, development has become a fundamental problem, and these societies have been increasingly exposed to systematic and comprehensive interventions in order to change it (p.6). He suggests that “the development discourse inevitably contained a geopolitical imagination”, which is evident in expressions such as First and Third World, North and South, center and periphery (p.9). Defining development by interrelations of three axes including “the forms of knowledge that refer to it and which it comes into being and is elaborated into objects, concepts, theories, and the like, the system of power that regulates its practice, and the forms of subjectivity fostered by this discourse, those through which people come to recognize themselves as developed or underdeveloped” (Escobar, 1995, p.10), he indicates that the ensemble of forms along these axes becomes an efficient apparatus that systematically relates forms of knowledge and techniques of power.

Esteva (2010), one of the scholars who took part in the discussions about the American hegemony accompanying the discourse of developing underdeveloped countries, which was initiated by the US President Truman on the day he took office in January 1949, declaring that “The old imperialism – exploitation for foreign profit – has no place in our plans. What we envisage is a program of development based on the concepts of democratic fair dealing”, argues that no word all over the world has been accepted so quickly on the very same day it was politically used, and indicates that the underdevelopment began on 20 January 1949, and on that day, 2 billion

people became underdeveloped (as cited in Esteva, 2010, p.2). Claiming that the word development is a socially constructed concept, which reminds two-thirds of the world population ‘what they are not’, Esteva emphasizes that to escape from it, people need to be “enslaved to others’ experiences and dreams” (2010, p.6). For many researchers, ‘backward’ or ‘poor’ countries are in that condition due to past lootings during the colonization process and continuous capitalist exploitation at national and international level so that underdevelopment was a product of development. According to Esteva (2010), with this declaration Truman freed the economic sphere from the negative connotations of two centuries, and delinked development from colonialism (p.14).

Development has been perceived as an economic concept until 1962 when the UN Economic and Social Council (ECOSOC) suggested in the Action Plan of First Development Decade (1960-1970) the combination of economic and social aspects of development stating that “Development is not just economic growth, it is growth plus change. Change, in turn, is social and cultural as well as economic, and qualitative as well as quantitative... The key concept must be improved quality of people’s lives”.

Over time, the concept of endogenous development has been promoted by UNESCO experts (Esteva, 2010, p.12) in order to emancipate the word development from its West-centric connotations. However, containing many contradictions, the term has been discontinued after realizing the impossibility of imposing a single cultural model on the whole world. Esteva highlights that 1980s was referred to as ‘the lost decade for development’ despite the rise of so called four Asian tigers (Taiwan, Singapur, Hong Kong and South Korea) while a new development ethos ‘redevelopment’ was introduced in 1990s, which has been transformed to sustainable development afterwards (Esteva, 2010, p.13). In 1990, the United Nations

Development Program (UNDP) published its first Human Development Report, which was followed by the invention of Human Development Index, combining life expectation deprivation, adult literacy deprivation and real GNP capita deprivation, to classify nations by. Later on, several indices and indicators such as Ecological Footprint, Water Quality Index, Genuine Progress Indicator, Environmental Pressure Index and Sustainable Wellbeing Index have been created, emphasizing that sustainable development can only take place along with economic, social and ecological sustainability (Bekmez & Özsoy, 2014, p.215). In all these efforts the concept of development again relies on the Western knowledge system, which requires marginalization and incapacitation of other non-Western knowledge systems. Local knowledge and discourse have been historic accumulation over centuries or millennia as adapted to a local ecology, which has been embedded in a composition of social relations, religion, politics and economics whereas development brings an external knowledge system via experts and organizations (Lewellen, 2002, p.75).

Initially perceived only on the basis of economics, the concept of development is now discussed with its social, political, cultural and environmental dimensions, and it has been noted that even when anthropologists do not take development as their subject, they often make assumptions about it in their ethnographies, so “named or un-named, development questions lie at the discipline’s theoretical and ethnographic core.” (Edelman & Haugerud, 2005, p.1). According to Lewellen (2002), globalization represents a significant break with traditional anthropology since “traditional anthropology looked at bounded cultures and communities” whereas “globalization theorists are more likely to be interested in transnationals, diasporas, nations that are scattered in many countries and deterritorialized ethnicities” (p.30). He argues that globalization cannot be studied as a sub-discipline of anthropology,

rather as another level of analysis, with “a recognition that people and the world they live in are just a bit more complex than we have credited” (2002, p.33). All political economy alternatives that have been proposed along with globalization such as dependency theory, world system theory and Marxist analysis differed primarily in their relative emphasis on the importance of intersocietal influence as in dependency and world-systems approaches, and internal dynamics as in Marxist approaches (Smart & Smart, 2005, p.5). As the concept of development has undergone several modifications such as sustainable development, participatory development, development with gender equity, integrated rural development, etc. in recent years, in an interview called *Farewell to Development*⁶ Escobar argues that a strong distinction should be made between *development alternatives* on the hand, and *alternatives to development* (White, 2018, emphases in the original). Referring to Gustavo Esteva, who argues that “the idea of individual was the Trojan horse by which Western nations infused their ideology of development – including private property, secularism and anthropocentrism- into traditional, communitarian ways of being”, Escobar indicates that “conventional development locates the individual as the central agent and beneficiary of development” (White, 2018).

While theoretical anthropology-centered discussions continue in the academy, it would be appropriate to briefly mention Applied Anthropology, a sub-discipline of anthropology overlapping with development. During the twenty years between the First and Second World Wars, it was assumed that the most appropriate application area of anthropology would be the “management of colonies” (Güvenç, 2010, p.306). After the emergence of anthropology as a separate scientific discipline in 1860, applied anthropologists worked as research specialists or training staff to support the

⁶ Published in www.greattransition.org on February 2018.

management activities of governments or private organizations, particularly in colonies, over a period of nearly seventy years (Akgül, 2010, p.71). However, although organizations that have been established for developing countries, such as Ministries of Coordination and State Planning Organizations, during the post-war period have conducted activities based on, or required, applied anthropology, the gap between theory and practice has not been bridged in one way or another since academic anthropologists have preferred to stay away from application and implementation tasks (Güvenç, 2010, p.309). As a result, according to Kongar, long-term and large-scale development programs have been transformed into short-term and local-scale development and social study projects (as cited in Güvenç, 2010, p.309). Thus, anthropologists were unable to stand on the front lines in development organizations, leaving the leadership to economists, engineers and other professional groups.

At present, applied anthropology, which can be defined as “the application of anthropological data, perspectives, theory and methods to identify, assess and solve contemporary social problems” (Gezon & Kottak, 2016, p.12), is gaining ground in areas such as public health, family planning, business, economic development, and cultural resource management. Seeking an answer to the question of ‘Is change always good?’, the sub-discipline of applied anthropology mostly acts along with the system and institutions of the system, and according to Gezon & Kottak, innovation succeeds best when it is culturally appropriate (2016, p.239). At this point, with the globalization of markets, it has been observed that multinational corporations are increasingly cooperating with anthropologists for consulting in market research and gathering social data for policies or business administration in territories they want to launch their new products. The next section will focus on the historical evolution of

the relationship between development and water, one of the essential components of industrial development.

2.2. A historical review of the relationship between water and development

Development and water are indispensable, and both having important functions in human life in terms of natural, cultural, spatial, physical, symbolic, artistic and intellectual aspects. However, depending on where they intersect, they can have both negative and positive consequences. Under the present conditions where water resources are declining all over the world, and political, environmental and social issues are escalating in many regions, efficient and effective use of water resources have become more important than ever for all living creatures around these resources as well as all communities affected by the water cycle on Earth. It has been agreed by global organizations and decision-makers that the development projects have so far addressed water from engineering, economic, political and legal aspects, but failed to deal with its social, environmental and cultural aspects. The introduction section of a report making a comprehensive assessment of the freshwater resources in sustainable development following the Stockholm Water Symposium organized by the United Nations Conference on Sustainable Development Commission (UNCSD) in 1997, Lundquist & Gleick (1997, p. viii) indicate that “lack of water is a barrier to sustainable socio-economic development; lack of development is a barrier to solving water problems”. Thus, any development path that does not take water management issues into consideration would be counterproductive, since water integrates all aspects of life. Development objectives should therefore include the day-to-day management of water, decisions about water allocations for socio-economic activities, and the preservation of natural water resources.

Access to water has been associated with social, economic, cultural and political changes in human life. The first efforts to take control of water flow by means of hydraulics were associated with agricultural needs (Mays, 2010, p. 2). According to Mays, irrigation probably began to develop at a small scale during the Neolithic Age in the ‘fertile crescent’⁷ while large-scale irrigation was developed in the low plains at the confluence of Tigris and Euphrates Rivers by early cultivators. Since the Mesopotamian valley had no good drainage and was subject to many floods, people living in this region have had to build canals to divert water from rivers and begin canal-irrigated agriculture. At the time of the emergence of first civilizations, water was supplied to urban settlements by rainwater collection systems, wells, aqueducts, underground cisterns and channels connected to rivers. Water and political power became inseparable after a while as irrigation systems helped the development of environment and economy and founded the infrastructure of political power. Thus, communities and states have fought each other for the control and ownership of water and water resources. Glasgow (2009) argues that the origin of civilization is also the origin of war. “Between 3000 BC and 2300 BC the city states of Sumer were constantly at war for control of water resources upon which they relied: Lagash and Umma were at loggerheads for a century and a half over a boundary dispute involving irrigation waters” (p. 59). Water was also used as an important military weapon; Sennacherib the Assyrian, who became the agent of well surveyed and constructed dams and irrigation schemes, destroyed Babylon in 689 BC by damming the Euphrates and then destroying the dam (Newson, 1997, p.5).

In his book *Political Landscape*, Smith (2003) indicates that the story of politics begins with the Pristine State that “emerged first on the alluvial plain between

⁷ A crescent shaped region in the Middle East, spanning modern-day Iraq, Syria, Lebanon, Israel, Palestine, Jordan, the northeast and Nile valley regions of Egypt, southeastern region of Turkey and the western fringes of Iran. (p.y.a)

the lower Tigris and Euphrates Rivers and in the Nile Valley” (p.18), and provides examples of Mayan (Mesoamerica) and Urartu (Eastern Anatolia) civilizations for reinforced political power through the exploitation of nature. For him, it is necessary to look at the archaeological landscape of politics in order to connect political power with water throughout the evolution of states. The historic records of first civilizations are appreciated in their archaeological scope and allow us to comprehend their social lives. The increasing interdependency of political power and agriculture, and thus water, can be traced in following statement of the Sasanian King Anushirwan (531-579 AD):

Royal power rests upon the army, and army upon money, and money upon the land-tax (*kharaj*), and the land-tax upon agriculture, and agriculture upon administration, and just administration upon the integrity of government officials, and integrity of government officials upon reliability of the vizier, and the pinnacle of all of these is the vigilance of the king in resisting his own inclinations, and his capability so to guide them that he rules them and they do not rule him (as cited in Smith, 2003, p.200).⁸

The monumental waterworks by earlier civilizations led Karl Wittfogel to argue that the centralization of water control was associated with the emergence of states while describing his theory *Oriental Despotism* or *Hydraulic Society*, developed by fusing Max Weber’s views on bureaucracy and power with Marx’s concept of Asiatic mode of production⁸ (1957, p.3). He claimed that “there exists a *bureaucratic* landlordism, a *bureaucratic* capitalism and a *bureaucratic* gentry in hydraulic societies. There is only one center of power, the Despot, who works through an agro-

⁸ The concept of Asiatic mode of production included the absence of private ownership of land, autonomous village communities, and a despotic centralized state in charge of public works, especially irrigation (encylopedia.com)

managerial bureaucracy” (1957, p.24). While using “oriental society”, “agromanageial society” and “hydraulic society” interchangeably, Wittfogel preferred to call his theory as “Oriental despotism” as he believed that most of the societies meeting his definition were located in the Orient. According to him, primitive humans did not need control of water when they were dependent on gathering, hunting and fishing to survive. The urge to control the water came after learning how to reproduce plants. “Large enterprises of water control do not create a hydraulic order if they are part of a wider nonhydraulic nexus” (1957, p.31). For him, it is not about too little or too much water leading to governmental water control; and also governmental water control does not necessarily imply any despotic power. When people wanted to cultivate fertile, but dry lands, they needed to keep the moisture at a stable level, which resulted in development of hydraulic methods of social control. There are many other elements essential other than water for agricultural activities such as useful plants, adequate humidity, appropriate temperature, arable soil, etc. Hydraulic communities control the moisture of several independent sources of water through cooperation of separated work teams. Such teamwork requires leadership, which involves an organizational web. And those who control this network become ready to exercise political power effectively where the heavy water works of hydraulic agriculture are essentially directed by the government. “Time keeping and calendar making are essential for the success of all hydraulic societies; and under special conditions special operations of measuring and calculating may be urgently needed” (1957, p.48)

Unlike many of his Marxist contemporaries, Wittfogel believed that the fundamental aspect of a mode of production is not the social relations that characterize it but rather the relations between humans and nature. This belief led him

to analyze the technical modes of production and their relation to geographical conditions and emphasize the ecologically determined patterns of social development (Walder, 1980, p.536). With a similar claim, Steward also argues that irrigation civilizations such as Egypt, Mesopotamia, China and Andes shared cultural and developmental characteristics since adopting to arid and semi-arid environments required large-scale irrigation and some organizational changes (1949, p. xx), concluding that these similarities stemmed not from the universality of cultural development or diffusion of civilizations, but from the similarity of natural environments. On the other hand, there are other researchers who claim that the strongest predictor of societal complexity is the size of the regional population or density of population (Diamond, 1999, p.284). According to Diamond (1966), “In Mesopotamia, North China, Mexico and Madagascar, small scale irrigation systems already existed before the rise of states. Construction of large-scale irrigation systems did not accompany the emergence of states but came only significantly later in most of these areas”. Similarly, Adams rejects irrigation as the major stimulus to the growth of institutions of the state (p.76), highlighting that centralized states in Mesopotamia and Mesoamerica emerged before large-scale irrigation activities while Smith emphasizes that “basic environmental parameters are critical to human life and have considerable impact on the production of landscapes. However, fluctuations in environment must be understood within the social and political ordering of daily practices, not exterior to them” (2003, p.278). Shiva (2016) also claims that Marx and Wittfogel overlook the fact that cooperative management systems are independent from sovereign bureaucracies, and that the irrigation systems in India were on decentralized control, rather than centralized (p.295).

Mitchell indicates that archaeological work has generated both positive and negative criticism of Wittfogel's hypothesis (1973, p.532). Some archaeologists reject the notion that centralized political power centered around the control of irrigation activities. For example, in Egypt, the Pharaoh had no central role in organizing agricultural production, whereas extensive irrigation existed before the origin of state in Mesopotamia and China (Dubreuil, 2010, p.195). Dubreuil argues that the accumulation of archaeological knowledge on early civilizations which indicates that major irrigation canals were built after the emergence of states disprove Wittfogel's theory of *hydraulic society* (2010, p.195, emphasis in the original). Another researcher, Jamie Linton (2010) argues that Wittfogel's dialectical approach between man and nature might be considered as a predecessor to recent historical and cultural investigations about the social nature of water, and claims that the internal relation between two entities, water and society, was not well understood by Wittfogel, quoting Donald Worster who defined this relationship as "an ongoing spiral of challenge-response-challenge, where neither nature nor humanity ever achieves absolute sovereign authority; but both continue to make and remake each other (p.64).

While first settlements of humans were close to rivers, lakes or freshwater resources, the dependence on water transported to these settlements increased when cities were founded and surrounded by walls. According to Illich, the art of well-digging was perfected after 2500 BC, and Egyptians learned to operate water like a mine by opening tunnels so that they could increase the amount of water supply (2007, p.56) In the seventh and sixth centuries BC, the aqueducts became popular, especially in Asia Minor and Europe, travelling long kilometers. For example, in 9th century AD, reaching to a population of one million inhabitants, Rome was supplied

with 450 liter water per person by nine major aqueducts with a total length of 400 km, which was ten times higher compared to 35 liters per person in London, Frankfurt and Paris in 1936 (Illich, 2007, p.57). With increased urbanization after the Industrial Revolution, numerous transformations and metabolisms that support and maintain urban life such as water, food, computers, and movies involve infinitely interconnected environmental and social processes, which resulted in the fact that the “socio-ecological footprint of the city has become global” (Swyngedouw, 2002, p.10). Swyngedouw claims that both the social and physical environment in cities is the result of the historical geographical urbanization process of nature, and he emphasizes that a glass of water relates all things in a network, connects most intimate of socio-spatial relations, inserts them into a political economy of urban, national and international development, and is a part of a chain of local, regional, national and global circulations of water, money, text and bodies, where water should be considered as the entry point of a political ecological process (2002, p.28).

When we look at the past, the use of water for agricultural purposes and irrigation methods in non-Western societies have attracted many anthropologists and other social scientists. Studies on ‘traditional irrigation systems’ demonstrate how water is signified, perceived and managed in different hydrological and cultural circumstances (Linton, 2010, p.55). Among these traditional irrigation systems, *qanat* was a groundwater supply technology used for irrigation in Iran; *subak* was an irrigation system used for paddy fields on Bali Island, Indonesia; tank systems of Sri Lanka and southern India were used for water harvesting and storage; *chinampas* was a Mesoamerican agriculture system which used artificial islands in the pre-Hispanic Valley of Mexico; and *huertas* is a community water tribunal system used for intensively farmed gardens in southern Spain (Linton, 2010, p.55).

The history of some of the water structures built by disrupting two-thirds of the world's largest rivers for agriculture and flood control goes back to centuries ago while the majority of them have been constructed following World War II. Early examples of dams can still be seen in Sri Lanka and Israel, while the Dujiang irrigation project, which supplied 800,000 hectares in China, is 2200 years old (WCD Report, 2000, p.8). Almost 95 per cent of the investments in dams and reservoirs were made after 1950 (Lempérière, July 2013). According to the World Commission on Dams website (Bosshard, 2014), the reservoirs of these dams contain three times as much water as all the world's rivers, and constantly lose up to four Niagara Falls to evaporation. These dams generating 16% of the world's electricity, irrigate crops for 12-15% of world's population, and 80% of the water they store is used for hydropower. In addition to irrigation and energy, dams provide services for water supply, flood protection, transportation and tourism. The number of large dams constructed between 1960 and 1970 is five or ten times higher than those currently built, which indicates that there has been a significant decline in the construction of big dams in recent years, to a great extent in industrialized countries. International commissions such as ICOLD (International Commission on Large Dams] and Hydrocoop have been established to study the economic, social and ecological effects of dams, which are higher than 15 m. By the end of 20th century, there were over 45,000 dams in over 140 countries, where China alone has built 22,000 large dams although it had only 22 large dams before 1949 (WCD Report, 2000, p.8).

In the modern setting where the flow of water and the flow of money are materially linked (Swyngedouw, 2004, p.2), international financial institutions such as the World Bank and International Monetary Fund (IMF) supporting 'developing' countries in order to reduce poverty globally argue that one of the main obstacles to

development is the lack of water services. The main objectives of water management policies, prepared in accordance with the recommendations of these organizations, can be summarized as follows: improving distribution of income; increasing employment opportunities, food and energy security; contributing to economic growth; creating a healthy environment and preserving ecosystems; all of which require an integrated planning, implementation tools and institutional structuring (Bilen, 2009, p.10). However, the loans provided by the World Bank and similar institutions for giant water projects actually take control of the waters used as common property from communities and serve to strengthen the control of governments. Thus, dams are a popular means for colonizing rivers and people (Shiva, 2016, p.160). Emphasizing that national development plans not only favor the urban industrial sector, but do so at the expense of the rural sector, Scudder (1981, p.10) argues that big dams are a classic example of this bias because their main purpose is to generate hydroelectric power for the urban industrial sector although they are built in rural areas. Not being able to benefit from these dams, rural people migrate to big cities to seek opportunities following these transmission lines (Scudder, 1981, p.10).

On the other hand, the shortcomings and setbacks of the conventional planning that have been under debate since the 1970s in terms of basin management and dams have brought up the concepts of ecosystem, sustainable development and holistic water resources. In the 1990s, when neoliberal policies had a significant impact on development projects, four guiding principles were laid in the 'Dublin Principles' adopted in 1992: environment as an important factor in development efforts; adoption of participatory water management; emphasis on women's role in water management; and evaluation of water as an economic commodity. The World

Bank began to lead neoliberal policies based on the view that water is an economic commodity (Bilen, 2009, p.48). In development and water policy projects prepared accordingly, models such as service contract, management contract, leasing, concession agreement, Build-Operate-Transfer and public-private partnerships and asset sales and privatization have gained weight, and it has been laid down as a condition to privatize the sector as per credit requirement by international creditors. Since mid-1995, platforms such as the World Water Council (WWC) and the World Water Forums (WWF) have been created to respond to rising water problems globally and create an integrated water management system (Bilen, 2009, p.36).

According to the final report of the World Commission on Dams, which was born out of a World Bank and International Union for Conservation of Nature (IUCN) sponsored workshop in 1997 to discuss increased opposition to large dam constructions, dam projects carried out with the support of international organizations in order to overcome the obstacles to development, have physically displaced an estimated 40 to 80 million people in the modern era, including 23 million in China alone (WCD Report, 2000, p.104). Displacement makes poor people poorer, marginalizing their resources, skills and cultural identities, putting them into the process of 'dispossession'. Dams also pose a risk to human rights, since dams that accompany displacement on large scales are mostly built by authoritarian regimes. In countries such as Burma, China, Colombia, Ethiopia, Guatemala and Sudan, dam builders often responded to opposition with serious human rights violations. The worst slaughter associated with dams was in 1982, when more than 440 locals were killed during the construction of the Chioxy Dam in Guetamala (Bosshard, 2014).

In addition to the negative impacts mentioned so far, large dams are also costly investments. Again, the World Commission on Dams report estimates that at

least two trillion US dollars have been spent for the construction of large dams over the last century (WCD Report, 2000, p.11). Planning errors, technical problems and corruption cause delays of 44% in average, and costs overrun 96%, which make these dams uneconomic (Bosshard, 2014). Since reservoirs silt up eventually, their maintenance costs exceed their benefits. They also have unacceptable levels of environmental and social impacts. In the US, more than 1000 dams have been removed at great costs, and since 1998 the decommissioning rate for large dams has overtaken the rate of construction (WCD Report, 2000, p.10). When they are not properly built or maintained, dams can collapse as it occurred recently in January 2019 in Minas Gerais, Brasil, which killed 186 people. In the world's biggest dam disaster that occurred in China in 1975, 171,000 people were killed after the failure of Banqiao Dam. From this point of view, generating energy from water resources by putting barriers in front of them is problematic, not only financially, but also, and most importantly, because of the environmental and life-threatening risks it accompanies. In their 1984 work, *The Social and Environmental Effects of Large Dams*, Goldsmith and Hildyard combined an enormous volume of data, showing that large dam and water projects have not only failed to achieve their basic objectives, but also left a legacy of unsurpassed cultural destruction, disease and environmental damage (as cited in Linton, 2010, p.51).

On the other hand, in a compendium prepared for the UN Dams and Development Project, which was established to follow on from the World Commission on Dams, in order to present practices with positive outcomes, it has been suggested that focusing only on negative social and environmental impacts has a narrow perspective, and polarize the debate into whether dams should be built or not,

whereas when social, environmental and economic issues are considered in full range, the question becomes how to build a good dam (UNEP, 2007, p.xi).

Looking at all these data, it appears that technological developments and industrialization should take into account the problems created by an imagined world where development is synonymous with western-led industrialization, and develop policies that eliminate unemployment, poverty, income injustice, social and regional inequalities, and favor ecological balance while meeting the basic requirements of all segments of society such as health, education, housing, culture. In this regard, next section will focus on Turkey's approaches and policies on development during the period after the establishment of the republic.

2.3. Development in Turkey

Development policies in Turkey, especially starting from the 1930s, have been the focus of national economic development with an emphasis on the assessment of the country's natural resources and geographical possibilities. Following the Lausanne Treaty, the abolition of capitulations of the Ottoman Empire followed the lifting of restrictions on tariffs and the creation of a new tariff (1929), and the Law for the Encouragement of Industry was issued on May 28, 1927. According to Ahmet Insel, unlike the state of the Republic of Turkey, which has shown a strong desire for change, everything in the Ottoman Empire was aimed at freezing time, forcing the society, its activities and existence to depend on an order that does not take the public into the center, and any event that could turn into a development dynamic was doomed to be destroyed in the status quo (1996, p.44).

As the heir to an empire that has won its war of independence against the world's major powers but missed the industrialization period in the West, it has not been possible for Turkey to start the development process by copying the west in its

transition from imperial- to the nation state-order. The lack of a dynamic class for capitalist development and workers to support this class were liquidated by peasants and tradesmen of Anatolia engaged in agriculture and small trade. There was neither capital development nor foreign financing and entrepreneurs (Savcı, 1982, p.45). Furthermore, there was no peasantry in Turkey to demand land by forcing the landowners to become dispossessed and distribute their lands to the villagers (Ahmad, 2009, p.93). Likewise, the Soviet model was not appropriate according to the political principles of the pro-modernization groups. The dominance of a class was not favored; instead, the "idealistic individualist core of the 1789 French Revolution" was highlighted. Thus, these groups were after engendering absolute national qualities, rather than internationalist perspectives. Since there was no possibility to create a state capital beyond regular public spending, the West's economic model has been transformed into statism and then, into welfare economics (Savcı, 1982, p.47).

The decision was made to revive private entrepreneurship and create an environment conducive to individual enterprise and to allow activities for this with liberal economic policy established at the 1923 Izmir Economic Congress, which aimed to move the concept of national integration into the economic field after the War of Independence (Öztürk and Yıldırım, 2009, p.151). As a result of this congress, it has been decided that the state would provide the necessary means for the capital accumulation and turn this into more investment and structural improvements since under the existing circumstances the liberal capitalist model, which operates based on obtaining cheap raw materials, processing and selling those products at higher prices in the acquired markets could not be applied (Savcı, 1982, p.52). Between 1929-1931, the world economic crisis led the state to take on a more regulatory and more entrepreneurial role, resulting in a structure that transformed economic affairs into

state management, even monopoly, and accordingly, institutions such as the State Industrial Office [Devlet Sanayi Ofisi], Industrial Credit Bank [Sanayi Kredi Bankası], Sümerbank, Etibank were established. In addition, by expropriating railways, water companies, docks and port companies, gas, telephone, electricity, tram, and tunnel companies (Savcı, 1982, p.52), the state assumed infrastructure investments.

When the First Five-Year Plan, which was drafted in the hope of ending consumption of expensive imported products, was adopted on January 9, 1934 in the parliament, Turkey became the second country to implement a planned economy after the Soviet Union (Ahmad, 2009, p.121). According to Bahri Savcı, the group power of the upper tiers of the leadership that carried out the War of Independence, who saw development as a means and principle for countries that have been poor in terms of social-economic-political opportunities and accumulations, has in fact determined the developmental principles following the 1923 Izmir Economic Congress (1982, p.53-54). The development in the industry was seen as a vital component in the establishment of new Turkey, and it was believed that a strong, balanced and independent industrial economy should be established to achieve the goal of civilization (Ahmad, 2009, p.115).

When the first plan ended in 1938, it was observed that the plan had succeeded, but the second plan could not be implemented due to the Second World War. This second plan, which was more ambitious than the first one, was aimed at operating mines, creating a mining industry, and establishing power plants all over Anatolia to equip the country with electricity (Ahmad, 2009, p.121). The 1930s was a period in which the state established a number of Public Economic Enterprises (PEE [KİT]) particularly iron and steel, and paper factories; founded the Central Bank;

achieved foreign trade surplus in 1930; and also reached the average annual growth of % 6 (Akyıldız & Eroğlu, 2004, p.49).

According to the 1917 census, only 16.4 percent of the population lived in more than 10,000 cities and towns in Turkey, an agricultural country with a population of less than 14 million. The population growth did not cause problems for rural towns for two decades since the amount of existing land that could be used for agricultural purposes was sufficient enough to start with, but also supported by new state-owned land opened to cultivation. By 1950, only 18.8 percent of the population lived in cities (Ahmad, 2009, p.117). Turkey stepped into a multi-party system in 1946 with the establishment of the Democratic Party. In this period, the government had to introduce liberal economic policies with decisions taken as a result of pressure from the opposition. It was believed that competitive capitalism – instead of state capitalism - would serve the future of Turkey better, and that this could be accomplished with foreign capital investments (Ahmad, 2009, p.131). Following this political-economic development, the Turkish Republic has strengthened its relations with the United States between 1946 and 1960, became a member state of the UN, adopted the Bretton-Woods Treaty in 1944, and joined the International Monetary Fund (IMF) and the World Bank in 1947 (Akyıldız & Eroğlu, 2004 p.50). During this same period, under the US President Harry Truman's plan, the *Truman Doctrine*, which was designed to support governments fighting communism, Turkey was provided \$100 million in financial aid and military supplies, and the United States earned strategic positions in Eastern Mediterranean. This was followed by the introduction of the *Marshall Plan*, which provided economic assistance to 16 countries for \$6 billion under the European Economic Development Program. Turkey became a member of the North Atlantic Treaty Organization (NATO) in 1952 and

continued its cooperation with the United States during the Cold War, which lasted until 1990.

As Ahmad (2009) outlined in his work on the formation of modern Turkey, in 1950, the Democratic Party (DP) that promised to the people of Turkey to create a rich family in every neighborhood in each generation and turn the country into 'little America', won the election for the first time (p.133). Democratic Party cadres who were strengthened and re-elected in the next election did not prefer a comprehensive economic plan, which they believed was a communist practice (p.139). Under DP's reign industrialization has been shelved for a while, instead, the priority was shifted to agricultural products and mining, which were in great demand by Europe. Anatolian villages were opened to the outside world for the first time and highways were increased from 1643 km in 1950 to 7049 km in 1960. As a result, bus and transport companies have rapidly proliferated, and the Turkish automobile industry was established in the mid-1960s. The spread of highways also resulted in the opening of Anatolia's coastline, first to domestic- and then, to international tourism. Machine-based farming methods have been introduced, but only 1.8 million hectares of land were distributed to 360,000 families between 1947 and 1960, as the political power of landowners prevented an effective land reform. Since the state-owned land, which was redistributed to a limited number of families, provided the livelihood of villagers with no land or little land, the period of migration to the cities to find work has begun and this led to a growing number of slums in the urban areas (p.141).

Turkey experienced huge economic growth of 13 percent annually between 1950-53 as a result of the increase in demand for consumer goods in and out of the country due to post-war Europe's demand for food and the economic development that was accelerated by the Korean War, which in turn resulted in the accumulation of

money in rural areas (Ahmad, 2009, p.141). On March 1, 1950, the Foreign Investors Encouragement Act was passed, and in March 1954, the state monopoly was abolished in the oil industry and it was opened to foreign investors. Between 1956-1959 the inflation rate was 18 percent due to the increased foreign debt and foreign trade deficit. Since capital goods and spare parts could not be purchased, agricultural machinery did not get to be put to efficient use and remained dormant, and the factories worked at half capacity. Under these circumstances, the Democratic Party government had to abandon its liberal policies, passed the National Protection Act in 1956, which allowed the state to re-regulate the economy. Nevertheless, the cheap agricultural loans the DP government gave when it failed to stabilize the economy, the extra incentives applied to agricultural products and the tax exemptions for farmers created a rich class of farmers, and the rural wealth increased consumption and created an unmet demand. As a result, inflation caused by an increase in food prices has affected all segments of society, particularly the fixed-waged and paid civil servants, officers, and workers (Ahmad, 2009, p.142).

In 1960, when the government was toppled in a military coup, the economy had already collapsed. On September 30, 1960, the junta government decided to establish the State Planning Organization (Devlet Planlama Teşkilatı -DPT) in order to find a solution to economic bankruptcy. The decisions taken by this organization were required to pass cabinet and Parliamentary approval before implementation (Ahmad, 2009, p.159). The revised constitution defined the Republic of Turkey as a "social state", 1960 marked a turning point in political, economic and social transformation, and a period of planned development was initiated once again (Akyıldız & Eroğlu, 2004, p.52).

Since the planning process was still under the supervision of the prime minister, this process has continued to be a politically used element with the return to the electoral system. Despite intense discussions about conflicting statements on investments and development plans in the relevant clauses of the Constitution and objections of the capitalist groups who claimed that the time for strike and collective bargaining rights for workers have not yet arrived (Ahmad, 2009, p.160), as well as the parties pledging reductions in taxes to voters, while taxation is of great importance in planning, disagreements over agricultural reform, suggestion that economic government agencies should be structured as large firms so that they can compete with the private sector (Salep, 2017, p. 217) the DPT managed to prepare the 'First Five-Year Development Plan in a two-year period after including the views of all the relevant actors, which envisaged the Turkish economy showing an average growth rate of 7% each year promulgated on December 3, 1962. One of the most important goals of this plan was its social goals. The Republican People's Party (Cumhuriyet Halk Partisi -CHP) released a statement about this development plan highlighting that "Ensuring a fair distribution of income among citizens, eliminating the differences in economic and social levels between the regions, rapidly expanding social security measures, providing an adequate level of life to the increasingly large layers of public rather than a millionaire in each neighborhood, democratization of prosperity can be counted among these goals" (as cited in Salep, 2017, p.220). The emphasis on the principle of social justice seems important as it indicates that politicians have also come to an understanding that the development cannot be considered only on economic basis. Within the scope of the plan, it was stated that 6000 slums would be rehabilitated annually for 1,5 million people living in 300,000 slums by the end of 1963, and 150,000 slum owners would be moved to new dwellings, financial support

would be provided to those in need to prevent slum construction, and the budget would be allocated accordingly (Salep, 2017, p.224).

The average development rate (6.5 percent) has been promising for the following years, although it was slightly below the targeted average rate during the implementation process of the First Five-Year Development Plan, which was prepared from a fifteen-year perspective. In this period, while the share of the agricultural sector in gross domestic product (GDP) decreased, the share of the industrial sector began to rise (Salep, 2017, p.226). The growth rate achieved during this first five-year period was a ratio that not many Third World countries could have achieved and can almost be considered as an industrial revolution, while the economy in Europe, especially in Germany, has experienced a major period of output, the unemployment rates in Turkey have remained low thanks to large Turkish labour exports to European countries (Ahmad, 2009, p.160). Money sent by these migrant [*guest*] workers to their families contributed 1 % to GDP's annual growth in the early 1970s. In 1973, due to the fact that Turkish workers migrating to the European countries had *de facto* restrained the economy, which had become overly dependent on foreign currency that was transferred by these workers, led to negative consequences on Turkish economy. In the late 1960s, there was a significant change in the structure of the economy and society, which can be identified as the transition from an agricultural- to an industrial economy. In 1973, rapid urbanization began due to intensive migration from the villages in search of a better life after the industry's contribution to GDP exceeded that of agriculture.

Following this demographic change in the cities, two oppositional classes became politically empowered by establishing their own organizations: On the one hand, the bourgeoisie became organized through the formation of the Turkish

Industry and Business Association (TÜSİAD) in 1971, on the other hand, workers founded The Confederation of Progressive Trade Unions of Turkey (DİSK) in 1967 as a breakaway union from the pro-government trade union confederation (Ahmad, 2009, p.161). In Keyder's (2004) opinion, although there is significant inequality in the 'modernization' process, "in addition to the basic elements of this model: the aristocratic workers and industrialized bourgeoisie, the marginalized urban population and non-industrialized workers in the countryside have been included as part of the aforementioned development plan- at least in terms of their expectations" (p. 33). With almost every product which was previously imported now being produced locally as well, the industry received a great amount of foreign funding, and started to change its consumption habits. In the meantime, while new consumption models kept fueling inflation and coalition governments implementing failed economic programs the elections held in 1965 resulted with the Justice Party led by Süleyman Demirel, the former Director General of State Water Affairs who later became the symbol of modern capitalism and cooperation with the United States, winning the elections (Ahmad, p. 170). Demirel had been in the United States between 1949 and 1950 with a training program on irrigation, electronic technologies and dam construction. Inspired by this visit, he prioritized the construction of dams under his reign, which earned him the nickname of 'King of Dams' (Cağlıyan, 2008, p.222). According to Demirel, transportation, communication and energy were the three most important elements in development. The foundation of Keban Dam and Hydroelectric Power Plant, one of Turkey's major dams, was laid in 1966 and completed in 1974.

Although Demirel propounded that they took the villages to the center of development with slogans such as 'We will make dark Turkey bright' and 'Whatever

is in the city will be in the village' (Çağlıyan, 2008, p. 223), as Ahmad (2009) asserts, Demirel's claims that "the path of the modern Turkish state will be totally different than that of 19th-century capitalism" have not succeeded and under his reign, a certain group of entrepreneurs was put on the list of the richest, while small traders and tradesmen across the country failed to survive due to unequal competition (p.192). According to Çağlıyan (2008), Demirel, who developed a more nationalist discourse due to the increasingly sharp political polarization of the late 1970s, has now highlighted the concept of nationalism in development and the ideal of 'Great Turkey' has become more prominent (p. 224). The following political turmoil, workers' protests, violence in the society separated as leftists and rightists, and the economic crisis due to interventions such as the March 12 memorandum led to changes in the management of economy: The economic program prepared by the Ecevit-Erbakan coalition in 1974 had left the profitable, light industrial production to private entrepreneurs, and the cooperative system, effective product marketing and land reform plans were abolished (Ahmad, 2009, p.193).

Economic policies imposed by coalition governments, which were established under conditions such as capital shortages, rising unemployment and inflation, the US arms embargo imposed after the 1974 Cyprus Peace Operation, and Europe's implementation of economic sanctions, have always had to be contingent upon election periods. Between 1975 and 1977, \$7 billion was owed to private banks, and the social democratic government that came to power afterwards was forced to comply with the IMF austerity policies. Demirel, who came to power with the support of the United States once again after the Iranian Revolution, enacted harsh measures called the January 24th decisions, along with Turgut Özal, whom he appointed as a chief economic adviser. When the September 12, 1980 military coup was declared,

the political polarization in the country had turned into armed conflict and the rise in the unemployment rate and inflation led to economic stagnation. Silencing all forms of opposition in the country, the coup paved the way to a highly depoliticized society and supported a political ideal merely focusing on long-term stability (Ahmad, 2009, p.212).

In this respect, it can be said that until the late 1970s Turkey implemented import substitution strategies as development policies, but since the early 1980s had to put export-led growth strategy into practice due to unfavorable internal and external economic conditions and successive political instability as well as globalization compelling the strategies to adapt to the economic transformation and integrate with the world economy. The main purpose of the Import-Substitution-Led Industrialization Strategy was to restrict imported goods and encourage the domestic manufacturing industry to produce substitutes (TMMOB, 2007, p.7). During the same period, serious steps were taken towards integration with the European Union, based on the Partnership Application made in 1959, while the transition to a free market economy was on the agenda. In the 1990s, the interventions of the state were reduced to the minimum and the economy became completely open to foreign interventions. As a result of these developments, significant changes have occurred in the traditional structure of the state, the state-society relationship and social policies.

In the changes that the junta regime announced to bring to ensure that the same political and economic woes would not happen again, foreign policy and the economic stability program put into force on January 24th were excluded, and the generals brought the architect of these decisions Turgut Özal in charge of the economy, giving him complete authority. This period is known as the 'fund economy' with funds created almost entirely arbitrarily and spent by the prime minister's office

funds, such as the Poor and the Needy Fund [Fak-Fuk-Fon] (Ahmad, 2009, p225).

Also, with the transition from a mixed economy to a free market economy, the state's withdrawal from the production area, in which it heavily invested after the 1960s, and focus on the country's infrastructure, energy needs, road and transport networks, and dams were seen favorable. However, due to a lack of private capital at the time, privatization efforts remained limited. Private entrepreneurs' way has been smoothened especially in manufacturing, savings/banking and investment fields. To get rid of the preserved domestic market and the dependence on import substitution industrialization, the industry has been encouraged to open to international trading and produce quality goods that will find buyers in foreign markets. With the execution of the aforementioned decisions, the income distribution model has been changed in favor of the rich, pushing the middle and lower classes into poverty. Combined with the economic crisis of the late 1970s, this economic change has exposed a new generation of businesspeople who are still committed to their provincial origins - the moral values of small-towns dominated by Islamic rhetoric. Along with this, the belief that modernization and the Republican nation-state have failed to meet their promises has led to a new interest in traditionalism (Keyder, 2004, p.140).

Between 1980 and 1988, the average growth rate was 4.6 percent. Because big companies are more efficient, richer and stronger, they have been able to compete better with their foreign rivals and benefit from government incentives. As a result of these encouragements a handful of conglomerates have grown rapidly. The government has virtually become a partner of the private sector in foreign market research, which has led diplomacy turning into a new arena for international trading (Ahmad, 2009, p.242).

Privatization and expropriation were enabled with the Law of Outsourcing Some Investments and Services as the Build-Operate-Transfer Model, enacted in 1994. In 1999, the 47th amendment in the 3rd Section of the Constitution, titled Social and Economic Rights and Duties, revised 'etatization' in the article under the subtitle of 'public interest' as 'etatization and privatization'. Thus, with this revision, privatization was now conceptualized as public interest in the Constitution (Kaya, 2016, p. 76).

With the effectuation of free market policies, the economic growth has been accelerated, however, industrial investments have decreased compared to service sector investments, and areas such as tourism have become important sources of investment and foreign exchange. The national wealth proliferated, interestingly though the distribution of this wealth increased not in favor of industrialists, but in favor of service provider entrepreneurs and rentiers. The fixed exchange rate regime was abandoned, and a flexible exchange policy was implemented, completely freeing the foreign exchange import (Akyıldız and Eroğlu, 2004, p.55). Starting from 1990, despite the attempts to close the foreign trade deficit and make the foreign debt payments by increasing the exports, inflation went up to 149% and the economy shrank by 6.1%. After the signing of the Customs Union Agreement with the EU in 1996, the foreign trade deficit reached its highest value in history. Although a standby agreement with the IMF was signed as a result of increasing public deficits and high debt levels in 2000, it had to be followed by a program called the 'Transition to the Strong Economy Program' to overcome the crisis of confidence and eliminate instability after the February 2001 crisis (Akyıldız & Eroğlu, 2004, p.57).

The neoliberal economic program, which began in the early 2000s with the Justice and Development Party (AKP) starting to rule the country, was mainly aimed

at controlling money and labor during the initial period, and then natural resources in areas such as mining and energy, where public resources and authority were transferred to the private sector. In this process, it has been observed that "the whole society continued to be swiftly subdued by the capital, as a result, the process of commodification in almost all social areas (water, education, health, transportation, security, etc.) deepened" (Akçay, 2013, p. 33). One of the most important differences separating AKP's rulership from its predecessors was the privatization of state enterprises, especially with a pro-foreign capital stance. Between 1986-2002, a total worth of \$8.053 billion was gained by privatization, while between 2003 and 2012 alone, this figure reached to \$35.255 billion (Angın & Bedirhanoğlu, 2013, p.76). However, during this period, neo-liberalization gained visibility not by the state's retreat in the face of capital, but by reorganizing the mutual relationship, and even filling the areas created by the private sector with the intervention of the state (Erensü, 2016, p.41). While the fact that Turkey's capital accumulation is based on a state-backed process does not change during the AKP era, the decisive role of state politics in the economy has increased with the reorganization of the relationship between capital and state in neoliberal policies aimed at reducing the role of the state (Aslan, 2016, 125).

Since the establishment of the SPO, altogether ten Five-Year Development Plans have been implemented, among which "pre-1960 plans were considered pro-state and partial, 1960-1980 plans were considered mixed economy and holistic, and 1980-2000 plans were considered liberal and strategic" (SBB, n.d.). The concept of 'sustainable development' in Turkey was first included in the Third Five-Year Development Plan covering 1973-1977, and the international sustainable development approaches were introduced to the Turkish legislation through signing the UN

Convention on Biological Diversity in the Rio Conference in 1992 (Algan, 2000, p.227). The Ninth Five-Year Development Plan included clauses of "a human-oriented development management approach" and "protection of natural and cultural heritage with an understanding that takes into account future generations" (Resmi Gazete, July 2006). Turkey's accomplishments on sustainable development were presented with a report at the Johannesburg Summit in 2002. In the report, which was prepared with the contribution of the state offices, private sector, higher education institutions and non-for-profit organizations, social, economic and environmental factors were examined under the headings of 'climate change and sustainable development', 'protection of biodiversity and sustainable development', 'governance and sustainable development', 'fighting poverty and sustainable development', 'business and industry in sustainable development' and 'information and communication for sustainable development'. With the support of the UN Development Program, LA 21⁹ applications, an adaptation of The Rio Conference Agenda 21, were launched, and the LA 21 Launch and Encouragement Project in Turkey started. The work initiated in 1995 was completed with the National Environmental Strategy and Action Plan in 1998, and the issue was put on a legal basis by making the necessary revisions on the Constitution and its applicable laws, statutes and regulations (Akgül, 2010, p. 161).

Within the scope of the European Union integration process, Development Agencies were established as autonomous public institutions to reduce cross-region inequalities and ensure regional development by the Council of Ministers' decision, dated 28.08.2002 with the number 2002/4270 (Eryılmaz & Tuncer, 2013, p.174). "Development Agencies have been established to develop the cooperation between

⁹ Local Agenda (p.y.a).

the public sector, private sector and civil society, to provide meaningful and effective use of regional resources, to accelerate regional development, to provide sustainability and to reduce inter-regional and intra-regional development differences” (GMKA, 2020). Currently, there are 26 different Development Agencies based on NUTS 2¹⁰ regions in Turkey, and these agencies are legal entities coordinated by the Ministry of Industry and Technology.

After Turkey was accepted as a candidate country to the European Union in December 1999, water legislation was also covered under the heading of environment in the Public Partnership Document, which includes economic, legal and administrative reforms. Accordingly, the National Program prepared detailed measures and standards for improving water quality (Bilen, 2009, p. 244). In its National Environmental Strategy prepared in 2006, the Ministry of Environment and Forestry has given a compliance calendar for the water sector and regulations such as urban waste water treatment, water intended for human consumption, the quality of surface waters obtained or planned to be obtained from drinking water, the protection of water against agriculture-derived nitrate pollution, control of pollution caused by hazardous materials in water and surrounding areas, swimming water quality, and control of soil pollution.

As the capital accumulation process has reached its limits to exploiting the environment and this becoming more visible in the public eye enforced the need for 'greening' the development (Turhan & Gundogan, 2016, p.100). As such, in the 2012 Turkey Sustainable Development Report, released following the Rio+20 meeting, the

¹⁰ “The Nomenclature of Units for Territorial Statistics (NUTS) is a statistical subdivision standard by Eurostat. According to NUTS classification, there are 12 NUTS 1 and 26 NUTS 2 regions in Turkey. These regions are not administrative but statistical units. Development Agencies have been set up based on NUTS 2 regions and work according to "Law on The Establishment and Duties of Development Agencies" (No. 5449) and related regulations.” <https://www.gmka.gov.tr/en/what-is-development-agency-what-are-its-responsibilities>.

need for 'green economy' was highlighted. This report emphasized that Turkey's sustainable development is not affected by high energy demand since this demand is met by imported energy. However, according to Turhan and Gündoğan (2016), the roadmap drawn in the report reveals that the green economy is being treated with a hollowed-out politicism, more information is needed about the consequences and ambiguities of the green economy while "advancing towards hegemony at a wild pace and audacity in Turkey" (p.117). According to Şahin (2011) 'green economy' is

[the] understanding of minimizing human destructive interventions on nature and thus enabling sustainability of the life on earth and permanency of human civilizations, rejecting the economic growth and development dogma, supporting the production-consumption relations on a human-friendly and human scale close to the ground approach, as opposed to huge scales of such relations within the framework of the concept of 'small is beautiful' (p.24).

This definition immediately addresses the contrast with political and economic practices built in Turkey. In the aforementioned report, while the depiction of the state as unbiased (and without political leanings) and as favoring the well-being of every single citizen would fully correspond to green economy, it also reinforces the belief that environmental problems can be solved without breaking the fetish of economic growth (Turhan and Gundogan, 2016, p.115).

A study that addresses the qualifications of development of society states several points in defining what such qualifications need to be: It operates a process of innovation; involves voluntary participation of the public and the support of the state; moves in harmony with national development efforts; covers educational and organizational initiatives including many different issues; performs as a problem-solving process; and works as a guideline for the development of society (Mikser,

1993, p.511). In another study, Erdentuğ (1966) calls for an intellectual mobilization with "efforts to go to the people and reach villages" by using all the slogans of the Republic's early days related to development since villages are the starting point of development (p. 211). Erdentuğ (1978, p. 212) claims that despite all the efforts made since the First Constitutional Era, the villages did not reach their desired potentials because of the constant battles and incursions on their soil as much as the outdated village administration systems and public ignorance towards villages. She believes that the Second Five Year Plan (1965-1970) reserving a separate section to the issues related with villagers and villages was an enormous step in terms of recognizing their importance. According to her, the rapid urbanization process brought changes to the socio-cultural dynamics of the villages, however, since the pace of this change did not manifest itself as fast as needed, once again she repeats her call for immediate action by stating that the "modernization [of villages] is the basis of our cause" in development of society (1978 , p.212). She notes that as the modernization process is a cultural change and an anthropological process, institutions such as the Ministry of Village Affairs and State Social Planning should benefit from these disciplines. She also asserts that, the efforts made for elevating the villages without conducting ethnological and cultural anthropological preliminary investigation resulted with the lack of improvement in health services, leisure time activities, educating kids and adults in the villages, housing, implementing new techniques in agriculture, etc. and the money, time and energy spent in such efforts have been only wasted (1978, p.214). As an example of not taking into account the cultural, social and psychological factors in decision making processes, she refers to the Hasankeyf case, where the villagers were forcibly placed in modern buildings, which, however, had no barns attached to them, and as the villagers were accustomed to living near the

animals they breed for husbandry, social workers in the village were "met with pushy behavior or reluctance".

Rıfat Mikser (1999) claims that based on the political decision of the time, changing the state institution that is responsible for the development of society from the State Planning Institute (Devlet Planlama Enstitüsü -DPE) to The Ministry of Rural Affairs, then to the Ministry of Interior, and then, transforming the General Directorate of Public Education to the Ministry of National Education in 1967, resulted with no government body owning the development and this led to the failure of the Third Five-Year Development Plan. Mikser asserts that this failure of the Third Plan was attributed to administrative disruptions. He posits that introducing a learning by experience model for communities which is an effective method in human development, coinciding the regional-national development initiatives with the local ones would provide the necessary means for both the ideals of national development and such ideals of reaching local communities (1999, p.110). In one of the field studies conducted on social development in Altınözü, Terme, Bunyan, Ulukışla and Edirne central districts, collected data showed that there was an imbalance in the distribution of land, middlemen gained extra profit by selling the villagers' products through the 'alive'¹¹ method, traditions such as keeping the accumulated money in the village and thus hindering economic development, prioritizing the infrastructure and techniques that multiply the end product, and the characteristics of the local leaders who are constantly in a relationship with the city such as drivers and grocery store owners (Geray, 1972, p.6).

Given the development projects of the governments and the rhetoric supporting these projects, it is seen that development holds an important role in the

¹¹ In English it refers to 'forwarding', which means the seller delivers a certain product to the buyer at a later date on the same price agreed upon in advance.

process of modernization of the Republic of Turkey. The formation of rulership, especially after the 1950s, being from engineering-based staff, can help us understand the lack of social and cultural content in development plans. Çağlıyan (2008) claims that only a leader such as Süleyman Demirel whose origin is village and who knows and uses religious terminology successfully could eliminate the disconnection between the concepts of Westernization and modernization projects that have been in place since the first years of the Republic, on the one hand, and the public on the other, by translating such concepts into a language that the public can adopt. According to Çağlıyan, Demirel's idea of modernization, which does not ignore religion and peasantry, has managed not to contradict the ideals of the regime because of its rhetoric that has centered the state, although the state elites did not approve it (2008, p.227).

In response to Fernand Braudel's question of "Who thought this concept [capitalism] could expand as a system to include the whole society?", Eberliköse (2013) pointed to the case of HEPPs in Turkey, explaining how the state's policies transformed in the field of energy through HEPPs. He identified two distinguished periods for this transformation; first, the years between 1984-2001 as the Purge of the Protectionist-State and the Open Market Period, and second, the years between 2001 and 2012, as the Institutionalization of Neoliberal Reforms and State's Efforts to Keep Up with the Capital Accumulation Period. Eberliköse (2013) argued that between 1984 and 2001, during the 'Commissioning to the Private Sector' period, despite the development goals set out by the government Do-Operate and Transfer models were not preferred by the private sector who claimed that the costs were too high and the state did not make the necessary arrangements to guarantee the purchase (p. 34). After transition to a model aimed at increasing production under the supervision of the IMF

in 1999, growth in energy needs, and energy rearrangements emerged in the period between 2001 and 2012 in an effort to shift from the labor-intensive sector to the technology-intensive sectors. During this period, new concepts such as restructuring the state as a company, public-private partnerships, Decrees in Law, hasty expropriation and superior public interest were added to the legislations. In this context, the 58th cabinet of the Turkish Republic ruled by AKP declared that, the state, the market and society were complementary, not each other's alternatives, and claimed that sustainable development would be achieved by the synergy that they would create (Eberliköse, 2013, p.135). However, Statutory Decrees aimed at opening forests, pastures, mines and waters to the use of corporations were introduced in response to local resistance and protests across Turkey, particularly with respect to mines and HEPPs. In this context, ministries have abandoned their role of service providers and become regulators and supervisors, and capitalists working in labor-intensive sectors who wanted to take advantage of these opportunities have made sectoral changes by shifting to the energy field.

According to the General Directorate of State Hydraulic Works (Devlet Su İşleri-DSİ) data, 27700 MW of HEPP is planned to be built to reach a total of 55000 MW power output in Turkey, which has a total of 25 hydrological water basins (DSİ-Yönetim, n.d.). In Turkey, which strives to harmonize energy policies within the framework of European Union membership negotiations and international conventions signed, holistic water resources management is aimed at with respect to water management, but, due to a one-dimensional understanding that relies on engineering-based projects and bureaucratic decisions, differs much from Europe's Water Framework Directive, which aims to develop a sustainable water policy that combines a physical river basin with its social, cultural, political and ecological

dimensions (Öktem, 2016, p.2). According to Öktem (2016), the main reason for this is that political culture in Turkey underestimates the role of civil society in creating a national water policy. Turkey's water policies, geographical preferences, water management powers and HEPP practices, as well as the social movements that emerged as a response to these policies and actions will be discussed in more detail under different headings in the upcoming sections. Since bureaucracy is of the opinion that such investments are made in favor of citizens, water allocation and use in Turkey are usually done without the participation of society. However, since water is the basis for life and environment, regardless of its economic and political uses, it seems essential for any development plan involving water to be devised and implemented considering all dimensions of human needs, namely biological, social, cultural, and ecological.

The next section is about the multifaceted aspects and meanings of water, and evolution of Ecological Anthropology.

3. WATER AND ECOLOGICAL ANTHROPOLOGY

*The waters are smarter than us, they see the evening before us,
Fall into darkness before the air does,
Vanish like a big fish,
While the animals run to the mountain.*

*The waters are smarter than us, they'll be content,
Just with the trees
Not with other people,
who leave us behind.*

*The waters are smarter than us, they don't sleep,
They open up to blue, their big eyes.
And wait in a secret of death,
The place of their own lives*

Fazıl Hüsni Dağlarca

3.1. Water and Life

Water is a matter of ‘do or die’, it is about the essence of life, both materially and symbolically. As the planet's universal solvent, water has the capacity to saturate, dissolve and mingle with other molecules to catalyze basic chemical reactions, making it the most potent agent of change of the earth (Solomon, 2010, p.9). Water's material qualities such as “its composition, its transmutability, reflectivity, fluidity and transparency are inherent, but also responsive to context” (Strang, 2004, p.245). For instance, in order for the living organisms to survive when compared to other biological necessities, it has to go through a systematic control, collection and working process, therefore water also has an economic value. Emphasizing that water is an indispensable part of the circulation of money and capital in capitalist cities or at least in cities where market relations are dominant because the sustainability and daily life practices of cities are based on the supply, circulation and disposal of water, Swyngedouw (2004) recounts the story of water as follows: “Nature's water is captured, pumped, purified, chemically adjusted, piped, bought and sold, regulated, used by households, agriculture and industry, transformed into electricity,

biochemically metabolized by plants, animals and humans, integrated in public displays like fountains, often turned into sewage, eventually returned to ‘nature’” (pp. 1-2). In due process, the traces of spiritual purity that were once applied in painting, music and likes, and the loss of meanings permeated within, left with consisting of only one formula, H₂O formation, whereas “ the water has a nearly unlimited ability to carry metaphors” (Illich, 1985, pp. 24-25). In fact, “[w]ater is a substance that richly engages the senses (touch, sight, hearing, and taste) as mediated through social products and practices that have specific cultural value” (Orlove & Caton, 2010, p. 404).

As a fundamental element of human life water has played an important role in all cultures throughout history, be it in daily thoughts, mythology, literature, religion, philosophy, politics or science. As a metaphor of chaos and life for living things, the binary state of water feeds an infinite life cycle. “The Waters symbolize the entire universe of the virtual; they are the *fons et origo*¹², the reservoir of all the potentialities of existence; they precede every form and sustain every creation” (Eliade, 1961, p. 151, emphasis in the original). Thales of Miletus, who describes nature not with mythological elements, but with nature itself propounds that “[w]ater is the arche¹³, principle, nature, cause or essence of everything”, and claims that annihilation is not possible because every element of the universe is caused by the transformation of water (cited in Toka, 2017, p.49). In all mythological stories, water, chaos and darkness precede life as the fundamental element of creation. According to Womack (2005), “[c]reation myths are symbolic stories describing how the universe and its inhabitants came to be. Creation myths develop through oral traditions and therefore typically have multiple versions” (p. 81). Such myths are most commonly

¹² A Latin term meaning “source and origin” (p.y.a).

¹³ A Greek word meaning “beginning”, “origin” or “source of action” (p.y.a).

seen stories in all human cultures. Most of them have one thing in common; as reflecting the cycle of water, the flow begins with water, which is vital for all living organisms, and ends with water. Examples include Babylon's creation myth *Enûma Eliš*, Mayans creation myth *Popol Vuh* and the Japanese Ainu people's creation myth. In the Altai creation myth, the Earth emanates from water. The myth starts as "[t]he world was a sea; there was no sky, no place, in endless, immense waters was everywhere" (Karakurt, 2011, p. 4). In the Māori myth, "creation starts in the womb, in which the waters fuse. The firstborn wedges himself between mother and father, whom he thereby separates from each other; from the blood the separation draws out of the womb the world is made" (Illich, 1985, p. 25). According to a Sumerian story, Nammu, 'the goddess of the primeval ocean' created a female earth and a male sky (Glasgow, 2009, p.23). Likewise, there is a flood epic in many mythologies, in which humans are punished by God(s), such as the story of Noah's ark in the Bible and the Qur'an, Utnapishtim in the Epic of Gilgamesh or in three flood epics of Ogyges, Deucalion and Dardanus in Greek mythology. All of these myths are about the end of the world as it is, but not life. A new world is usually created with what is left of the old world, thus a new life cycle begins. In this understanding of lifecycles, not just humans, but all forms of life depend on water. "Water remains a chaos until a creative story interprets its seeming equivocation as being the quivering ambiguity of life" (Illich, 1985, p. 25). According to Illich, "all stories of creation from around the world tell about the origin of the same stuff, since the 'stuff' as such is a-historical" (Illich, 1985, p. 4).

Civilizations that have emerged throughout history sought the formula of immortality, and in many traditions from the Gilgamesh Epic to Greek mythology, the main source of this formula was believed to be *the water* (Öztabak, 2017, p.30).

Water is life, and it gives life. Contact with water always represents regeneration; water refers to 'rebirth' in initiation rites, healing in magical rituals, postmortem birth at funerals. In the aquatic symbolism in cosmogony¹⁴, "[e]mergence repeats the cosmogonic act of formal manifestation; while immersion is equivalent to a dissolution of forms. That is why the symbolism of the Waters includes Death as well as Re-Birth. Contact with water always goes with a regeneration, on the one hand because dissolution is followed by a "new birth", and on the other hand because immersion fertilizes and multiplies the potentialities of life. To the aquatic cosmogony correspond-at the anthropological level- the hylogenies, the beliefs according to which mankind is born of the Waters" (Eliade, 1961, p.151)

Illich claims that "water, which has always been perceived as the feminine element of nature, in the nineteenth century" was associated with a "new 'hygienic' image of a woman", created during the Victorian period, and in the late nineteenth century, female nudity as a cultural symbol was tied "to the tap water of the bathroom" (1985, p. 1). This image is seen in the nude paintings of Courbet, Ingres and Degas, especially the ones including 'Oriental' elements such as sofas, fabrics, headscarves, hookahs, hand-held fans. Illich (1985), in his influential book *H₂O and Waters of Forgetfulness* claimed that the "intertwining of urban water and the nude constitutes one of the strands of a taboo woven to protect the symbolism of public water use from analysis" (p.3), and "the twentieth century has transmogrified water into a fluid with which archetypical waters cannot be mixed" (p. 7). Illich (1985) further stated that because "archetypical waters are as antagonistic to this new 'stuff' as they are to oil", he feared "that contact with such liquid monumentality might make the souls of [city's] children impermeable to the water of dreams" (p.7). Linton

¹⁴ A theory regarding the origin of the universe (p.y.a).

(2010) describes this liquid as 'modern water' and assumes that all of the waters are reduced to an abstract quantity, apart from their social and ecological relations (p.163).

Water has a significant impact in the systematic of western culture, playing a part as the symbol of purification and absolution by leaking inside the routines of life (Kula, 2017, p.399). In sketches and paintings of farming culture, solutions for water provision, provision of energy by water, and disease prevention through the use of water are depicted during the Medieval Ages and Renaissance, where the aesthetical perception is also reflected. The art of sculpting also came to life on the fountain squares and palace fountains of Italy, Spain, and France of the seventeenth and eighteenth centuries (Kula, 2017, p.401). It is common knowledge that water is not static, but flows and takes on the shape of the container it is in, be it natural or human-made. Strang (2004) explains water's great potential as follows:

It has an extraordinary ability to metamorphose rapidly into substances with oppositional qualities, that is, the highly visible, concrete solidity of ice, and the fleeting dematerialisation of steam. Each state is endlessly reversible, so that this polymorphic range is always potentially present. In every aspect, water moves between oppositional extremes: it may be a roaring flood, or a still pool, invisible and transparent, or reflective and impenetrable. It may be life-giving, providing warm amniotic support and essential hydration, or it may burn, freeze or drown (p. 49).

Water, once symbolizing purity and eternity ““went underground”, making the link between source and use invisible” (Strang, 2004, p. 40). Although it takes the shape of its container, the most important characteristic of water is the variability of its state and susceptibility to the changes around it. As such, water can quickly transform into substances that contrast each other in terms of material characteristics.

Since its state is ceaselessly reversible, it maintains its multiformity. Water in psychology may represent the source of joy, happiness, and relief, or fear, and hopelessness. In *On Airs, Waters and Places*, which is seen as the foundation of medical science, Hippocrates (2000), emphasizes various effects of waters on the bodies and cultures of people living in different parts of the ancient world, advising different types of water i.e. rain water, lake water, sea water, spring water and so on, for treating various health issues. The ‘healing’ characteristic of water is also presently used as a medical therapy method. The use of water for therapy purposes in various forms is called hydrotherapy and it covers baths where all three states of water is used such as full body baths, or partial body sitting baths, vapor baths, colonic irrigation, and warm or cold water compress baths, and ice baths (Karagülle, 2017, p.285). Beside these, therapies for various diseases also exist, where hot water springs or mineral waters and sea water are used in various methods, such as climatotherapy, thalassotherapy, balneotherapy. Belhi, an Islamic philosopher, who has opinions on mental health similar to modern psychology, claimed that if the soil, water and air of a place has a good quality, then the people living there would be more healthy (Gürsu, 2016, p.276). However, water as a symbol of formlessness is not single-dimensional, the chaotic state of its primal condition “can also be envisioned as swirling fog or as darkness”. Thus, “space, void, the yawning abyss, chaos, or even ‘nothingness’” can be used as suitable metaphors for its vacuity (Glasgow, 2009, p.23). “Metaphors employing water imagery are used interchangeably to describe people’s physical, emotional and mental health, and (with homologous logic) transposed to concepts of ecological balance – or the lack of it. To ‘dry up’ has negative connotations obviously because without water every living

organism would die. (...) People therefore associate dryness or drought with aging and death” (Strang, 2004, p.69).

Water symbolizes life, eternity, abundance, and sacredness in belief systems. Water has various meanings in Sufi thinking. Çatak (2015) reports that Mesnevi referred to Rumi, who used the water metaphor to explain love; according to him water looks for the thirsty, the way the thirsty is looking for water, i.e. “Never, insooth, does the lover seek without being sought by his beloved” (p.39). In the same work Rumi likens the world to pure and calm water, and the reflections on the water surface are the adjectives used when mentioning Allah’s name. Rumi likened the human body to a jug, and human spirit to the water inside the jug; he used the same metaphoric description for another meaning, where the human body is a jar with five faucets [the five senses], and the emotions are the water inside this jar. According to him, the feeling inside humans, keeping its waters clean and maintaining its cleanliness is through shutting down the five senses and taking the way to love. Similarly, he likens reality to water, and the seeker of truth to the human who digs a well to find water (p.46). Rumi also likened sleep to water, and thoughts to bees, according to him a person who suffers from insomnia due to thoughts and worries is similar to a person who’s got many bees flying around the head (p.48). According to Aydın (2017, p.403), water is used in Taoist literature most commonly with the metaphor “life’s pathway”: life advances in relation to the barriers that it meets just as water does. Emphasizing the process where the water travels from the earth to the sky, then, from there, back to the earth Lao-Tzu, the world-renowned Chinese philosopher said: “[w]ater never rests, neither by day nor night. When flowing above, it causes rain and dew. When flowing below, it forms streams and rivers. Water is outstanding in doing good. If a dam is raised against it, it stops. If way is made for it,

it flows along that path. Hence it is said that it does not struggle. And yet it has no equal in destroying that which is strong and hard” (as cited in Conn, 2007, p. 7).

Eliade stated that when worshipping to gods of abundance and agriculture people sank inside the water for rejuvenescence, and performed sacred bathing rituals (1961, p.152). The purgation process also found great acceptance by Christianity, and is transformed into a baptise ceremony, which is one of the prerequisites of becoming Christian (Kutay, 2017, p.82.). Also, as cited in Çatak (2015), Rumi explained the concept of faithfullness, using a metaphor about water, where he likened satan’s effort to undo humans’ faith to the effort spent by a hawk to force the geese out of the pond (p.49). According to him, a human-being has to miss and seek the death, and the water-of-life, just like a thirsty person misses and seeks water. Since one can bathe in the infinite river of life only by entering through the gate of death, he/she has to pour the water in his/her bowl of lifespan into that large river as soon as he/she sees it, and run to that river (p.50). For Rumi, the water that flows is alive, dynamic; it is the source of inspiration, it heals, and guides.

Rumi likens the knowledge obtained through education to a river, knowledge obtained as a gift of god to water source, according to him if the first one is blocked it remains as it is, and it can’t advance, but since the second one itself is a source its flow can’t be blocked (Çatak, 2015, p.51). According to Rumi, who likens understanding and intellect to water, and the human body to a jug with five perforations, in case the body jug breaks, human’s understanding will pour out from the perforations to make him insensitive, thence the dervish who follows the route of god, should keep from pouring the water of the mind and understanding (Çatak, 2015, p.52). The relation founded between water and wisdom is also seen in Kutadgu Bilig: “A wise person is like a wetland, water comes out from wherever they step on” (as

cited in K1yak, 2013, p.26). According to Rumi, longing to reunite with god is like a man sitting on a wall on the bank of a stream who throws the mudbrick fragments he plucks from the wall into the water. Water represents reunion of lovers, wall is the inner-self of the human, and the mud-bricks represent a human who breaks his ego, and matures.

As cited in Çatak (2015), according to Rumi, a false statement is similar to water mixed with the lamp oil inside an oil-lamp. Human's heart is a stream, diabolic and carnal delusions on the other hand are like the hidden thorns at the bottom of the stream, they are invisible when gazed from outside the stream, and become visible after diving in the water (p.55). Rumi propounds that humans should not be deceived by the purity of the water, mud rises to the surface and the water becomes turbid even with the slightest undulation. Human spirit is in fact transparent water just like pure and clean air, but when it is mixed with sin and crime everything becomes invisible, the water has to be rinsed with repentance and tears in order to be able to see again (p.56). On one hand we have the idol, which is the black water inside the jug, on the other hand we have the human soul which is the source of this black water. The grinding stone is symbolic for everything that goes on, on the planet, the water that makes the grinding stone turn is symbolic for the divine understanding (p.57).

As Rumi likened the heart to a jug, he also likens the negative thoughts and actions flowing into the human body through five senses to bitter and salt water. In the comparison where he likened the woman to the fire and the man to the water he stated "When seemingly you are superior to woman, just like water is superior to the fire, in fact, inside, she is superior to you, because you want her" (as cited in Çatak, 2015, p.59). In the Shinto belief system, specific to the Japanese, the fundamental element is water. In any case, in this teaching where harmony with the nature is

fundamental, harmony only happens by “becoming like the water” by letting yourself go into the water current (Aydın, 2017, p.403). In a similar way to Islam, before visiting holy places and before starting to worship the hands and mouth have to be washed with water. Worshiping water as a pagan tradition in Europe disappeared with the rise of Christianity. Such attempts to spiritual worship of water was denounced as an abomination at the Second Council of Arles, held around AD 452. Saxon King Edgar issued a decree to forbid the worship of fountains in AD 960. And in the fifteenth century in an edict announced by King Edgar in 960 AD, and the Hereford Diocese Cathedral Registers passed a decree banning the worship of wells and other water sources (Shiva, 1988, pp.317-318).

Another factor to be considered while analyzing water is the dual structure of water. As Glasgow (2009) asserts “the great advantage of water as a metaphor for primordial chaos is its capacity for overcoming its own shapelessness or for ‘containing’ within itself the seeds of future life or fertility” (p.24). Illich stated that the words “the water in the beginning” in most of African languages is identical with the word used to define twins, and indicated that the waters can only be dual; either deep or shallow, either life-giving or murderous (1985, p. 27)

According to Illich, “the dual nature of water” is best described by its ability to purify as well as to clean. The purification characteristic of water “transforms the innermost being”, this is why it is often associated with re-birth. Water acts as a solvent (it absolves), detaches the leftovers of past activities, and relieves the human of its “burden” (1985, pp. 28-30). Everything dissolves inside the water, each form breaks into pieces, each past becomes history, therefore water has the ability to recompose and regive birth; to sanctify, it cleanses the evil that originate from the presence of the deads, cures insanity, sanctifies sins (Eliade, 1961, p.153). According

to Hindus who believe water and rivers have the power to sanctify, Ganges River that originates from Himalayas is a bridge that connects with god, because it descended from heaven, it is a *tirtha*¹⁵, i.e. crossing from one place to another (Shiva, 2007, p.311). Beside its material cleaning characteristic, water is one of the most important elements of sanctification for the Jews as well, by performing ablution they both clean their bodies and their souls (Taşpınar, 2017, p.59). Similarly, ablution is a must by the Islam as well, especially before performing salaah (Taşpınar, 2017, p.63).

Water can also be a source of disease. Most water-related diseases are contagious and preventable. Although the three-fold increase in irrigation areas since 1950 suggests that food proficiency has been achieved, it can also mean an increase in the risk of infection. Although water is a key element for life, poor water quality due to sewage, industrial and agricultural waste materials can mean increased exposure to nitrogen and other carcinogenic compounds, insecticides such as DDT and heavy metals (Kay, 1999, p.xiii).

In fact, as Linton (2010) posits, "[w]ater is what we make out of it, but it seldom stays that way for long" and is the "least cooperative of things when it comes to being contained in words and in deeds" (p. 4). "[W]ater is a shifting mirror. What it says reflects the fashion of the age; what it seems to reveal and betray hides the stuff that lies beneath" (Illich, 1985, p. 25). Illich says, circulation, "the idea of a material that flows forever back to its own source constitutes a major innovation in the perception of water, a transubstantiation of its 'stuff' (1985, p. 40) and the perception of the city, "as a place that must be constantly washed" appears at the time of Enlightenment (1985, p. 47).

¹⁵ pilgrimage in Hinduism (p.y.a).

“Until the 1930s, in many areas of France and England most infants’ skins were carefully shielded from water and wiped out only with a handkerchief moistened with their mothers’ spittle. (...) “[M]ore than half of the population had never taken a bath at the time they died. (...) In other cultures weekly bathing, steaming, sweating, and scraping of grime from the skin was a must” (Illich, 1985, p. 59). In Europe, the habit of regularly washing with abundant water was only settled in the nineteenth century. In the Roman Empire, it was believed that there were strong therapeutic properties of bath ritual. As part of such ritual they would enter hot rooms and cold rooms sequentially and apply fragrant oils and ointments on their bodies. During the Byzantine period visiting hot springs was a common practice at all levels of society; in addition, sacred springs and fountains were seen as healing places in Byzantine times (Pitarakis, 2017, p.91). However, the importance of baths has decreased due to the technological and economic inadequacies of local authorities in ensuring the continuity of large and complex water systems, and the power and costly maintenance of aqueducts, as well as the increasing impact of Christianity in the understanding that "someone paced with Jesus does not need a second bath" during baptism (Yegül, 2017, p.165). According to Linton (2010), who defines water as a process rather than an object, the ancient Romans went to the public baths not only to wash the city's dirt from their ‘private’ bodies, but also to cement civic bonds (p.5), in fact, cementing a civic bond was far more important than cleaning their bodies.

By 1860s waterworks have been constructed in the US cities, and iron pipes became available, which in turn enabled tap water to reach households. And such “well-flushed” homes “acquired a dominant position among American culture symbols” (Illich, 1985, p.71). In the late ninetieth century, in many U.S. cities sewers for waste were combined with storm sewers for rain. However, when it became clear

that the water circulation network was also a network of infectious germs, and the cesspools near dwellings also polluted rivers, engineers chose to sterilize the water supplies with filter systems and chemicals, especially chlorine (Illich, 1985, p.74). “In the imagination of the twentieth century, water lost both its power to communicate by touch in deep-seated purity and its mystical power to wash off spiritual blemish. It has become an industrial and technical detergent, feared both as a poisonous stuff and as a corrosive for the skin” (Illich, 1985, p. 75). By this way Illich argues, “H₂O and water have become opposites: H₂O is a social creation of modern times, a resource that is scarce and that calls for technical management”, thus “[w]ater can no more be observed; it can only be imagined, by reflecting on an occasional drop or a humble puddle” (1985, p. 76). According to Linton (2010), it is now far more difficult to think of water abstractly:

We can no longer ignore water’s *ecological* dimensions, such as its importance for sustaining healthy terrestrial ecosystems as well as aquatic, ecosystems. Nor can we ignore water’s *cultural* dimensions, as in the myriad ways that water articulates with people to produce different meanings and different kinds of relationships. And we cannot ignore water’s *political* dimensions, as marked by the distribution of economic benefits and affordances associated with particular modes of water governance (p.7, emphases in the original).

It is important to underline a stark reality about water when we consider all these 'romanticized' features that water has gained in the process of interacting with humans since the beginning; water is also a vital right. However, as a result of industrialization and globalization water resources have been commodified and privatized when they should be owned by the public. And this led to denouncing of water as the right to life around the world. As a consequence of intensive efforts of

people and institutions who have organized around the world for more than two decades, especially in developing countries, “United Nations General Assembly adopted an historic resolution recognizing the human right to safe and clean drinking water and sanitation as ‘essential for the full enjoyment of the right to life’” on July 28, 2010 (Barlow, 2013, p.1). The United Nations released the UN Water Strategy 2014-2020 Report in 2014 explaining UN-Water’s goals and objectives, which was established in 2003. In this report UN’s vision has been set as ‘Delivering as One’, and the water has been identified as the core of sustainable development. The strategic directions guiding UN-Water’s work have been set forth as follows:

1. UN-Water will continue to foster greater coordination amongst its Members and Partners as they work together to address the global water challenges in all their facets. This involves a strategic prioritization of the work of the UN-Water Task Forces and Thematic Priority Areas.
2. UN-Water will increase efforts to ensure that water is included in critical global policy debates. These debates cover a wide range of pressing challenges, including the post-2015 development agenda, the global security and international peace and security concerns.
3. UN-Water will continue to seek avenues to improve sustainable water outcomes by its Members and Partners at the country level (2014, p.3).

Also, UNESCO launched The Water Information Network System (WINS) in 2017 as “an open access and free participatory platform for sharing, accessing and visualizing water-related information, as well as for connecting water stakeholders”, which is developed and maintained by Intergovernmental Hydrological Programme (IHP) (IHP-WINS, n.d.). Further to this, given the inequality in the geographical distribution of water resources, it is aimed to ensure that everyone has access to water by 2030 with the Sustainable Development Goal Number 6. In order to raise awareness about this issue, 22 March 2019 was recently declared as the World Water

Day and the theme of 2019 was designated as¹⁶ *'Leave no one behind'*, which was explained as “[t]his is an adaptation of the central promise of the 2030 Agenda for Sustainable Development: as sustainable development progresses, everyone must benefit” (Worldwaterday Factsheet, n.d., p.1). Moreover, water being a human right is defined as “[t]he human right to water entitles everyone, without discrimination, to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use; which includes water for drinking, personal sanitation, washing of clothes, food preparation, and personal and household hygiene” (Worldwaterday Factsheet, n.d., p.2).

The fact that water is a human right makes access to water a matter of justice. In her book *Blue Future: Protecting Water for People and the Planet Forever*, Maude Barlow (2013) proposes four principles for solving the world-scale water crisis and the safety of water: "Water Is a Human Right", "Water Is a Common Heritage", "Water Also Has Rights Too", "Water Can Teach Us How to Live Together" (p.4). Barlow affirms that “Some 3.6 million people, 1.5 million of whom are children, die every year from water-related diseases, including diarrhea, typhoid, cholera, and dysentery. One billion people still defecate in the open, and 2.5 billion live without basic sanitation services. By 2030 more than 5 billion people -nearly 70 percent of the world’s population- may be without adequate sanitation” (p.9). Barlow asserts that people from developing countries will be affected more than the ones living in the First World countries, and the water consumption ratios between those countries differ in great numbers. According to her, a child born in the northern hemisphere consumes thirty-fifty times more water than a child born in the southern

¹⁶ In addition, for water and development management related subjects of UN’s Rio Declaration on Environment and Development (1992) please see Appendix 2.

hemisphere: “Per capita daily water use in North America and Japan is 350 liters, in Europe it is 200 liters, and in sub-Saharan Africa it is 10 to 20 liters” (p.12).

However, as the income inequality deepens in the First World the poor living in those countries are experiencing water cut-offs too. In the US in Detroit and Michigan, people were unable to pay the water bills due to the rising tariffs (Barlow, 2013, p. 12), “mass shutoffs in Detroit, Michigan have resulted in the termination of service for 50,000 households since the start of a campaign in 2014 to shut off water for delinquent residents. In Philadelphia, Pennsylvania an estimated 227,000 customers, or 4 out of 10 water accounts, are past due. Atlanta, Georgia and Seattle, Washington have some of the highest water rates in the country” (Mack and Wrase, 2017, p. 2), thus as a key requirement for sustaining life, affording the water is becoming increasingly difficult. According to Swyngedouw (2004) “at the turn of the new century, water problems are becoming increasingly globalized. In Europe, the area bordering the Mediterranean, notably Spain, southern Italy, and Greece, is arguably the location in which the water crisis has become most acute, both in quantitative and qualitative terms” (p.8).

It is clear that the problems of access to clean water are rooted in poverty and class division, therefore, water as a fundamental requirement for living must be provided for free, just like education and health. Canada, the United States, Australia, New Zealand and the United Kingdom “all favour a market-based economy and have adopted different forms of privatization and commodification of their own water supplies. These countries promote open global trade and investment rights for corporations, a philosophy that has equipped private commercial companies with powerful new tools for asserting their proprietary interests in water and in water services” (Barlow, 2013, p. 22). According to Barlow, given that the UN's decision to

accept water as a human right imposes three separate obligations on states, such as respecting, protecting and implementing this right, it seems important to keep water services in the hands of the public and ensure that they remain in public service (2013, p.35). In order to permanently resolve the water crisis, water must be recognized as the most basic human right and defined as a public good. Therefore, it is essential to create management models that advocate equal access to water physically and economically, have a democratic and participatory understanding of the public interest in water management, and see water as a life source for all living things (Yüce, 2012, p.15).

In this context, according to Hefny (2009), Integrated Water Resources Management (IWRM), emerged in the early 1990s, has led to a paradigm shift all over the world in the management of water resources and the implementation of water and sanitation services and has been widely accepted. Hefny (2009) notes that as an ecosystem-based approach IWRM “takes into consideration the inter-relationships between natural resources systems and socio-economic objectives and attempts to integrate them in sustainable management of water resources. The IWRM approach broadens water resources management to take account of factors outside the water sector such as national development and poverty alleviation objectives” (p. 28).

As Molle et al., (2008) claim, this understanding supports the dominant view of technical eligibility that can be achieved through negotiations between good science, rational and impartial troubleshooting, well-intentioned and well-informed stakeholders. However, although it promises economic efficiency, social equality and environmental sustainability goals, there is no consensus on how to determine the weight of these priorities or how to make the most of them (p.3). At the World Water Forum in 2000, Orlove and Caton (2010) critically addressed IWRM for turning into

a hegemonic discourse in terms of global sustainable development, and stated that the real concern was people from all classes, ethnic and racial groups and all breeds having equal access to safe water (p.404). Baumgartner and Pahl-Wostl (2013) conducted interviews with experts about IWRM and they asserted that “[a]lthough all experts in principle approve of an integrated- management approach, some have also pointed out that “there are a lot of people challenging the whole concept of IWRM” and questioning its practicability. This stems from a general confusion about the plurality of definitions and understandings of the concept” (p.7). Likewise, Linton cites Biswas to support his argument as he opposes to IWRM’s “perception of water as an integral part of the ecosystem, a natural resource, and a social and economic good” (Biswas, as cited in Linton, 2010, p. 217), claims that “[c]onsistent with the constitution of modern water, each of these ways of perceiving discloses water as *one thing*. But by the same token, (modern) water can hardly be all of these things at once” time (Linton, 2010, pp. 217-218, emphasis in the original). Schmidt (2010) asserts that, “though integration may appear a neutral term, there are in fact numerous ethical judgments within IWRM” (p. 9), and these judgements and “about the world’s water and how social relationships should be ordered” (p.8) are an important part of the discussions on IWRM. As the concept of ‘adaptive management’, gaining prominence in North America and in the rest of the world, “adaptive management theorists were very concerned with the top-down, command-and- control style of environmental governance at the time” (Schmidt, 2010, p. 9). Schmidt (2010), goes on arguing that according to this understanding, changing management practices are experimental learning efforts and requires flexibility in changing social and ecological systems. Understanding and increasing flexibility will reduce the chances of

disrupting the ability of ecological systems to adapt to surprise events and problems such as sudden flooding or wildfires.

As it is stated in Linton (2010), the world is “indeed facing a water crisis, and this crisis stems from the fact that we can no longer presume a simple identity for water as well as from the facts of water scarcity and water pollution”, thus “our idea of water needs to be complicated by the fact in every instance, water bears the traces of its social relations, condition and potential” (p.7). Barlow (2013) reiterates that “water is a common heritage of humanity and of future generations as well as our own. Because it is a flow source necessary for life and ecosystem health and because there is no substitute for it, water must be regarded as a public trust and preserved as such for all time, in law and in practice” (p.66), also “[w]ater is not a resource for our pleasure, profit, and convenience but rather the essential element of a living ecosystem from which all life springs” (p. 136). Also, it is crucial to acknowledge the fact that “having manipulated water for irrigation, energy, and burgeoning urban centers, we face the reality that although freshwater is renewable, it is as finite as many other resources. It is now imperative to develop a cogent, grounded approach toward water management to curtail the growing, global water crisis” (Schmidt, 2010, p.3).

As stated above, under these current circumstances a profound water management policy is not only needed but also mandatory and urgent. Water management experts say that there has been a paradigm shift in the management of the water in the past fifty years; the transition from the ‘water development’ period before the 1970s to the ‘water management’ period in the 1970s and 1980s, and the transition from the ‘sustainable water management’ period to the 1990s (Linton, 2010, p. 54). According to Linton, the new water paradigm has diverted “attention from

water supplies to the uses that people make of water” thus, “to the *social* side of water’s hydrosocial nature” (2010, p.54, emphasis in the original). In this sense, the concept of Integrated Water Resources Management (IWRM), which is claimed to be sustainable, is criticized for preventing small-scale grassroots-up projects and supporting the interests of agricultural companies, especially when land and water rights are traditionally owned by the local public, while modern-day water laws promote the elimination of these rights through privatization processes and water concessions provided, and without preventing poverty due to the acquisition of these rights. While Young (2005) suggested that the analyses have no methodological criteria to evaluate the results of the policies applied as part of IWRM, also emphasized that “they abolish the ‘value of use’ and impose a ‘value of change’” (as cited in Spring and Brauch, 2009, p.193). From this perspective, “Anthropology can offer significant insights into social and cultural constructions of water by taking into account the meanings people attribute to the presence of water (or its absence)” (Sahal, 2018, p.49).

As a result, for centuries, “societies have struggled politically, militarily and economically challenges to control the world's water wealth to erect cities around it, to transport goods upon it, to harness its latent energy in various forms, to utilize it as a vital input for agriculture and industry, and to extract political advantage from it” (Solomon, 2010, p.3). In this process, every image, sound, smell, purpose, attributed meaning is bounded by the content, which differs from one person to another, one culture to another, and one religion to another. It is the relationship with water that defines what the essence of water is. Water as indispensable element in the life of living things has been subject to Anthropological studies. Such studies on water should consider relations between water and human beings, economic activities such

as agriculture and fishing, production processes where water is an integral part, hydro-energy production, wastewater and industrial wastes while keeping in mind that water itself has a social life. Wagner claims that if we want to live sustainably within the watersheds we inhabit, “then we need to understand watersheds as socioecological systems, as whole systems, not systems that are sometimes social and sometimes ecological, and not always both at the same time” (Wagner, 2013, p.7). Borrowing Latour’s ‘actor network’s theory’¹⁷, Sahal (2018) argues that “water is an inanimate object like oil, coal gold etc. but considering the generative role water plays in biological and ecological processes it can be regarded as animate” and if Latour’s argument “that social is not something given but rather something we assemble on day-to-day basis” is followed, then “water can be assigned the same agency in social system which can be assigned to human beings, not specifically in terms of intentionality but in terms of the impacts of a given actor within the network” (p.50).

3.2. Ecological Anthropology

Since the early days of the discipline, anthropologists have been interested in how people change, symbolize and adapt to the environment they live in. While they were aware of the environmental context of the society they analyze, environment has been treated as a static background against which human dynamics occur (Moran, 2006, p.16). However, it is possible to talk about a human ecology because humans are part of nature and need a model of relationship to survive and reproduce like other creatures, and even society, which is an expression of characteristics specific to our species such as socialization, language, culture, is an ecosystem because it is associated with other natural ecosystems and connected to them by dynamic

¹⁷ A theory proposed by Bruno Latour that argues, important actors within complex actor networks can be both human or non-human. It resists the modern contrast between nature and culture and takes into account the agency of non-human actors.

boundaries (Kovel, 2005, p.41). The word ecology, a word derived from the Greek word *oikos*, means “household or “place to live” in pre-Socratic thought, referring to the unity of nature and sciences (Emiroğlu & Aydın, 2003, p.150). Given that life began in the water, and more than 90 percent of the world’s biomass is said to inhabit the sea, it is not surprising that humans have experienced significant adaptations to go terrestrial and tended to stick as close to water as possible (Glasgow, 2009, sp.56). It appears that the earliest groups of hunter-gatherers had no choice but stay close to water resources since it was not possible to store or transport reliable sources of freshwater, while transition to agriculture and sedentary life has been a gradual process of diffusion and adaptation.

Environmental determinism has been a dominant school of thought both in Western and Eastern culture, claiming that cultures are entirely shaped by nature, and thus similar physical environments have produced similar cultures, however it has been contradicted since it does not take into account cultural accumulation, and claims that physical conditions are always decisive, places with similar physical conditions will have similar development status and all is predetermined and inevitable (Ari, 2017, p.37). With the development of multilineal evolutionism, which assumes that there are multiple forms of evolution adapted to local conditions, Cultural Ecology or Ecological Anthropology has emerged as a sub-discipline of Anthropology, which focuses on complex relationships between human communities and their environment, where environment is defined not only to include herbal and animal life necessary for human livelihoods, but also natural conditions such as water, climate as well as technology and material instruments (Özbudun et al., 2005, p.148).

Benjamin Orlove (1980) defines ecological anthropology “as the study of the relations among the population dynamics, social organization, and culture of human

populations and the environments in which they live”, and suggests that the development of ecological anthropology can be addressed as a series of stages, where each stage is a reaction to the previous one (p.235). The first stage is represented by Leslie White and Julian Steward, who both argue that similar cultural patterns reflect parallel adaptations to analogous environmental situations. The second stage is called neo-functionalism and neo-evolutionism, where neo-evolutionists were interested in origins such as the origin of agriculture, origin of the state, and the origin of the class society, and neo-functionalists argued that social organization and culture were functional adaptations, allowing populations to exploit their environments successfully. Finally, the third stage is *processual* which developed as a reaction to functional ecology that ignores conscious human choice and employs decision-making processes which explain change based on choices (Applebaum, 1987, p.204-206).

Julian Steward’s ideas suggesting that permanent and causal elements of a culture, which are most closely related to subsistence activities, are called *culture core*, while artistic patterns, individual behaviors, fashions and like are *environmental* (Özbudun et al., 2005, p.150, emphases in the original), made a major contribution to anthropology by turning anthropological inquiry to problems of culture change and Third World development as well as developing two significant concepts: cultural ecology and multilineal evolution (Moore, 2009, p.194). This way of thinking actually contains two ideas within the concept of mutuality; first of all, neither environment nor culture are ‘ascribed’, both are defined from each other’s perspective; and secondly, the environment plays not a restrictive or selective - but an active role in human relations (Hardesty, 1987, p.270).

Even though Steward had a lasting impact on anthropology's approach to environment, Clifford Geertz criticized Steward's approach claiming that "his concept of culture core proved to underestimate the scope, complexity, variability and subtlety of environmental and social systems", but he was the first anthropologist to advocate the usefulness of ecosystem as a unit of analysis in his 1963 book *Agricultural Involution* (Moran, 2006, p.15). Geertz's approach is rooted in cultural ecology, and based on the concept of *system* and the system focuses on a complete network of mutual causality instead of reciprocal causality; and for him ecological system relies on the idea of constant interplay between culture, biology and environment (Hardesty, 1987, p.275).

The re-emergence of the evolutionary approach adopted by Julian Steward and Leslie White, who developed a techno-environmental approach about cultural change, influenced by Marxist thought in mid-twentieth century, has resulted in the development of ecological anthropology and material cultural analysis. Based on this, two types of materialism became popular: Ecological materialist and neo-Marxist approaches (McGee & Warms 2012, p.259). According to McGee and Warms (2011), ecological materialists were interested in interactions between populations and environments, and they assumed that "cultural institutions functioned as feedback mechanisms (like thermostats) to maintain a balance between energy production and expenditure and the productive capacity of the environment" (p.259). Neo-Marxist approach was centered in Europe while neo-evolutionism and neo-functionalism were popular in the US. A group of researchers, including Claude Meillassoux and Maurice Godelier (2011) suggested that Marx's work provided the basic insights for the analysis of traditional society, however they could not be applied directly to ethnographic analysis since his focus was mainly on development of capitalism in

Europe, and thus, they proposed new modes of production and new evolutionary sequences, and strongly criticized the effects of colonialism and international economic exchanges unlike their contemporary colleagues (p.261).

These ecological approaches were successful for explaining hunters and gatherers and primitive food producers; however, they were inadequate in studying other civilizations (Flannery 1972, s.400). Therefore, in the nineteenth- and twentieth-centuries various alternative theories were proposed mainly by the disciplines of anthropology and archaeology. The processual studies that form the third stage, and seek to overcome the split in the second stage of ecological anthropology between fairly short-term scales and long-term scales, are focused on mechanisms by which behavior and external constraints affect each other, and they examine the shifts and changes in individual and group activities (Orlove, 2006, p.206). According to this analysis, adaptive strategies are the consequences of conscious choices of actors pursuing their goals, and culture and ideology are close causes that shape human action (Özbudun et al., 2005, p.158). In the analysis, they use the research methods of cognitive anthropologists, and concentrate on emic views and on the ways human populations perceive and classify their own environments (Applebaum, 1987, p.206). Processual ecological anthropology employs new trends in social sciences, such as democracy, analysis of environmental problems, adaptive strategies, and recent work on Marxism, which are all connected by decision-making models (Orlove, 2006, p.210). The use of decision-making models as mechanisms of changes has resulted in greater emphasis on social organization and culture. According to Orlove (2006), “As ecological anthropology draws closer to biology and history, it becomes enriched and enriches other fields” (p.210).

In 1980s, when actor-based decision-making models used in processual ecology were combined with the political economic approaches used in anthropology, it gave rise to the emergence of a significant research program called political ecology (Little, 1999, p.255). According to Paul Little (1999), political ecology and human ecology can be considered as complementary research programs with diverse emphases under the umbrella of ecological anthropology. He indicates that anthropological political ecology developed a dialogue with geography and political economy, with a strong critical approach for concepts like claims, rights, power and conflicts, while anthropological human ecology developed a strong empirical approach for concepts like energy flows, knowledge systems, subsistence, and adaptation in a dialogue with biological sciences (p.256).

According to Moran (2006), ecology studies in social anthropology and human geography have become popular since the 1970s. However, he indicates that “the use of ecosystems as units of analysis did not radically alter the scope of research: research still focused on small, non-urban communities” (p.17). However, with efforts to measure energy flow and the cycles of matter through human ecosystems, environmental settings of various populations have been demonstrated in more detail. Opposing these efforts, Smith claims that such measures are appropriate for macro-ecosystem description, however they do not provide “insight into human variation in resource use in given localities – a matter of great interest in anthropology” (as cited in Moran 2006, p.18). Moran (2006) also argues that ecological anthropologists who see themselves as human ecologists often think that ecology provides a framework that can be tested within a single theoretical perspective to study both human and non-human social behavior. On the other hand, those who see themselves as cultural ecologists, tend to reject direct implementation

of ecological rules to study human status on the grounds that culture acts as an intermediate power that analytically distinguishes human's adaptation to the environment compared to all other species (p.18).

There are some other classifications in environmental studies made from an anthropological perspective. Paul Little (1999) suggests that environmental research in anthropology falls into two major areas with two distinct methodologies and objects of study: ecological anthropology, which uses ecological methodologies to study the interrelations between human groups and their environment, and anthropology of environmentalism, which uses ethnographic methodologies to study environmentalism as a type of human action (p.254). Kottak (2006) indicates that ecological anthropology of the 1960s focused on system theory and negative feedback, where cultural practices were seen as optimizing adaptation for humans and maintaining ecosystems (p.40). What is new about ecological or environmental anthropology is the emergence of political awareness and policy concerns, due to factors forcing anthropologists to re-think old assumptions along with population increase, and high-tech-mediated transnational flows of people, commerce, organizations and information. The differences between old and new ecological anthropology are mainly about policy and value orientations, practice, analytical unit, scale and method. Kottak (2006) argues that old ecological anthropology studies highlight native people's success in managing their own resources and protecting their ecosystems, while the new ecological or environmental anthropology blends theory and analysis with political consciousness and policy concerns.

Under present circumstances, in a global world of political and economic interdependencies, local ethno-ecologies face challenges, and are being transformed through migration, media, corporations, values, and technologies (Kottak, 2006, p.

40). According to Kottak (2006), changes in ecological anthropology can actually be seen as reflections of more general changes in anthropology since there is a shift from studying a single community or culture to understanding the connections and simultaneous flows of people, technology and knowledge that penetrate everywhere, and acknowledging the impact of differential power and status in the post-modern world (p.42). In this way, the scale becomes larger in new ecological anthropology since the focus is not local ecosystems anymore, and the management of ecosystems now involves many levels.

Instead of considering nature and culture in dualistic terms, the new anthropological theories offer a dynamic, interpenetrative interaction between them where human beings have considerable agency, appropriation, cultural space or 'habitus', ideological and moral construction, imagination, meaning, identity and emotion¹⁸ (Strang, 2004, p.4). The new ecological anthropology focuses on culturally informed solutions to problems such as environmental degradation, environmental racism, and the role of the media, non-governmental organizations (NGOs), and environmental hazards to increase ecological awareness and action. As a cultural anthropologist Conrad Kottak argues that "the new ecological anthropology must be careful not to remove people and people's social and cultural form from the analytical framework" (2006, p.40). According to Descola and Paulson (1996), the attention paid to the relationship between humans and their environment by so many social theorists supports the basic premise that "human history is the continuous product of diverse modes of human-environmental relations" (p.13).

Okongwu & Mencher (2000) indicate that the countries and their people have been tied into the global economy since the sixteenth century, and particularly since

¹⁸ Here, the author refers to specific concepts discussed by many researchers such as Descola & Palsson, Ingold, Bourdeiu, Ingold and Strahern, Bateson and Gibson and Ingold, Geertz, Milton and Strang, respectively.

the 1960s, and therefore, anthropologists, like other social scientists, have become more interested in the impact of globalization on social and environmental policies. However, “anthropologists have tended to write mainly for other anthropologists, not for those who have the power to change the world” (p.109). In reaction to this, Peacock (1997) emphasized the importance of anthropology in shaping public policies by heading projects beyond academy, formulating positive proposals, and reaching out to create a synergy between theory and practice (p.14). Okongwu and Mencher suggest that based on their in-depth knowledge, anthropologists should make clear, short statements available to policymakers, and learn how to use the language of influence effectively (2000, p.120).

Edelman & Haugerud (2005) indicate that in the 1970s, anthropologists were influenced by dependency and world-system theories, peasant studies and feminism, and their research focused on the cultural-political economy, and then there occurred a significant shift in the mid-1980s, and anthropologists began avoiding systemic political economy and analysis of new economic liberalism, preferring to make fragmentary attacks on economic reductionism and cultural essentialism while in the 1990s, there were few anthropologists who objected “neoliberal claims that decisions should be left to free markets rather than governments”, and neither the opposite claim was addressed explicitly, arguing that “decision-making should be left to states rather than markets” (p.18). Yet, anthropological analyses have glorified concepts and institutions such as global flows, fragmentation, indigenous, grassroots organizations and cultural differences, i.e. neoliberalism’s premises. Furthermore, according to Edelman & Haugerud (2005), anthropologists were in a position to investigate how markets and corporations, and states and supranational institutions actually worked, and such an analysis would provide opportunity to show why modern economic

globalization is not natural or inevitable, but rather a result of random historical processes. The authors consider anthropology's preference at the end of the twentieth century for focusing on flows and fragmentation rather than powerful economic actors as a reflection of its traditional focus on small-scale phenomena (p.18).

Neil Smith (2008) complains that geographical dimensions of uneven development have not been adequately addressed, claiming that unequal development is the distinctive feature of the capitalist geography (p.xiii), and that capital transforms the shape of the entire world to such an extent that "No God-given stone is left unturned, no original relation with nature unaltered, no living thing unaffected" (p. xvi). He argues that problems of nature, space and uneven development are connected to each other by capital, and with the development of capitalism "human society has put itself at the center of nature" (p. xvi), so uneven development is a concrete process and model of natural production under capitalist conditions. According to Moran (2010), the human population has increased from several million to 6 billion over a period of 400 generations, or 10,000 years, and the biggest shift has occurred since The Second World War, which is connected to rising living standards as well as rising consumption levels for materials and energy. As human communities do not react to the environment in the same way, societies and cultures show a lot of diversity (p.6). The number of hunter-gatherer communities, which are mostly connected with global economy, is shrinking whereas horticultural communities, using slash-and-burn methods, still constitute significant populations in rural areas of developing countries, and those living in developed countries seek to return to more organic production methods. As Moran emphasizes, human activities such as fossil fuel consumption, changing the atmosphere by increasing carbon dioxide emission rates, more nitrogen fertilizer use in agriculture, depletion of fish stocks by fisher

boats, increasing the vulnerability of hydrological systems and the people that depend on them by irrigation and alterations made to the surface- and ground-water, massive deforestation, and increasing amounts of land devoted to agriculture, have reached to such an extent that can change the viability of processes upon which human and non-human species depend (2010, p.6).

With technological advance and expansion of economic production, there has been an increase in environmental damages, and concerns about the natural environment have gone beyond the scope of nation-states. Thus, “the issue of environmental responsibility, the ethics and politics of nature, refuses to respect any cultural boundaries” (Descola & Pálsson, 1996, p.13). Referring to Marx’s insight in *Grundrisse*, Kovel (2005) highlights that “capital is quantitative in its core, and imposes the regime of quantity upon the world”, and that “it constantly seeks to go beyond the limits that it itself has imposed” (p.66) so that nature is no longer a local issue, and now the green of the village is nothing but the whole earth, and the nature has become a market with spreading consumption. Kovel argues that the feudal state fed the capital created by exploitation of labor when it was emerging, and then took it over through revolution, and centered it around capital accumulation (2005, p.76). In recent years, the rapid increase in private corporations’ ownership of resources, biotechnological innovations and the provision of ecosystem services have been interpreted by advocates as if the ‘greening’ of capitalism will bring solutions to urgent and critical environmental problems with a fusion of goals of economic growth, efficiency and environmental conservation while the opponents reject such developments “as the ‘green-washing’ of appropriation of resources and environmental commons for private profit that would deepen socio-economic inequities” (Bakker, 2010, p.715). Bakker (2010), a geographer seeking answers to

the question “What is nature in the neoliberal world?” emphasizes conceptual multiple meanings of both neoliberalism and ‘natures’, and argues that neoliberal natures should be treated with “an expansive view of socio-nature rather than narrowly defined nature-as-source, an incorporation of non-dualistic understanding of agency and a more systematic account of the variegation of neoliberalism through integrating multiple dimensions of neo-liberalization – affective, libidinal, and cultural, as well as political, ecological and economic” (p.717) Bakker claims that her colleagues are unable to account for the diversity of neo-liberalization, and cannot offer a convincing explanation of “the neo-liberalization of nature as a historically and geographically differentiated, yet global or at least trans-local phenomenon”, and that the claim of diversity of capitalism emphasizes that neo-liberalization processes cannot be adequately explained if common aspects and differences in “actually-existing neo-liberalisms” across different types of resources in different places are not accounted for (2010, p.721).

Based on the exploitation of natural resources and related human activity as well as rapidly increasing human population, the emerging global water crisis will be addressed through the lens of anthropology in the next section.

3.3. Water Crisis Through the Lens of Anthropology

It is evident that rapid growth and the notion of indefinite exploitation of natural resources as a result of neoliberal policies underlie the degradation of ecological balance. Being a natural element essential in all aspects of human life, water has been having its substantial share of such destruction. Although it appears as if water will never cease to exist because of its endless hydrological cycle, it is no longer in the right place or drinkable due to the interference in water resources to promote industrial development; it is alarmingly contaminated with increasing

population; consumption is rapidly increasing; it is mismanaged, and freshwater resources are rapidly depleted due to displacement of water (Barlow, 2016, p.23). Barlow (2016) indicates that due to rapidly advancing desertification, over-extraction of rivers and groundwater, and advance of climate change, millions of people migrate in search of a safe haven, and “the world’s rivers, the largest renewable water resource and a crucible of aquatic biodiversity, are in crisis from pollution and over-extraction” (p.26). Scudder (1999) argues that anthropologists can make significant contributions to water problems by emphasizing that water is not just an economic source for human use, but “a multifaceted resource with ecological functions in maintaining the biological and cultural diversity of habitats” (p.355), and makes a list of some increasingly important areas that anthropologists will be interested in and work on in the twenty-first century, based on a survey conducted with employees from different organizations and institutions, emphasizing that anthropologists have local expertise (p.361). These areas include water scarcity and pollution, decreasing biological diversity, poverty and globalization, and increasing ethnic, national, political and religious fundamentalism. The scarcity and misuse of this important substance that supports our lives poses a serious and growing threat to human health and the environment. The need to increase crop production to close the gap between food production and consumption with a rapidly growing population reveals the importance of irrigation, and incorporation of measures to protect human health and the environment in present irrigation projects, and shows how the water management should be addressed in the context of food and water security, health and environment, and development projects in the context of socioeconomic and health effects (Sawadogo, 1999, p.10).

Orlove & Caton (2010) report that water has become an important theme in anthropology as access to clean water becomes increasingly difficult in many parts of the world, and suggest that for anthropologists water is not only a resource, “but also a substance that connects many realms of social life” (p.401). Therefore, proposing to study water based on Marcel Mauss’s claim of water as a “total social fact”, they call the totality of connections that water may have in any given society as ‘waterworld’, inspired by Hastrup, and point out that anthropologists work on five central themes in these waterworlds; value, equity, governance, politics and knowledge (Orlove & Caton, 2010, p.404). The authors also suggest that anthropologists could productively analyze three specific sites, including ‘watersheds’ (water catchments), ‘water regimes’ and ‘waterscapes’, where boundaries of a watershed define various participants in its management such as natural scientists, government officials, members of local organizations, and ordinary citizens; water regime that is increasingly used in political science and other fields can be used “to examine cooperation and coordination among water users like nations who could seem to autonomous and to have conflicting interests”; and studies of waterscapes can show that “water is not merely an economically valuable resource that flows through spaces, but it is also a culturally and experientially meaningful substance present in places” (p.406-408).

Broadening this approach a little more, Wagner (2013) emphasizes that water circulates constantly through complex hydrological cycles, establishing “connections among all life forms between animate and inanimate worlds” so that it constitutes a wider ecological subgroup of relations, in other words, it is not only a ‘total social fact’ as argued by Mauss, but also a ‘total ecological fact’, “in which the social is separable from the ecological only by semantic convention (p. 2). Stating that

hydrological cycle has transcended the boundaries of scientific discourse, and inundated the popular imagination, Linton (2010) argues that the understanding as if the only possible way for people to involve themselves in this cycle is through ‘altering’ it, leads to an antagonistic kind of relationship (p.106).

Based on this antagonistic form of relationship, Glasgow (2009) argues that civilization tends to define itself with relentless opposition to water and indicates that “The heroic struggle with the primal waters is a first step in a more general process of establishing cosmological, social and political order” (p.22). As I have already discussed in the development section above, irrigation has made considerable contribution to development, economy and the establishment of political power throughout this process so that water and political power have become inseparable (Adams, 1960; Glasgow, 2009; Smith, 2003; Solomon, 2010; Wittfogel, 1957). On the other hand, Clive Ponting argues that the period that caused the least damage to nature was that of hunting and gathering prior to the emergence of agriculture, and since then the human race has been under the constant threat of starvation (as cited in Glasgow, 2009, p. 62). Glasgow (2009) also reminds us that “water has been inherently linked not only to the birth of civilizations, but also to their death and the ensuing dusty oblivion”, providing examples of increased salinity due to inefficient drainage, leading to ruins in the fertile lands of southern Mesopotamia, which culminated in the irreversible collapse of the large Sumerian cities that have depended on these lands, and the rise and fall of a prosperous Sabea civilization of the first millennium BC living within the modern borders of Yemen with a high degree of hydraulic know-how and complex water management due to the collapse of the great Marib Dam in the sixth century (p. 66).

Among the many problems that anthropogenic interventions in the hydrological cycle cause is water scarcity. Water scarcity has been considered as a social artifact resulting from changes in demand and the use of water due to industrialization, commercialization and technological changes (Linton, 2010, p.71). According to Linton (2010), increased demand in water due to Western-style industrial development and economic growth, ecological and social impacts of large dams and hydraulic structures, surface and groundwater pollution, and transfer of previously successfully managed common water resources to meet the demands of industrial capitalism, and structural adjustment requirements demanding privatization and commercialization of water services in the case of many developing countries, are among the social factors associated with water scarcity (p.72). Similarly, Indian activist Vandana Shiva (2016) emphasizes that scarcity is inevitable when control of water is taken away from local people and technologies interfering with hydrological cycle is used for the sake of development, and now more villages are exposed to scarcity in India despite huge investments in water projects (p.84). According to her, there are two conflicting paradigms expounding the water crisis: the market paradigm and the ecological paradigm. The market paradigm explains the crisis as a result of absence of water trade, which would allow movement and distribution of water freely, and higher prices will ensure water protection. However, Shiva notes that this paradigm “is blind to the ecological limits set by the water cycle and the economic limits set by poverty”. According to Shiva, what we are facing is an ecological crisis that has been associated with commercial causes. Thus, it requires not a market driven- but rather an ecological solution (Shiva, 2016, p.89).

During the period from the Industrial Revolution to today, it is evident that the increasing impact of humans on nature has led to changes in geological processes.

Inspired by the Italian geologist Stoppani, who was referring to the “Antropozoic era” in 1873, the idea of *Anthropocene*¹⁹ is an exact match to this impact (Crutzen, 2006, p.13). Scientists attribute climate change and the decline in biodiversity to the impact of human populations which is continually increasing (Schmidt, p.8). Paul Crutzen (1990) attributes the beginning of this impact to the rise of carbon dioxide levels in the late eighteenth century (p. xx). It has been observed that the war of sovereignty over oil and natural energy resources has now concentrated on water supplies. Although almost two-thirds of our planet is covered with water, the geopolitical consequences of long-lasting water scarcity have been debated; some argue that the resource crisis triggers technological and diplomatic inventions, but not war (Amery, 2002, p.1), while others believe that shortage of critical resources such as water and oil will hinder economic development and if it persists over a long time, scarcity will lead to social problems and war in resource-dependent countries (Gleick, 2000, p. 83). Water stress and global climate change, perceived as a security problem in the Anthropocene era, is a situation that affects not only developing countries, but also developed Northern countries by winter storms, hurricanes, flooding, drought, heat waves and forest fires. The security problems of climate change, water and desertification necessitate “a fundamental shift in the understanding of the threat posed by global environmental change to both national and especially human security”, implying “a search for soft security policies, strategies, and measures beyond the armed forces and their operational logic and toolkit” and comprehension of the fact that it is associated with us, our lifestyle, consumption behaviors, use of fossil fuels since the Industrial Revolution, and our energy (Brauch, 2009, p. 989). In the next section, I will address the social, economic and environmental impacts of

¹⁹ Derives from the words *anthropo*- (human) and *-cene* (new) in ancient Greek.

dams and hydroelectric powers as well as their positive and/or negative consequences in the ecosystems and livelihoods of local people.



4. PILLARS OF DEVELOPMENT: DAMS & HYDROELECTRIC POWER PLANTS

4.1. Social, Economic and Environmental Impacts of Dams and Hydroelectric Power Plants

Throughout history, dams, reservoirs and irrigation systems have been designed and built for the purpose of supplying water to agricultural lands, flood control, transportation, entertainment and industrial use, and as we have already seen in the development section, these systems have transformed water into energy as an important part of development projects in the modern age. In fact, the twentieth century has been described as an era of ‘hydraulic mission’ by engineering approaches, dominating nature and establishing 50,000 dams and 280 million hectares of irrigated land (Molle et al., 2008, p.1). Compared to other alternatives, water is preferred because it produces relatively clean energy, and it is cheap to invest in and operate. Thus, water resources have become “an ideal means of economic development for most countries in the world, particularly during the early period of the twentieth century when many dams and irrigation schemes were built” (Sornmani & Okanurak, 1999, p. 229). These projects have advantages as well as disadvantages; Sornmani & Okanurak (1999) assert that urban dwellers enjoy the availability of electricity, industries increase their productivity and create more jobs, farmers cultivate double- or more amounts of crops, increasing the agricultural production; yet, they have also been associated with socioeconomic-, cultural-, psychological- and ecological-, even, health problems for those living near these projects. In addition, all over the world these projects have caused local people to be displaced from their homelands and forced to move elsewhere.

The impact of energy from water resources on human life can be small or large, depending on the project type, the degree of the environmental changes it causes, and human behaviors and their interaction with the environment. Multi-purpose projects, which are regarded as monuments of development and modernity, usually have greater impacts since they are large-scale projects. Since running waters are ecologically and geomorphologically dynamic systems, changes in geology and climate clearly alter biological functions of rivers through their effects on valley vegetation as well as slopes, hydrologic flow paths and channel characteristics (Allan & Castillo, 2007, p.356). According to Allan and Castillo (2007), most of the largest rivers systems have been affected by dams built around the world, and free-flowing sections of these rivers are very small regardless of their size. While the effects on rivers include changes in flow, sediment load, temperature and water quality as well as loss of upstream-downstream and lateral connectivity, small streams are widened and straightened for water conveyance, and larger rivers are modified for navigation, flood control and utilization of floodplain land (p.356). As emphasized by the authors, such interventions result in significant degradation and loss of habitat; invasive species pose a risk by dominating biomass and space, leading to a decline in local species, and changes in trophic structure and ecosystem processes.

On the other hand, declines in water quality are associated with contaminants that reach surface waters at specific locations, such as industrial and municipal wastes or wastes from other sources. Overfishing in inland waters is another concern, not only because of the threat it poses on extreme predators and influential species, but also raises concerns for millions of fishermen who provide their income and food from these sources. Climate change is also expected to have significant consequences on aquatic ecosystems due to changes in temperatures and flow regimes as well as

more subtle effects on riparian vegetation, disturbance intensity and frequency, water chemistry and species interactions (Alan & Castillo, 2007, p.357). “Flow regimes are the key driving variable for downstream aquatic ecosystems, and flood timing, duration and frequency are all critical for the survival of communities of plants and animals living downstream” (WCD Report, 2000, p.78). Any disruption in this regime will alter the riverine environment.

All of these global impacts led to the establishment of the World Commission on Dams (WCD) in 1998. WCD was initiated by the World Bank and the International Union for Conservation of Nature (IUCN) as a multi-stakeholder body in response to oppositions to large dam projects all over the world²⁰. Members of the commission consisted of representatives from governments, nongovernmental organizations (NGOs), dam operators, grassroots people’s movements, corporations, academics, industry associations and consultants. After examining in-depth case studies of eight large dams on five continents, 17 thematic reviews on social, environmental, economic and financial issues, brief reviews of 125 large dams in 56 countries, four public hearings, and 950 submissions by interested parties, the Commission released a report called *Dams and Development: A New Framework for Decision-Making* in November 2000 (WCD Report, 2000, p.2). According to this report, ample evidence revealed that large dams have failed to provide predicted amount of electricity, water or flood control, and also regularly suffered major cost overruns and time delays. The major findings of the report included that these dams forced 40 to 80 million people from their homes and lands, leading to extreme economic hardship, community disintegration, and increased mental and physical

²⁰ All information on WCD has been obtained from <https://www.internationalrivers.org/campaigns/the-world-commission-on-dams>.

health problems; caused great environmental damage, such as extinction of many fish and other aquatic species, huge losses of forests, wetlands and farmland; and the benefits of large dams have largely gone to the rich while the poor have borne the costs.

Thayer Scudder (1973) argued that although river basin development and hydroelectric power projects are usually based on economic arguments, they have important political and psychological attributes (p.46). Particularly focusing on resettlement, Scudder suggested that resettlements and incorporation to a new ecological setting provide anthropologists a 'laboratory' type of situation to study the extent of responses by river basin populations to compulsory resettlements, where dam construction accelerates changes in certain areas of human behavior, and after providing several examples, he concludes that "it is a traumatic experience which precipitates stress and leads to a crisis of cultural identity" (p.50). His observations showed that in the resettlement areas very few villagers used relocation as a chance, which prompted him to suggest that developers and social engineers should use compulsory resettlement as a development strategy only after a comprehensive examination of alternatives has been completed.

The WCD report indicates that large dams have negative effects on poor, vulnerable groups such as women with a disproportionate share of social costs, next generations, indigenous and tribal communities and ethnic minorities living near reservoirs, and on cultural heritage through loss of cultural resources of local communities, submergence and degradation of plant and animal remains, burial sites and archaeological monuments (2000, p.130). Upon analysis of these adverse effects, it has been agreed by the Commission that several complex issues regarding water, dams and development can only be resolved in an open and transparent manner

through decision-making processes based on negotiated results, including all legitimate actors involved (WCD Report, 2000, p. 211).

In a study published in an exclusive edition of the *Water Alternatives* journal to revisit the same issues 10 years after the WCD Report, Moore et al. (2010) indicate that displaced populations “have frequently been resettled with minimal or no compensation, often in marginal lands, and in majority of cases they have become and remained poorer” (p.4). After reviewing a set of papers, they reported six critical and relevant themes. The first theme was about diverse perceptions, and despite WCD’s efforts to reach a consensus on the impact of dams on development, they found that the fundamental disagreements over the costs and benefits of large dams and who benefit and who undertake the cost burden were still controversial. The second theme was about the changing drivers since the water and energy demands continue to rise and drive dam development and climate change was a greater driver of hydropower expansion, and new financiers like Brazil, China and Turkey were changing the loci and framework for decision-making processes since they self-finance dams from their own resources. The third theme indicated that negative consequences of dams on the environment and livelihoods of dam-affected communities remain critical issues; while the fourth theme was about the continuation of the quest for new decision-making tools and approaches. The fifth theme showed that participation and accountability still needed to be addressed, emphasizing the WCD’s key policy principle of free, prior and informed consent of affected indigenous communities. The final theme was about negotiation, emphasizing that multi-stakeholder platforms continue to promise for informing and shaping negotiated agreements in order to have better sharing of the resources, benefits and costs associated with dams. The authors concluded that dialogues at local, national, and international levels are necessary, and

highlighted that millions of people continue to be negatively affected by existing dams, and more will be affected by new projects while the loss at aquatic systems and biodiversity is at an alarming rate (Moore et al., 2010, p.9).

The WCD Report in 2000 was followed by The Dams and Development Project (DDP), which was hosted by the United Nations Environment Programme (UNEP) to help translate and disseminate the Report and continue the dialogue at different levels (Moore et al., 2010, p.7). As stated in the foreword section of the project, the aim was to call attention to examples of good practice and sustainability with an approach focusing on a positive way forward, rather than shortcomings and failures since they believed that a ‘narrower perspective’ with an emphasis only on negative social and environmental impacts, “leads to polarizing the debate on whether dams should be built or not” (UNEP 2007, p. xi, emphasis in the original). The project reports that although “sustainability of dams involves consideration of engineering, environmental, social, economic and financial aspects of each option, within an informed and participatory decision-making process, and within the project itself once a decision about building the dam has been made”, environmental social and decision-making aspects are not addressed as much as their engineering and financial aspects (2007, p.13).

Further, the United States, which built massive dams and HEPPs at the turn of the century, has begun dismantling the dams that have completed their life one by one due to aging infrastructure, decline in fish reserves, and recognition of more economic benefits when rivers flow freely. A total of 241 dams were demolished between 2006 and 2010 in the US, which has about 80,000 dams (Yavuz, May 2014). 86 dams were torn down in 2017, beating the previous high number of 78 dams in 2014 (Thomas-Blate, February 2018) whereas in China, the new actor in construction of

hydroelectric power plants, annually 4.4 large reservoirs were constructed between 1970 and 1990, and this average reached to 11.8 in the 2000s. Various Chinese environmentalists and non-governmental organizations have begun to protest against these dams due to their adverse impact on rivers and riparian communities (Miao et al., 2015, p.2349). The authors claim that these protests have been influenced by the anti-dam movement in the United States in the 1960s and indicated that China is at a crossroads on its policy about dams. According to the authors, dam construction is necessary despite all negativities of the current development process, but sustainable dams should be built by taking lessons from past mistakes, ensuring society's participation in decision-making process, and taking into account ecological effects, displaced communities and people's well-being (Miao et al., 2015, p.2356).

Fortunately, Allan and Castillo (2007) affirm that despite serious threats by dams, rivers have great restorative powers, and the practice of river restoration is growing rapidly (p.357). Technological reassessments for development of river basins suggest that large dams should be reevaluated. Due to increasing massive and political protests and campaigns against large dams, several proposals have been made such as reducing the height of dams, lifting irrigation and directing water from rivers, and construction of small-scale, community-run dams (Newson, 1997, p.202).

While disputes about positive and negative impacts of dams and reservoirs continue, the privatization of water resources globally impose another threat to public access to water and public management of water resources as discussed in the next section.

4.3. Privatization of Water

Water has been managed as a common property by many different cultures throughout human history. According to a 2009 report by TMMOB (Union of

Chambers of Turkish Engineers and Architects-UCTEA), water resources, which are considered to be publicly owned, are governed by a public or community organization across the world; the proportion of public-managed water resources is around 99% in Asian countries, 97% in African countries, 96% in Central and Eastern European countries, 95% in North America and 80% in Western European countries (TMMOB, 2009, p.16).

With privatization of water resources and water management systems, water control is taken away from local communities that so far have succeeded to manage and distribute it and delivered to the hands of a small group of people. During the past two decades, almost 5% of the water used by world population has been privatized and given to a few giant water companies including Suez, Vivendi, Bechtel, Thames and RWE (Shiva, 2010; Bakker 2010b; Swyngedouw, 2004). The total income of these companies, which hold only 5 percent of the world's water, has reached almost half of the current oil revenues, and it shows how huge the profit potential is as the water crisis increases and that these companies tend to see water resources as an economic resource, not as a social asset (TMMOB, 2009, p.12). The performance of these companies in Europe and in developing countries has been clearly shown, and they are "aided by the World Bank and the IMF, which are increasingly forcing Third World countries to abandon their public water delivery systems and contract with the water giants in order to be eligible for debt relief." It has been well documented that they make very high profits, sell water at a high price, cut off the water of subscribers who cannot pay their bills, do not have transparency in their dealings, reduce the quality of water and create an environment of bribery and corruption (Barlow & Clarke, 2002, p.12). Furthermore, the bottled-water industry is one of the fastest growing, and least regulated industries in the world, with an expanding rate of 20

percent per annum. Bottled water companies like Nestlé, Coca-Cola and Pepsi pursue new water sources to feed their ‘insatiable appetite’, and as quoted by Barlow and Clarke, the World Bank claims that “One way or another, water will soon be moved around the world as oil is now” (2002, p.13).

Shiva (2010) asserts that cultures and communities around the world resist the destruction of biological and cultural diversity, their lives and livelihoods, instead of experiencing the world as a global supermarket where goods and services are produced at high ecological, social and economic costs and sold at very low prices, and movements are defending the planet as a commons in contrast to those viewing it as a private property (p. 13). Globalization transforms all assets and resources into a commodity while the common and public resources of the poor are taken away from them through indirect dispossession. Privatization of water and transformation of water into a profit tool is carried out in different ways, including the construction of hydroelectric power plants, in such a way that water resources and the public services for their management are privatized in all aspects (Yüce, 2012, p.12). Yüce (2012) adds that for years, public resources and services in Turkey have been transferred to private companies through hundreds of loan agreements provided by financial institutions such as the World Bank and IMF. Similar privatization programs, especially guided by the World Bank, are heavily implemented in countries such as Argentina, Chile, Brazil, Mexico, Malaysia, Nigeria and India (Shiva, 2016, p.235). Along with this transfer, the entity of the supplier changes from public service to the private sector while the buyer is no longer a subscriber or citizen, but a consumer or customer (Aslan, 2016, p.128).

According to Swyngedouw (2004), the commodification of H₂O has led to dramatic shifts in its social and political meaning and cultural valuation, incorporating

the circulation of water directly into the sphere of money circulation (p.50). He argues that, in this way, first, water is turned into profits and capital accumulation by private or semi-private institutions; second, non-economic uses and functions of water will have to be regulated by governmental institutions that often face serious opposition, contradiction or other problems in the face of powerful private agencies; third, this shift also brings an inevitable change in the geometry of social power, and voice of private actors and companies is higher in strategic water-related decisions than that of other non-governmental organizations or of the state; fourth, water is forced to circulate during standard discount periods of corporate strategists and economic cycles rather than flowing in its natural cycle as part of a larger environmental system; fifth, the privatized nature of the most important parts of the water cycle will reduce the transparency of decision-making processes, and restrict access of other social groups to information and data on which they can base their views, decisions and options; and finally, water production and distribution becomes incorporated into an increasingly global economy where the contours of urban water is shaped by financial capital markets and investment decisions (Swyngedouw, 2004, p.41).

In her book *Privatizing Water*, Karen Bakker (2010b) examines the activities of private water companies in developing countries in Latin America, Southern Asia and South Africa. According to Bakker (2010b), pro-privatization arguments assert that private companies would perform better, be more efficient, provide more funds, and mobilize higher-quality expertise than public administrations, usually summing up their arguments by the label of “government failure”. From this point of view, the supporters believe that “it is unethical not to involve private companies” since they can perform better at providing water, particularly to the poor (Bakker, 2010b, p.2). On the other hand, opponents of privatization argue that state-managed systems are

more effective, equitable and responsive when they are properly supported and resourced, have access to cheaper forms of financing, and can perform just as well as private companies. They also argue that it is unethical to profit from water, which is essential for life and human dignity (Bakker, 2010b, p.2). Bakker further indicates that these discussions cannot be kept separate from debates over public services and claims that water privatization has faced a stronger protest since “water fulfills multiple functions, and is imbued with many meanings” (Bakker, 2010b, p.3).

On the global scale, the significant role played by five large companies in water privatization including Suez, Vivendi, Bechtel, Thames and RWE and their perspective has been well documented in the water struggle experienced in 1999-2000 in Cochabamba, the third largest city in Bolivia where Bechtel wanted to privatize the city’s municipal water supply and increases in water rates led to massive protests and strikes, and the government tried to silence protests by using force. During the protests, activists were arrested, a 17-year-old was shot and killed by the police, and the media were censored, however after days of confrontations, the company was expelled (Dwinell & Olivera, 2014, p.147). This struggle has also been the subject of a movie called *Tambien La Lluvia*²¹ in 2010. Shiva (2005) emphasizes that “under Bechtel’s interpretation the water concession meant every drop of water in the region was their property, and a rural woman using a pail to draw water from her own well was a thief” (p. 43). In her book *Water Wars*, where she tells the story of how local communities are deprived of their water rights, Shiva (2007) draws attention to a clash between two cultures in India by comparing Aquafina, the bottled water of Pepsi, served on the train from Delhi to Jaipur, with the water given from earthen water pots to the thirsty in small huts called *Jal Mandirs*: “a culture that sees water as

²¹ ‘Even the Rain’ in English, directed by Icíar Bollain.

sacred and treats its provision as a duty for the preservation of life and another that sees water as a commodity, and its ownership and trade as fundamental corporate rights” (p.12). Based on this, Shiva also emphasizes that the culture of commodification is at war with diverse cultures of sharing, receiving and giving water as a free gift.

In the meantime, as a result of water crisis due to diminishing water resources, injustice in access to water, and transfer of water control to private companies, thousands of local struggles gave rise to a highly organized water justice movement, and forced global institutions such as the World Bank and the United Nations to admit the fiasco of their model (Barlow, 2007, p.311). Maude Barlow, the founder of the Blue Planet Project²², gave a speech during the Fourth World Water Forum that was held in Mexico City in March 2006, stating that we are going through an era in which humanity and the common heritage of the earth is under a systemic attack, and that everything is for sale in the model called globalization, and that the struggle to protect humanity from attacks on its common heritage is one of the biggest ideological and social struggles of today. Based on this, she suggested three fundamental components for a global covenant on water: water justice, water conservation and water democracy (2007, p.343).

water justice – water is a basic human right that must be distributed equally as a public service, and can never be confiscated for profit purposes; *water preservation* – water should be protected and renewed instead of being wasted, polluted or consumed, and humanity must respect the sanctity of water in natural life again; and *water democracy* –not only

²² It is part of a global movement that promotes the fundamental truth that the right to water and sanitation is a human right.

private corporations, expensive technologies or governments, but local communities should also participate in decisions on water management since they are the best protector of water resources.

(Barlow, 2007, p.343-359, emphases in the original)

Proposals to fight water scarcity include reclamation of looted water systems, drip irrigation over flood irrigation, infrastructure repairs, water conservation, radical changes in production methods and watershed management (Barlow & Clarke, 2002, p.13). Emphasizing that the commodification of water is ethically and socially wrong, Barlow and Clark (2002) argue that in privatization, “management of water resources is based on principles of scarcity and profit maximization rather than long-term sustainability”, and corporations are dependent on increased consumption to generate profits, and need to invest in the use of chemical technology, desalination, marketing, and water trading rather than in conservation (p.14). Instead of discussing water crisis as a ‘state failure’ or ‘market failure’, Bakker suggests that it should be dealt with another concept, ‘governance failure’ (2010b, p.9), where “governance may be defined as a process of decision-making that is structured by institutions (laws, rules, norms, and customs) and shaped by ideological preferences”, and governance failure occurs when there is a mismatch in decision-making between citizenship and associated political rights, on one hand, and institutional and cultural practices on the other (2010b, p.45).

While several declarations from international meetings and organizations converge on a consensus about sustainable water resources management and use, two of the most remarkable recognitions are that “the water is a finite and vulnerable resource that must be used efficiently, equitably and in a sound manner for present and future generations”, and “the most effective water policies involve the users of water as explicit participants in water management, planning and decision-making”

(Lundquist & Gleick, 1997, p.1). Experience has repeatedly shown that decisions made without the involvement of affected local communities are more likely to fail. A study carried out in Dorset, UK, found that recent privatization of the industry combined with centralization, dissemination and alienation has severely damaged the ties between most people and water resources (Strang, 2004, p.247). Strang (2004) notes that it is not surprising to see the anxiety and anger the privatization process creates in the inhabitants of Dorset since they think that the most vital substance of 'their own' is at the hands of an untrustworthy 'other'. With privatization the meanings of water set the local people at odds with those who have taken the control of it, and created a contentious and unstable oppositional position, which can be obscured by political discourses and public relations, but are unlikely to be resolved (Strang, 2004, p.248). On the other hand, in South Africa, where access to water is a political issue, 600.000 white farmers use country's water resources for irrigation, while 15 million blacks have no direct access to water (Barlow & Clarke, 2002, p.14). Due to this injustice called 'water apartheid' by the authors, the towns around cities like Johannesburg and Durban became centers of resistance to water privatization and a water cut-off for more than 10 million residents due to a World Bank- inspired cost recovery program implemented by the government. Similar to the struggle in Cochabamba, Bolivia, the fight against private water projects in La Paz, Bolivia, Buenos Aires, Santa Fe in Argentina, and in Uruguay were successful; water services were retaken from private operators in Mali and Dar es Salaam and Tanzania in Africa; and the activists in Asia made the water privatization process invalidated in Jakarta, Indonesia and Malaysia; cities in Ukraine, Georgia, Kazakhstan and Uzbekistan followed suit; and one of the European countries where privatization was cancelled was France, the home of water privatization (Barlow, 2013, p.221). More

than forty municipalities, including Paris, Toulouse and Nice succeeded to take water service operations under control, and Paris saved 35 million Euros in the first year as a public service provider, and reduced water prices to consumers by 8 percent.

Climate change, drought, melting glaciers and rising sea levels as well as declining freshwater resources and future disputes over water have long been on the agenda of international organizations such as the United Nations. The UN regards water at the core of sustainable development, and while there is no single UN entity dedicated exclusively to water issues, UN-Water was established in 2003 to coordinate over 30 UN organizations to carry out water and sanitation programs so that they can deliver one response to water-related challenges. Emphasizing that culture is learned, experienced and expressed in social relations, UN-Water holds that culture represents a significant dimension in terms of factors that shape both disagreements and consensus in understanding, valuing, using and managing water (Johnston, 2012, p. xi). However, since the UN has no direct control on governmental bodies, and thus lacks formal decision-making power, it acts only as a coordination mechanism in the global water governance (Baumgartner & Pahl-Wostl, 2013, p.3).

The World Water Council, which has been founded in France, representing more than 300 organizations in more than 50 countries, as part of global water management efforts in parallel to multi-stakeholder platforms such as UN-Water, Global Water Partnership, International Union for Conservation of Nature IUCN, established an initiative called the World Water Forum (WWF) in 1997. The stated goal of the forum is to bring solutions to world's water problems from a global perspective, and thus gather all official and unofficial platforms related to water. The World Water Forum has refused to recognize the right to water in its ministerial declaration (Barlow, 2013, p.46). The most recent forum, the 8th World Water Forum,

was organized in the city of Brasilia, Brasil between March 18 and 23, 2019 under the theme “Sharing Water” with approximately 10.600 participants from 172 countries.

The next one will be held in Dakar, Senegal during the third week of March 2021 under the theme “Water Security for Peace and Development” (WWC Strategy 2019-2022, 2018, p.9). The fifth of these forums was organized in İstanbul, Turkey between March 16-22, 2009. In this forum, climate change was the central topic, and during the discussions under Theme II: Advancing Human Development and the Millennium Development Goals/Element 2: Water for Energy-Energy for Water, sustainability and integrated water resources management were emphasized, and it was concluded that the use of water resources areas should be made on basin-basis, diverse sectors and areas such as irrigation, drinking water, hydropower, energy and ecosystem should be taken into account (Ministerial Roundtables, 2009, p.19). In the meantime, UNESCO-IHP withdrew from its official role as the coordinator of the sessions one week before the forum in İstanbul since the co-coordinators of the Water and Culture topic found the usage of the term water and cultural diversity inappropriate, and instead, preferred to use “diverse water cultures” (Hiwasaki, 2012, p.527). In the meantime, protesting the 5th World Water Forum, many NGOs in Turkey also issued a joint declaration, titled *No to Commercialization of Water Platform* [Suyun Ticarileşmesine Hayır Platformu] stating that:

Our opposition is not limited to the World Water Council or the World Water Forum. We are announcing to the world that we define the United Nations not part of a solution, but a problem as it was the first international organization that defined water as a commodity and has sponsored the World Water Council since the beginning. We, unions, professional societies, revolutionary groups, political parties in favor of labor, environmental and

cultural associations from Turkey, believe that it is not possible for individual nations gathered under the roof of the United Nations to act in a 'democratic' way. (İlhan, 2011, p.185, emphasis in the original).

Many NGOs defending water resources believe that the World Water Forum only helps facilitate the privatization of water services and the legitimization of these privatizations as it has become a major vehicle for the corporate takeover of the world's water (Barlow, 2007, p.122). Furthermore, organizations such as UN-Water, which serve as a unifying network in global water management, claim that they act on the principle of transparency, but their works and decision-making procedures are not publicly accessible (Baumgartner & Pahl-Wostl, 2013, p.3).

The shift from public to private model of water services, which has begun in the Western world in the 1990s when public water was started to be seen as a commercial and economic commodity, has been reflected in Anatolia since 2010. In fact, this shift can be traced back to the rise of a neo-liberal market-based ideology first manifested in England during Margaret Thatcher, followed by Ronald Reagan in the US (Barlow, 2007, p.94). Turkey, as in many other developing or underdeveloped countries, is undergoing an intense process of commodification and privatization of its water resources. While water becomes subject to private property and/or converted into a profitable commodity, the public aspect of water has been legally annulled by the deactivation of national and local institutions legally responsible for drinking, use and irrigation water such as the General Directorate of State Water Affairs (DSİ), the General Directorate of Village Services (KHGM)²³, General Directorate of Electric Power Resources Survey and Development Administration (EİE)²⁴ and Bank of

²³ KHGM was closed down on January 27, 2005.

²⁴ It was handed over to the General Directorate of Renewable Energy in 2011.

Provinces²⁵. It appears that Turkey, having initiated one of the biggest, most expensive dam-building projects in the world, and planning to sell off rivers and lakes, is a nominee for the biggest privatizer of water in the world (Barlow, 2013, s.258). Bakker highlights that the ‘global opportunity’ offered to water companies will be largely found in managing, rebuilding, extending, and supplying urban water supply networks in cities while small-scale and low-intensity rural areas attracted little interest from private companies (2010b, p.4).

In this context, the streams rented to private companies usually for 49 years for the construction and operation of HEPPs in Turkey differ from other privatizations across the world, with a focus on privatization of water resources directly rather than through water networks. Eight HEPPs have received licenses since 2005 even in Maçahel, a biosphere reserve and important ecotourism center, whose name should not even be mentioned in HEPP projects (Ulaş, 2010, p.153). Harris and İşlar suggested that privatization of Turkey’s rivers goes beyond a circumscribed understanding of neoliberal environmental governance, and thus it should be addressed in the context of “Turkey’s imperative to ‘develop’ (and the energy requirements this entails), or the need to maintain a geopolitical position that is stable and favourable to Europe and the ‘West’” (2013, p.70). In the next section, I will provide a brief summary of the laws related with water in Turkey before moving on to extensive HEPP projects.

²⁵ It has been transformed into an incorporated company in 2011.

5. POLITICS OF WATER AND HEPPS IN TURKEY

5.1. Water Policies and Regulations in Turkey

According to Perçin, who has been writing on water law in Turkey for many years, this under-researched field exhibits a fragmented and disorderly structure, despite many efforts to bring order to its regulations (2014, p.ix). The 1921 and 1924 Constitutions do not contain any clauses pertaining to the use and ownership of water resources (2014, p.88). In the 1961 Constitution, it is noted that natural resources and treasures are under the authority and ownership of the government, and that the sole right to search for and operate any natural resources belongs to the government, and finally, that any private corporations requesting access to these resources must obtain a legal permit. Although the 1982 Constitution contains similar water law decrees to the previous Constitution, a short clause was added, stating that the right to search for and operate natural resources is transferrable to natural and legal persons. However, the added clause also notes that any such transfer would be subject to government supervision (2014, p.89).

In Perçin's (2014) words once again, in accordance with the Article 715 of Turkish Civil Code Law No. 4721 of November 22, 2001, water is a public property, and due to its nature, cannot be subject to private ownership. In a similar fashion, Article 16 of Cadastral Law No. 3402 enacted in 1987 states that general water resources like rivers, lakes, seas, and natural springs in rock formations, hills, and mountains, are not subject to any registration or restrictions²⁶. However, the Civil Code makes a distinction between general and private waters (Perçin, 2014, p.90). According to this distinction, water resources which are considered to be public

²⁶ It must be noted that this article also declares that "exceptions are reserved" for this matter.

property, and areas like rock formations, hills, mountains, glaciers and similar areas, which are not arable, and natural springs originating in these areas, are not considered anyone's property, and ownership of the surrounding area does not constitute ownership of the underground water resources. The decrees of law detailing the ways in which proprietors can take advantage of underground water resources are reserved. Water sources which turn into rivers or streams upon reaching above ground are not considered to be springs, and for them to be subject to becoming private property, they must cease to be immovable properties with a deed, and flow at an acceptable rate without exceeding the limits of the immovable property it's coming from, and finally, the source must flow consistently and without causing damage to any public property (Perçin, 2014, p. 97). In accordance with Article 756 of the Turkish Civil Code, to take advantage of a water resource located within someone else's property, the access rights must be added to the land register. In this way, the beneficiary can receive the water from the spring, and transfer it to their own depot or immovable property via pipes or canals. According to Article 742 of the same law, it is the immovable property owner's responsibility to deal with the water flowing from the upstream property to their own. This clause allows the downstream immovable property owner to request that the natural flow of water not be changed (Civil Code, 2001).

The first law enacted with regards to the management of water resources in urban and rural areas is the Village Law No.442 dated March 18, 1924. The Village Law gave mukhtars and the village council of elders the authority to bring drinking water to the village from closed canals and allowed them to build pipes to maintain the flow of wells, fountains and springs, among other sources of dirty water. Following this, the Law on Water Resources No.831 dated April 28, 1926 was

enacted. This law transferred control of water services in cities, towns and villages, which were formerly controlled by the government and by foundations in the Ottoman era, to local authorities. Later, Law No. 7478 on Drinking Water In Villages was enacted on May 9, 1960, which stated that the water needs of villages would be covered by the DSHW. On December 16, 1960, Law No. 167 on Underground Water Resources was enacted, which declared that underground water resources are possessed and managed by the government and assigned the DSHW to oversee their operation. Additional laws pertaining to this topic include: Law No. 1053 on the Supply of Industrial, Utility and Drinking Water to Municipal Organizations, dated July 3, 1968, which handed the duty of providing industrial, utility and drinking water to the DSHW, and the management of depots and water circulation to the municipality; the Environmental Law No.2872, dated August 9, 1983, which was created to help reduce environmental pollution, and to protect the environment and water resources; Law No. 5216 for Metropolitan Municipalities, dated June 10, 2004, which gave authorization to municipalities to manage water and sewage businesses, construct dams and other facilities as necessary, and manage them, improve the quality of water streams, and the right to market filtered natural spring water; and Municipality Law No. 5393, which gives municipalities the right to procure industrial, utility and drinking water, to dehydrate waste and rainwater, and to establish and manage the necessary facilities to process the water appropriate to its amount (Perçin, 2014, p.104-109).

When looking at the organization of water law-related corporate matters, it can be seen that a deeply complex administrative structure takes hold. Especially after the 2000s, there have been many changes to the names, responsibilities and applications of these institutions, with many decree-laws having been passed in order

to alter their structure. Over hundred laws, decree-laws and administrative decisions include articles regarding water usage, management and procurement (Can, 2015, p.149). The government, sensing that they lack an official water policy on the national scale, established a new ministry in 2011 under the name Ministry of Forestry and Water Affairs (MFWA [OSİB]). The mission of the ministry was "...preservation and development of forests, water resources and biological diversity in order to improve the quality of life for all living things, and produce reliable meteorological data based on a target of sustainability." (OSİB, 2012). On one hand, OSİB declares in its statement that "It is likely that water scarcity will become a water crisis in some regions, including the Middle East, in the next 20 to 25 years. Therefore, it is widely accepted that this natural source, which is irreplaceable, will be one of the strategical resources of the 21st century ", but on the other hand, OSİB also states that "Necessary projects have been implemented to ensure that Turkey can benefit from its renewable, cheap and environmentally friendly hydro-energy potential and other economic and social benefits in an efficient and sustainable way. Within this framework, efforts are underway to carry out dam, hydroelectric power plant and irrigation projects, especially in the GAP region" (OSİB, 2012). However, the life span of the Ministry did not last long, and it became the Ministry of Agriculture and Forestry with a Presidential Decree on the Organization of the Presidency, published in the Official Gazette on 10.07.2018, and one of the missions of the Ministry was defined as "to develop policies for preservation and sustainable use of water resources, and coordinate national water management (Official Gazette, 2018, p.1).

While the responsibility of creating new water policies was assigned to various ministries, like the Ministry of Public Works, Ministry of Agriculture, Ministry of Environment and Forestry, Ministry of Forestry and Water Affairs, and

the Ministry of Environment and Urban Planning over the years, in 2014 the duty of planning for and determining new policies along with the management of water was finally handed over to one establishment, with the foundation of the Directorate General of Water Management (DGWM [SYGM]). This directorate's core values are the protection of water resources and establishing policies on the usage and betterment of water resources. Its vision also includes the reservoir-level management of water (SYGM, n.d.a), and today, it is in active operation under the wing of the Ministry of Agriculture and Forestry. The need for a proper corporate structure in water policies is especially relevant since due to Turkey's inclusion as a member state candidate for the European Union in 1999, and as part of the EU Integrated Environmental Approximation Strategy, the goal is to achieve complete harmonization with the EU policies (Can, 2015, p.159). The DGWM's study of Legal and Corporate Structure (SYGM, n.d.b) states that the existing water law regulations are part of thirty laws and secondary clauses, and that there are no framework water laws on a national scale. The study notes that to mend these issues, a Water Law Proposal will be presented to the national parliament. However, on the latest version of the DGWM's official webpage, the Ministry of Forestry and Water Affairs is still visible, and no information is given on the proposal other than a basic outline of the law. This indicates that the proposal is probably on hold.

Deemed as "the organization with the most responsibility with regards to the planning, administration, improvement, and operation of water resources" (DSİ 2018 Activity Report, 2019, p.5), DSHW is assigned a special budget within the Central Administration Budget, and operates in accordance with the laws numbered 6200, 162 and 1053 (DSİ, n.d.). The organization is also tasked with the evaluation of hydroelectric resources with the goal of furthering development on this matter with

new projects, and allowing those in the private sector to submit applications in order to pursue energy projects, along with signing new agreements for the use of water supplies (Can, 2015, p. 169). These new responsibilities were given to DSHW after the Electricity Market Law No. 4628 was passed in 2001, further reinforced by the Electricity Market License Regulation. As part of the Water Pollution Control Regulations No. 25687, which went into effect on December 31, 2004, the DSHW was given yet another task: The planning of reservoirs and determining whether or not intra-continental water springs were of a high enough quality standard. Recently, the Ministry of Agriculture and Forestry established the Provincial Water Management Coordination Board as well as the Central Basin Management Board and published a Communique on the Principles, Duties, Working Procedures and Principles of the Central Basin Management Board, and the control of implementation of water basin preservation plans has been transferred to these provincial committees, where DSI will only be in charge of secretarial works (Official Gazette, 2019, January 18, p.49).

The Turkish Water Institute (TWI [SUEN]), founded in 2011 with the Decree-Law No. 658, under the administration of the Ministry of Forestry and Water Affairs, and operating under the Ministry of Agriculture and Forestry as of July 15, 2018 with the goal of furthering the vision and experience gained from the 5th World Water Forum held in Istanbul in 2009, is one of the leading institutions for water policies. One of the primary goals of the TWI is to “coordinate information between institutions and corporations taking part in water management” (Presidential Executive Order dated 15/7/2018, No. 4). The institute prioritizes academic works and educational programs related to water policies in Turkey. For example, the latest Istanbul Water Forum on May 10-11, 2017, organized by the institute in collaboration with the DSHW, was thematically based on the concept of “Water and Peace”. It

focused on the topic of refugees, and urban water management, relief efforts, water law, and Sustainable Development Goals. Similarly, the Directorate General for Water Management, formed according to the “Decree-Law No. 645 On The Organization and Duties Of The Ministry of Forestry and Water Affairs”, dated 29.6.2011, states that its primary mission involves the regulation of policies on the protection, improvement and usage of water (Official Gazette, July 2011).

Another organization with an active presence in the area of water management is the Ministry of Environment and Urban Planning. This ministry’s Directorate General of Environmental Impact Assessment, Permit and Inspection, and the General Directorate for Environmental Management, have the authority to track, inspect, grant licenses to, and if necessary, stop any activities related to the management of water resources, in accordance with the Decree-Law No.644 (Can, 2015, p.174).

Since 74% of water consumption comes from the agriculture sector, the Ministry of Food, Agriculture and Livestock directly or indirectly houses many different units under its wing, the most important of which is the General Directorate of Agricultural Reform. Yet another organization with significant influence in water-related matters is the Ministry of Energy and Natural Resources. The General Directorate of Renewable Energy, established in 2011 in accordance with Article 10 of Law No. 3154, has taken part in more than 80% of hydroelectric power stations’ engineering services, providing preliminary surveys, master plans, feasibility reports, and overseeing the final project (Can, 2015, p.177). Another organization connected to this ministry is the Energy Market Regulatory Board, which provides licenses for energy generation in accordance with the Regulation on Rules and Procedures Regarding the Signing of Water Use Right Agreements, together with the DSHW, which transfers HPP projects to the private sector.

Although the Ministry of Development's 2014-2018 Tenth Development Plan Water Resources Management and Safety Specialization Commission Report states that there is a detailed Water Law proposal under preparation, from the 2012 Water Law Draft Workshop until now, the proposal has yet to be enacted. In the Directorate General of the Ministry of Agriculture and Forestry's Water Law Draft presentation published in April 2019 (Water Law Draft, 2019 April), it is stated that the draft, prepared with the support of many public institutions and organizations, universities, and civil society, was forwarded to the Presidential Office in 2014, presented to the Council of Ministers in 2016, and was finalized after several meetings were held throughout 2016 and 2017 to achieve a common understanding in several matters which were previously unresolved. Due to administrative changes in July 2018, the draft was sent back to the ministry and was held pending its enactment. Among the goals of the law draft are: The protection, improvement and development of water resources, paving the way for sustainable usage, enabling a holistic approach to water with regards to its quality and quantity on a reservoir basis, promoting the economical and productive use of water, ensuring that reservoirs, any flooding or drought events and industry-specific allocations and the appropriate legal response are in compliance with the law, ensuring that allocations are made from a centralized organization, ensuring that the legal characteristics of this matter are within the scope of the law, and finally, ensuring that all water policies are compliant with EU directives.

The most striking topics mentioned in the law are clauses regarding the unification of water resource-related information under the Water Information System, and that organizations which produce or use water data should be given access to this database. The Law prescribes that water allocation will be made by the High Council of Water Management for up to 29 years while individual allocations

will be made by the DSHW. This indicates that the production of DSHW-made stations and privatization efforts will continue, however, the 49-year rental period will be reduced to 29 years. The final revision of the draft has yet to be published to the general public; however, even though it claims to promote a holistic approach to water, sustainability, and centralized management of reservoirs, which is in line with water policies in the rest of the world, the draft fails to emphasize the importance of a stable ecosystem, water rights, and “water’s status as a public property being an assurance of water rights” (Şirin, 2012, p.21). Additionally, water ethics should be used as the foundation for increasing the sustainability of water resources and the protection of water quantity and quality. “Sustainability is comprised of a certain set of ethical rules involving the protection of the ecosystem, equal distribution between current and future generations, and encouraging the involvement of the general public in managerial matters, and these fundamental principles shall guide the planning and management of water, and any decisions taken related to these matters” (Çolakoğlu, 2009, p.113).

The Water Rights Campaign (SHK) formed by the Social Change Association, the Initiative for the Sustenance of Hasankeyf, and the Global Action Group, with support from the Don’t Touch My Water Campaign and the Rosa Luxemburg Foundation, states that its goal is to oppose privatization of water and being treated as a commercial property in Turkey and in the world, and to act as a common ground for everyone who opposes those disturbing the natural ecological order, and a platform from which their voices can be heard (Su Hakkı, n.d.). In a review of the Water Law Proposal’s 2012 version, the Water Rights Campaign commented on the early draft of the law as follows: “In its current state, it sees water resources as a physical and economical resource and completely disregards the cultural significance of water. It

does not incentivise the protection of water resources, only to use them. Their strategy for the protection of water never goes beyond a simple “whoever dirties it, pays” principle, and as such, focuses on surface-level solutions to problems instead of fixing the reasons for which they occur in the first place. This proposal only serves to defend the current centralist order, and is but a piece of legal scripture which supports local administration in name only. The Water Rights Campaign asserted that this proposal was a threat to water rights and democratic participation, and prepared an Alternative Water Law proposal in its place (Su Hakkı Kampanyası, 2014, June 16). In this alternative version, the Water Rights Campaign focused on the following: the water potential of reservoirs can only be transferred to other reservoirs in the event of a significant natural disaster; that water resources should be utilized for the good of the public and for various ecosystems; that economic motivations should not take priority over social and ecological ones; that a sufficient amount of water in good quality should be supplied for human consumption and for subsistence agriculture; and finally, that a democratic approach should be taken for the planning of reservoirs.

After reviewing legal changes that have paved the path for private companies from several sectors to invest in energy with a focus on renewable resources, next section will summarize the hydroelectric power plant projects designed and implemented by public and private entities, and provide discussions about these projects by several investigators from various disciplines.

5.2. Hydro-Energy and Hydroelectric Power Plants in Turkey

*Everybody has the right to live in a healthy, balanced environment.
It is the duty of the State and citizens to improve the natural environment,
to protect the environmental health and to prevent environmental pollution.*

Article 56, Constitution of the Republic of Turkey

The introduction of neoliberal policies in Turkey devised to address increasing economic crisis, dates back to the years before the military coup in 1980, which facilitated the implementation of such policies along with transformations in the global political economy (Kibaroglu et al., 2009). In line with the experiences in other developing countries, the free market economy adopted by the subsequent civil governments seems to have helped only the expansion of global capital while there have been tremendous impacts in social, cultural and ecological scales, such as urbanization, population growth, abuse of natural resources, subordination of public interests to the demands of national and international corporations, etc. Unfortunately, it is now clear that the rapid economic growth achieved through these policies has not translated well into overall development across the country, mainly due to lack of comprehensive planning and auditing activities. Along with the global rise of authoritarian populism, extractivism and neoliberal developmentalism (Adaman et al., 2018, p.518), Turkey, widely opening its gates to national and international corporations for privatizations, seems to have focused solely on economic growth figures, but not on humanistic development.

An example to this is the aggressive energy plan based on the exploitation of the hydropower potential, which involved the construction of small scale, run-of-river type plants even on small streams, in addition to dams. The main motivation behind this plan was to reduce dependency on foreign energy sources, and make use of renewable resources, mainly by private sector, with a target of constructing nearly 12000 micro plants across the country in line with the sustainable development goals of international organizations such as the UN, World Bank, IMF, etc. Being aggravated with imprecise, unjust and exclusionary environmental assessment and implementation processes, tax reductions, incentives and immediate expropriation

procedures in HEPP projects (Hamsici, 2012; Kaya, 2016; Erensü et al, 2016), water resources have become a revenue item for the government in integration with global capitalism, and thus, control over water has been transferred from local people to the private sector, mostly for 49 years, through the Water Use Right Agreements Bylaw that allowed DSI to lease sections of rivers and streams to third parties.

Turkey has a wide range of energy sources (Table 1). Among them, water, solar and wind are renewable sources, derived from natural sources or processes that are constantly replenished. The process of replenishment is a natural cycle that always converts read-made energy into available forms. This process is also referred to as ‘clean energy’. Any interruption of this natural cycle leads to a reduction in the renewability of the natural resources. Thus, “continuous use of water” relies on preserving water’s renewable capacity as a natural source (TMMOB, 2011, p.11).

Hydroelectric plants do not generate any toxic waste during their operation, and they have considerably lower greenhouse emissions²⁷, compared to fossil fuel-energy plants (Ürker & Çobanoğlu, 2012, p.67). Geographic characteristics and climatic conditions of a country/region are of great importance in determining a country’s hydroelectric energy potential. Therefore, it is not appropriate to make a comparison between countries regarding the production and use of hydraulic energy. In addition, it is not possible to convert each potential into energy due to losses in the process. Thus, the impacts of constructing a plant for hydroelectric energy production and transfer of water should be addressed in an integrated way as we discussed in the development section of this thesis.

According to the General Directorate of State Hydraulic Works (DSİ), Turkey has a gross surface water potential of 185 billion m³ (2019, p. 19). The exploitable

²⁷ A greenhouse gas is a gas that absorbs and emits radiant energy within the thermal infrared range. They can trap heat in the Earth’s atmosphere, and mainly include water vapor, carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons.

surface and groundwater potential amounts to 100 billion m³, of which 59 billion m³ is used efficiently, including 40 billion m³ (72%) for irrigation, 8 billion m³ for domestic use and 8 billion m³ for industrial use (Table 2), and it is projected to increase to 100 billion m³ by 2023. The annual amount of water available per capita is 1,600 m³ at present, and it is projected to fall to 1,000 m³ by 2023, which makes Turkey one of the countries with potential water stress. According to the Turkish Statistical Institute (TÜİK), as of 31.12.2018, the population of Turkey is 82.003.882 people, and population density is 102 people per km². The population is estimated to increase to 100 million by 2030. It is clear that policies and legal regulations are needed to take necessary measures in order to reverse this stress in the next ten years.

Table 1. Distribution of energy sources available in Turkey

Energy Source		Installed Capacity (MW)	
Thermic	Natural Gas + LPG	26.160	46.690 (53%)
	Coal	18.670	
	Fuel-oil	300	
	Other	1.060	
	Biomass	500	
Hydraulic		28.200 (32%)	
Wind		6.670 (8%)	
Solar		4.700 (6%)	
Geothermal		1.140 (1%)	
Total		87.400 (100%)	
Source: DSI General Directorate of State Hydraulic Works, 1954-2018. (n.d.) Water and DSI. http://bilgi.dsi.gov.tr/dijital/water-and-dsi/files/assets/basic-html/index.html#1			

Table 2. Annual Water Potential of Turkey

Annual Water Potential of Water	
Annual Rainfall Amount	448 billion m ³
Annual Available Surface Water	84 billion m ³
Annual Available Ground Water	16 billion m ³
Annual Total Available Water	100 billion m³
Existing Annual Water Demand	
Water Utilized for Irrigation	(72%): 43 billion m ³
Water Utilized as Domestic Water	(14%): 8 billion m ³
Water Utilized for Industry	(14%): 8 billion m ³

Total Consumed Water	59 billion m³
Source: DSI General Directorate of State Hydraulic Works, 1954-2018. (n.d.) Water and DSI. http://bilgi.dsi.gov.tr/dijital/water-and-dsi/files/assets/basic-html/index.html#1	

Table 3. Annual Water Demand in Turkey

Existing Annual Water Demand in Turkey	
Existing Annual Surface Water Demand	
Water Consumed for Irrigation	33 billion m ³
Water Consumed as Domestic Water	5 billion m ³
Water Consumed for Industry	5 billion m ³
Annual Total Available Water	43 billion m³
Existing Annual Ground Water Demand	
Water Utilized for Irrigation	10 billion m ³
Water Utilized as Domestic Water	3 billion m ³
Water Utilized for Industry	3 billion m ³
Total Consumed Water	16 billion m³
Grand Total	59 billion m³
Source: DSI General Directorate of State Hydraulic Works, 1954-2018. (n.d.) Water and DSI. http://bilgi.dsi.gov.tr/dijital/water-and-dsi/files/assets/basic-html/index.html#1	

Turkey is divided into 25 drainage basins, where 14 account for river basins, 7 for small to large rivers, and 4 for closed basins without discharge to any sea (Yılmaz, 2018, p.309). Hydroelectric power plants, which simply use falling or flowing water to generate energy by turning turbines, have two main configurations: with reservoirs (dams) and run-of-river type with no reservoirs (Kaygusuz, 2016, p.361). According to the Turkish Ministry of Energy and Natural Resources, hydroelectric power plants are the most important renewable energy sources due to their use of water as a renewable source; not being associated with greenhouse emissions; the availability of local resources for constructions such as clay, gravel and rock; long technical life span; absence of any fuel costs; low operating and maintenance costs; no outflow of foreign currency; creation of employment opportunities; and reviving economic and social structures in rural areas (Enerji İşleri, n.d.). However, the activities carried out during the construction processes have environmental consequences and lead to

irreversible destruction in the ecosystem, including discharge of construction debris to creek beds, thus muddying and reducing the flow of water; damage to streambeds leading to changes in water level, water velocity, water quality, and water temperature and thus negatively affecting fish habitats and all downstream segments in water; cutting trees and plants around the stream; road construction, etc.

The State Hydraulic Works (DSİ), which has been mainly responsible for projects on the use of water resources in Turkey since 1953, has been assigned with review and inspection duties within the framework of recent privatizations, particularly in run-of-river type projects. The main regional projects undertaken by DSİ such as Southeastern Anatolia Project (GAP), Konya Plain Project (KOP), Eastern Anatolia Project (DAP), East Black Sea Project (DOKAP) are primarily for energy production and irrigation (DSİ, 2019, p.46). For example, the Ilisu Dam, the largest dam planned to be built on the Tigris, will be the fourth largest dam in Turkey in terms of its installed capacity, following Atatürk (2.400 MW), Karakaya (1.800) and Keban (1.330 MW) dams. However, with the completion of this project, almost 250 mounds, 5,000 caves, historical mosques, church ruins, shrines and historical bridges, which meet 9 out of the 10 criteria to be listed among the UNESCO's world heritage list, will be flooded (Yılmaz, 2018, p.320). The Ilisu Dam project, which was surveyed in 1954, and incorporated in 1982 into the Southeastern Anatolia Project (GAP), the largest river basin development project in Turkey, has seen massive protests at international and national levels after being included in the investment plan for 1996/97, and strong campaigns by several NGOs have resulted in the withdrawal of three European companies and a Swiss bank involved in the

construction consortium (Taşlı & Ayboğa, 2009, June 30).²⁸ Although there has been no fundamental modifications in the project, it was again raised in 2004 with the initiation of accession process to EU when a salvation plan was developed for some of the historical artifacts and these changes were deemed sufficient by European governments for the release of loan collateral, but the project was cancelled for good in 2009 for not satisfying 153 environmental, cultural and social conditions required for the loan after a second anti-dam campaign due to potential migration and social problems, not only cultural and historical destruction (İlhan, 2016, p.340). However, the government was determined to implement the project with domestic financial resources and began construction by eliminating the binding requirements for the loan agreement, and completed resettlement projects for the Ilisu Village and Hasankeyf. İlhan (2016) explains this insistence to pay for such large socio-ecological costs on a project that will produce only two percent of Turkey's energy needs and that will be operated for up to 50 years, with the phenomenon of 'hydraulic paradigm',²⁹ that isolates water from the riverbed it runs through, the soil it passes through, the organisms it gives life to, and the culture it shapes (p.342).

Based on the Ministry of Energy and Natural Resources data, Turkey has 1% of the world's hydroelectric potential and 16% of Europe's (ETKB, n.d.). According to the 2019 Annual Report of the General Directorate of State Hydraulic Works (DSİ), which is the main authority in planning, management, and development of water resources under the Turkish Ministry of Agriculture and Forestry, there are 683 active hydroelectric power plants (HEPPs) with a total installed capacity of 28.571

²⁸ The Initiative to Keep Hasankeyf Alive was established by various non-governmental organizations, professional chambers and local administrations in January 2006 as a critical movement against the Project (Taşlı ve Ayboğa, 2009).

²⁹ Also called 'municipal hydraulic paradigm' or 'hydraulic mission'. It is a conventional approach to managing the water supply system, characterized by a belief that there is an abundance of water that can meet the needs of a modernizing society through hydraulic technologies (Bakker, 2010b).

MW, 47 HEPPs under construction with a total installed capacity of 3,636 MW, and 526 HEPPs planned to be constructed with a total installed capacity of 15.995 MW (Table 4) while in the private sector, these figures are 616, 45 and 485 with corresponding established capacities of 16.013, 1.878, and 14.203 MW, respectively (Table 5) (DSI Annual Report 2019, p.60).

Table 4. Potential for Hydroelectric Power Plants (run by DSI)

Potential	Number of HEPPs	Total Installed Capacity (MW)	Mean Annual Production (GWh/year)	Percentage (%)
Active	683	28.571	99.628	62.0
Under construction	47	3.636	11.962	7.5
Planned	526	15.995	48.745	30.5
Total	1.256	48.202	160.335	100

Source: DSI Annual Report 2019, p.60

Table 5. Potential for Hydroelectric Power Plants (private sector)

Potential	Number of HEPPs	Total Installed Capacity (MW)	Mean Annual Production (GWh/year)	Percentage (%)
Active	616	16.013	54.340	53.0
Under construction	45	1.878	5.954	6.0
Planned	485	14.203	43.173	42.0
Total	1.146	32.094	103.467	100

Source: DSI Annual Report 2019, p.60

Aiming to benefit from clean and domestic renewable energy sources for a sustainable life, 58.2 billion kWh electricity (22.4% of total electric production) was obtained from these plants in 2017. According to DSI data, the number of hydroelectric power plants constructed by DSI between 1924 and 2017 was 67

(installed power 12.564,31 MW)³⁰, while 571 hydroelectric power plants were constructed and set into operation by the private sector during same period (installed power 14.891,69 MW)³¹. The average production of power plants built mostly on large streams by DSI is 44,574,38 GWh/year, while the production of power plants built by the private sector on smaller streams is 51.015,39 GWh/year. While the constructions have been financed so far by several methods including, Build-Operate (BO) Method, Build-Operate-Transfer (BOT) Method or bilateral agreements between governments, all financial responsibility has been transferred to the private sector by granting water rights to the companies for a certain period of time (DSİ, 2018, p.39-40). It has been clearly indicated in the DSI report that by this method, the government no longer needs to allocate any budget nor provide treasure guarantee for loans and credits for these development projects.

The major functions of the Department of Dams and Hydroelectric Power Plants under the DSI is to monitor and inspect the construction phases of present and future dams, hydroelectric power plants and related energy facilities, and to examine and approve the dam projects designed by other public and private bodies that require approval (DSİ 2018 Faaliyet Raporu, 2019, p.24). The DSI Annual Report states that the total installed power of 644 hydroelectric power plants operated by DSI by the end of 2018 was 28.423 MW, and the average annual production was 99.1 million kWh, which corresponds to approximately 55% of the developed potential. The total installed power of 577 hydroelectric power plants built and operated by the private sector was 15.867 MW and the average annual production was 53.790 GWh. There are 53 hydroelectric plants under construction by the private sector and 554 others in planning and project phase. A total of 44.2% of the installed power belongs to HEPPs

³⁰ See Table 4: Hydroelectric power plants constructed by DSI, 1924-2017

³¹ See Table 5: Hydroelectric power plants by private sector, 1924-2017

developed and built by DSI. During this period, DSI has expropriated an average of 25,000 parcels per year and approximately 7000 hectares, and roughly 250,000 properties have been nationalized per year based on the average of 10-12 shareholders per parcel. (2019, p.37). According to an interesting statistic that shows the extent of recent expropriations; although there were only 14 decisions from 1978, when the first expropriation decision was made by the cabinet of ministers, until 2000, there have been 830 ‘immediate expropriation’ decisions since 2014, of which 55 are related with energy investments (Kaya, 2016, p.67). This increase clearly shows the scale of the collaboration between capital and the state during the privatization process after 2000. In line with the neoliberal policies followed, as Kaya (2016) emphasized, the ‘public interest’ has now become a production of ‘private interest’, in other words, ‘expropriation’ will now be used to establish unlimited sovereignty of capital in competitive markets (p.75). The immediacy factor in such decisions was related with delays in investment decisions and the desire to overcome the difficulties experienced in regular expropriations as a result of increasing constant and limitless capital attacks after 1970s that have been brought to the Council of State and the Supreme Court with an understanding of public interest (Kaya, 2016, p.85).

A review carried out by Erensü et al.(2016), addressing the effects of neoliberal transformation, which has been initiated with the claim of hydro-energy-based development in rural areas, describes this rapid change in the hydroelectric power investments from 12.000 MW in 2003 to 24.000 MW in 2015 as the ‘second spring’ of hydro-energy in Turkey (p.11). If we look at the Electricity Generation-Transmission Statistics of Turkey since 1970 (Table 4), despite the construction of hundreds of dams and HEPPs, the share of hydraulic energy has fallen compared to coal and natural gas, while in the last decade there has been an increase in the share of

electricity production from renewable sources and wastes. During the period between 1976 and 1984, hydro-energy's share in the country's total electricity production increased from 43 to 51%, whereas electricity production from its nearest competitors, coal and liquid fuels ranged from 23.8 to 33% and 22.4 to 30.7%, respectively. Similarly, between 1987 and 1998, electricity production based on increased from 34.5% to 60.3%, while that from coal and liquid fuels was raised from 26.0 to 36.5% and 5.6 to 12.4%, respectively. During the past seven-years between 2010 and 2017, the share of hydro-energy production was between 16.1% and 25.6%, the share of coal was between 26.1% and 33.7% while the share of liquid fluids decreased almost to 0.4% and the share of electricity from renewables including wind and solar energy and wastes showed a sharp increase from 1.9% to 10.0%. The biggest increase appears to be in the share of electricity production from natural gas, which rapidly rose from 32.5% in 1990 to 47.9% in 2014.

Table 6. Electricity generation and shares by energy resources

Year	Total	Coal	Liquid fuels	Natural Gas	Hydro	Renewable Energy and wastes ⁽¹⁾
	(GWh)					
				(%)		
1970	8.623	32,7	30,2	-	35,2	1,9
1971	9.781	30,4	41,2	-	26,7	1,7
1972	11.242	26,0	43,9	-	28,5	1,6
1973	12.425	26,1	51,3	-	21,0	1,6
1974	13.477	28,8	44,8	-	24,9	1,5
1975	15.623	26,3	34,5	-	37,8	1,4
1976	18.283	23,7	29,6	-	45,8	0,9
1977	20.565	23,8	33,4	-	41,7	1,1
1978	21.726	25,7	30,7	-	43,0	0,6
1979	22.522	28,6	25,1	-	45,7	0,6
1980	23.275	25,6	25,0	-	48,8	0,6
1981	24.673	24,9	23,6	-	51,1	0,4
1982	26.552	24,2	22,4	-	53,4	0,0

1983	27.347	31,4	27,1	-	41,5	0,0
1984	30.614	33,0	23,0	-	43,9	0,1
1985	34.219	43,9	20,7	0,2	35,2	0,0
1986	39.695	49,0	17,6	3,4	29,9	0,1
1987	44.353	39,8	12,4	5,7	42,0	0,1
1988	48.049	26,0	6,9	6,7	60,3	0,1
1989	52.043	38,9	8,2	18,3	34,5	0,1
1990	57.543	35,1	6,8	17,7	40,2	0,2
1991	60.246	35,8	5,6	20,8	37,6	0,2
1992	67.342	36,5	7,8	16,0	39,5	0,2
1993	73.808	32,1	7,0	14,6	46,1	0,2
1994	78.322	36,0	7,1	17,6	39,1	0,2
1995	86.247	32,5	6,7	19,2	41,2	0,4
1996	94.862	32,0	6,9	18,1	42,7	0,3
1997	103.296	32,8	6,9	21,4	38,5	0,4
1998	111.022	32,2	7,2	22,4	38,0	0,3
1999	116.440	31,8	6,9	31,2	29,8	0,3
2000	124.922	30,6	7,5	37,0	24,7	0,3
2001	122.725	31,3	8,4	40,4	19,6	0,3
2002	129.400	24,8	8,3	40,6	26,0	0,3
2003	140.581	22,9	6,6	45,2	25,1	0,2
2004	150.698	22,8	5,0	41,3	30,6	0,3
2005	161.956	26,6	3,4	45,3	24,4	0,3
2006	176.300	26,4	2,4	45,8	25,1	0,3
2007	191.558	27,9	3,4	49,6	18,7	0,4
2008	198.418	29,1	3,8	49,7	16,8	0,6
2009	194.813	28,6	2,5	49,3	18,5	1,2
2010	211.208	26,1	1,0	46,5	24,5	1,9
2011	229.395	28,8	0,4	45,4	22,8	2,6
2012	239.497	28,4	0,7	43,6	24,2	3,1
2013	240.154	26,6	0,7	43,8	24,7	4,2
2014	251.963	30,2	0,9	47,9	16,1	4,9
2015	261.783	29,1	0,9	37,9	25,6	6,5
2016	274.408	33,7	0,7	32,5	24,5	8,6
2017	297.278	32,8	0,4	37,2	19,6	10,0

Source: TETC, Electricity Generation - Transmission Statistics of Turkey, 2018

(1) Renewable energy and waste includes geothermal, solar, wind, solid biomass, biogas and waste.

Figures in table may not add up to totals due to rounding.

These fluctuations are linked to the optimum resource diversity targeted in the 2015-2019 Strategic Plan. While the decrease in fossil fuel consumption is good news

with respect to air and environmental pollution, as indicated in the Turkey's 2017 Energy Outlook report prepared by the TMMOB Working Group, radical changes are necessary for transformation to carbon-free economy based on local resources instead of imports, and it is essential to focus on clean energy and energy efficiency while reducing the energy consumption (Energy Outlook of Turkey, 2017, p. 6).

The report also emphasizes that there was a decrease in the electricity demand in connection with the periodic economic crises and developments in the country, and thus a paradigm change is required in goals, highlighting that an estimate of 6% increase in the electricity demand is not realistic since it should be close to the estimated annual increase of 3 to 4% in the national income growth rate. At the same time, the report indicates that the total installed power of existing plants and projects are 10,816 MW higher than the total power projected for 2023, and also an installed power of 125.000 MW projected for 2023 has been found exaggerated. Based on 2017 data, TMMOB points out that the project stock is above the available hydroelectric potential, and inefficient projects with no public benefits should be cancelled. The report also highlights that available hydroelectric potential is lower than projected due to constructions near water resources, use of dams for water supply, negative impact of climate change on water regimes, and drought; water values are not correct in many HEPP projects; predicted power and production figures are exaggerated and incorrect, and basins are considered as if they are independent of each other, but the Environmental Impact Assessment (EIA) reports should have an integrated approach of basins, and that decision-making should be based on environmental and social impacts (Energy Outlook of Turkey, 2017, p. 98-99). It has been observed that although EIA reports aim at conservation of the environment and environment-based development, the number of conclusions for 'EIA is not required'

was higher (54.357 decisions) between 1993, when the EIA report requirement entered into force, and the end of 2016, compared to the conclusions for “EIA is required” (872 decisions) (Yaman & Haşıl, 2018, p.154).

When we consider exaggerated assessments and inefficiencies experienced during the project-, construction- and production phases in the energy sector, which has been made attractive to investors by means of immediate expropriation, feed-in tariffs, reductions and incentives in license fees and public lands, it appears that the state and the energy sector are in search of a scapegoat for their failures, and they attribute it to helpers³² (*çantacı* in Turkish) who create a market of licenses by distinguishing between ‘good’ entrepreneurs who take social costs into account and ‘bad’ entrepreneurs who are only profit-oriented (Aslan, 2016, p.126). Aslan emphasizes that 90% of the 600 licenses distributed by the Energy Market Regulatory Authority (EPDK) is in the hands of those helpers, and the government prefers to accuse entrepreneurs who take the advantage of legal gaps rather than monitoring and filling these gaps in the license market where large figures are in demand, and it actually creates new areas of intervention while handing on some works to the private sector (2016, p.128).

Because HEPP projects have a market-based approach, Ürker and Çobanoğlu pointed out that beneficiaries include HEPP-investors, companies that develop HEPP technologies, agencies that provide EIA report services, banks and/or investors that provide loans, and energy speculators, while sufferers are local natural resources and ecosystems, local people and the state itself (2012, p.77). With these projects, the state transforms natural resources into unearned revenue, incorporating global capitalism. The modifications in plans that enable capital investment, and the right to

³² Those who submit for water use rights, and then sell it to big companies; usually local, middleman, who prepare initial documents and carry them in their briefcase until sold.

use that gives privilege turn into absolute economic rent, transferring water to its new and only owner. Buildings, infrastructure costs, environmental degradation, and the costs associated with disruption of natural balance are all covered by the state at the expense of public loss and harm to social justice (Turan, 2009, p.14).

While governments and the energy sector claim that HEPPs provide significant means of struggling with climate change due to their low CO₂ emissions, Ürker & Çobanoğlu indicate that when environmental impacts caused by HEPPs are combined, their ‘ecological footprint’³³ and thus ‘carbon footprint’³⁴ just show the opposite, and they also release CO₂ (emissions) during the generation of energy (installation and operation phases) (2012, p.68). In response to claims made by the energy sector that job growth, enhanced commercial life, improvement in agricultural activities, forestry and tourism contribute to the local economy, the authors note that about 50 to 60 people work during land clearing and construction, 8 to 10 people during operation phases, where they often are not local people since the work requires technical and qualified skills.

The privatization rush, which has been accelerating, particularly in the energy and mining sectors since 2001, has not only led to contracting the hydropower projects that have been already surveyed and planned by DSİ to big companies, but also privatization of a vast geographic area since the location and size of construction sites for small scale plants, particularly on streams in valleys have been determined by small sized enterprises (Erensü, 2016, p.45). This invasion into a wider geographic area parallels with the strategies developed by Turkey in collaboration with international development programs after ratifying the United Nations Framework Convention on Climate Change in 2004 and Kyoto Protocol in 2009. The foundation

³³ The impact of a person or community on the environment, expressed as the amount of land required to sustain their use of natural resources (p.y.a.)

³⁴ The amount of greenhouse gases released into the atmosphere by a particular human activity (p.y.a.)

membership of World Bank's the Partnership for Market Readiness (PMR) in 2010, the Clean Technology Fund (CTF) granted by the World Bank to transfer to low-carbon technologies, a loan contract of 600 million dollars to support energy efficiency and renewable energy projects from the CTF and the International Bank for Reconstruction and Development (IBRD), the Private Sector Renewable Energy and Energy Efficiency Project signed with the World Bank and numerous grants and donations from the European Investment Bank, German Development Bank (KfW) and Islamic Development Bank have been mainly resourced to these HEPP projects (İşlar, 2016, p.146). National companies who seek to benefit from natural resources that are liberalized and encouraged by the state as a financial reservoir participate in HEPP tenders, and then transfer to or jointly operate these projects together with European companies, which make it a 'laundering' item of the carbon market³⁵ that has been created to lower carbon emissions in accordance with the Kyoto Protocol. In this system, which is called 'carbon offset', companies that exceed their carbon emission quota within the EU borders have an obligation to invest in renewable energy. In other words, there exists a double-dipping both for domestic and foreign companies since they earn from both carbon trading and electricity generation. Although Turkey is not allowed to participate in the flexibility mechanisms created by the protocol, it is quite active in the voluntary carbon markets, where only carbon credits are sold (Kaygusuz, 2016, p.366).

İşlar argues that the process of privatization of hydroelectric energy in Turkey violates water rights in three ways: in terms of inter-generational justice in the future for renting the use of water resources for a period of 49 years; in physical sense, since

³⁵ A system that has been widely used following the Kyoto Protocol in 1997. It allows oil and gas-incentive companies or heavy industry to reduce their economic footprint through a series of incentives, where it is also possible for a company or country that exceeds reduction target to buy credits from another that does not exceed them.

both the habitat and local communities living around it are deprived of water due to its diversion from the river bed; and in legal sense, since it requires a redefinition of policies and laws for justification of privatized hydropower development. The author highlights that these violations do not only refer to the flow of water running through transport channels, but also land and water rights of next generations as well as local people and nature (2016, p.139). Ürker & Çobanoğlu also note that the expression ‘common facility’ in the Definitions part of the Water Use Rights Agreement Bylaw, which is signed between the DSI and private entities, and describes procedures and principles, “refers not only to a facility for energy production, but also a facility that serves multiple purposes such as irrigation water, drinking water supply and flood control” (2012, p.71). Furthermore, given that a significant portion of energy loss and leakage in Turkey are only measured by loss in electrical power, and that trying to transmit electricity rather than generating and using it on site increases this loss and leakage, it becomes important to know that the loss and leakage rate is around 12%, and on-site production will reduce transmission and distribution loss to around 7 to 8 % (Aydın, 2016, p.429) since these losses alone are equivalent to Turkey’s existing hydroelectric energy production.

In an early study of run-of-river type HEPPs in Artvin, Black Sea region, Özalp *et al.* indicated that the government was planning to build 15 large dams and 116 run-of-river type HEPPs on the Çoruh River basin in order to find a solution to the energy deficit in the region, however they claimed that the project was more likely to damage the forests, land and water resources due to the steep and rugged terrain in the region, and aquatic organisms and creek-side vegetation would suffer from changes in the amount of water and flow regime of the running water, woodland would be divided and the habitat of wild animals living in the region would be

reduced, and there would be potential problems in storage and removal of excavations as a result of the construction of new roads and tunnels, and sedimentation (2010, p. 677). They argued that since much of the running water would be taken into tailraces, these changes could lead to conflicts between local people and the administration of the power plant, and there is confusion with respect to laws and regulations since other stakeholders such as local administrations, local people, universities and NGOs have not been consulted about these projects. They also emphasized that the majority of the population would be forced to migrate due to unemployment in the region and large-scale expropriations made for dam construction. In accordance with their arguments, the Muratlı Dam and Hydroelectric Power Plant flooded the Muratlı (Maradit in Georgian) village, the tea factory and the mosque of the village submerged, villagers received minute amount of money, but still were thankful, they were unable to benefit from the electricity promised, and no new opportunities for employment were offered, and in addition to that, shortly after the construction of the dam some species of insects and pests that have never been seen before in Maradit have appeared (Akbaş et al., 2016, p. 248). As a result, they were now forced to use all kinds of pesticides for their agricultural activities as well as artificial fertilizers in an arid land. Another study by Kurdoğlu & Özalp emphasize that these plants, which comprise a threat to all life support systems, have destroyed ecotourism plans in the region with an ideal ecosystem (2010, p. 688).

The main component of the cultural richness in the Black Sea region is the rural settlements that mainly rely on agriculture. Therefore, the sustainability of cultural and economic environment is directly related with the agricultural conditions after the projects (Çevik, 2008, p.148). Çevik emphasizes that the development of water resources should be based not only on the technical and economic benefits, but

also political, social and environmental suitability, otherwise these projects will lead to serious social problems, particularly triggering rapid migration due to lack of considerations such as ‘social dimension’, ‘environmental values’ and ‘social participation’ during the design, planning and implementation phases.

According to Kurdoğlu & Özalp, Yusufeli, Şavşat and Ardanuş Districts of Artvin, and Tortum and the İspir District of Erzurum will be mostly affected by HEPP projects since they have relatively little rainfall in summer and they suffer water deficit (2010, p.697). Economic concerns resulting from water scarcity in upcountry results in debates about the negative impacts on beekeeping, animal husbandry and river fishery as well as ecological destruction and damages in water-rich lands near Artvin, Rize, Trabzon and Giresun. The authors report that four of the seven trout farms in Çoşandere and Akarsu streams in the Altındere Valley of Trabzon suffered serious economic problems due to HEPP construction in 2009. In İkizdere, where six HEPPs stretch to the Black Sea in cascades almost halfway through the İkizdere Valley from the mid of the river basin, the flow of the river is significantly low during the eight-month low-flow period, streams that feed the river in low-flow period either disappear or significantly decrease, the level of the river is low even during the high-flow period, and residents are concerned about their livelihoods mainly based on tea production (Eren, 2018, p.8). The drying of boxwood trees by the river in some villages as well as fish deaths have also been attributed to low water levels. Besides, water pollution in İkizdere has become more visible with the reduction in the flow level of the river. These consequences show that the government’s claim that the downstream habitats will not be adversely affected from run-of-river type power plants designed for sustainable development is unrealistic (Eren, 2018, p.9). Furthermore, as observed in the Munzur project, which includes the construction of

six dams and eight HEPPs, along with the destruction of nature, beliefs about the holiness of water have also been destroyed (Deniz, 2016, p. 180).

The implementation of HEPP projects initiated with the aim of meeting ‘the increase in energy demand’ and reducing ‘dependency on imported energy’ without a formal environmental assessment report, without a basin plan, without considering ecological, economic, social and cultural effects, becomes disputable even when reduction in energy loss and leakage are calculated and more efficient use of energy is demonstrated. In a leaflet prepared by Çiftçi-Sen³⁶ in 2011, Chairman Abdullah Aysu and General Secretary Ali Bülent Erdem stated that it was a reality that water would be captured in pipes, and only 10% would be left to the channel so that there would be not enough water for animal breeders and plant production, and indicated that some of the streams would be captured in HEPP pipes almost from their source until where they spill to the sea:

In this case, farmers will not be able to find water for their fields and gardens and will encounter a dry stream bed when they take their animals to the creek for water. It will become impossible for farmers to provide water even for one cow from tap water with counters against payment. Natural erosion is a must for the functioning and continuity of nature. Any erosion resulting from external intervention is risky since it will accelerate erosion, even more than it needs (Aysu & Erdem, 2011, November 25).

As Aysu and Erdem pointed out any intervention in the balance of nature will lead to the deterioration of this balance. Destruction of nature will have consequences for people and animals as well. However, villagers and farmers may suffer more, as emphasized by Aysu & Erdem, due to the hand-over of landownerships:

³⁶ Confederation of Farmer Unions

As already known, it is not easy to buy land in Turkey since each land has numerous heirs, and thus they are multipartite. It is almost impossible to buy adjacent lands to have large scale fields. Their scale can only be increased when they are expropriated by the state. It is a known fact that the areas where water passes through are fertile and can be easily irrigated. Contractors can use the land for agriculture after being expropriated by the state and they obtain a license for HEPP construction. If an agricultural corporation obtains this license, it may allow them to dominate the market. Farmers' lands are taken away from them, and they become workers of their own land (Aysu & Erdem, 2011, November 25).

The initial inputs of projects based on water are hydrometric measurements that detect characteristics such as rainfall, water level, water flow and quality. However, most of the HEPP projects carried out in Turkey are designed without any measurements that require an appropriate testing time (TMMOB, 2009, p. 56). Selection of sites without proper feasibility work results in cancellation of most of the projects in many environmentally vulnerable regions. Another important issue is that water left to the streams is inadequate. Reactions of local people are attempted to be solved by EIA reports, which, in fact, have serious scientific and technical problems, and often prepared with the “copy-paste” method. Even engineers who are in favor of HEPP projects criticize the planning and monitoring phases of these power plants (Hamsici, 2010, p.35). In addition, EIA reports do not include any information on the transmission lines of HEPP projects, and the potential destruction around these lines. Furthermore, companies that sign a water use right contract are held accountable for the management and use of water supply and any risks that may arise in the future, however although the water use right contract does not allow any transfer of these

rights, the sale of licensed HEPP projects to third parties raises many problems for the protection of public resources (İşlar, 2016, p.143).

As seen in many developing countries across the world, Turkey wants to make the most of its energy resources in order to meet the growing demands of rapidly increasing population and avoid relying on foreign finance and energy sources. However, the lack of an established water policy until recent years can be seen as the lack of political and economic will about the management of water resources. In addition, these projects promise modernization, growth, and, employment and create a perception that economic returns from these dams will be shared equally, which only serves to cover up socio-economic inequalities and reinforces the idea that the state is a legitimate and impartial actor with a compact society discourse (Adaman et al., 2016, p.302). According to Adaman et al. (2016), companies granted with the right to build and operate HEPPs lack any mission to provide services to the area where they are built, and the water use rights granted for up to 98 years are nothing but “water grabbing”. HEPPs do not have the persuasion and consent mechanisms and the idea of collective interest of dams, leading to a peculiar state-society relationship. Adaman et al. (2016) suggest that, within the framework of this relationship, the state has delegated its development commitments to the private sector, similar to the subcontracting process, because HEPP contractors try to build persuasion/consent mechanism with local communities by means of investment in local infrastructure, and creating jobs, while in the meantime, the state maintains its presence as an actor that produces economic incentives and sanctions within this relationship (2016, p.304).

Imposition of these projects full of inconveniences, resulting in several environmental and social problems across the country have met with reactions of

local people suffered or will suffer from these plants as well as urban people and environmental organizations. The next section is about these reactions and related social movements.

5.3. Protests against HEPPs:

‘HES Yapma Boşuna Yıkacağız Başına!’³⁷

“.. ya ben çok eskidim artık vaktim doldu ya da bizim dereyi birileri çaldı!”³⁸,

Emine from Borçka

With the introduction of mass HEPP projects, local and nationwide struggles have begun as a result of discussions about the damages caused by HEPPs, and the loss of public natural resources to private ownerships and companies. The lawsuit filed in 1997 against the HEPPs planned in the Fırtına Valley in the Çamlıhemşin District of Rize can be considered as the first anti-HEPP movement (Erensü et al., 2016, p.10). Privatization of water resources after the centralization of political and legal control on local representative entities have resulted in social movements and huge protests against these projects, in many valleys that have never been heard of, particularly in the Eastern Black Sea region. The Water Assembly of Turkey, which was formed by several environmental activists and non-governmental organizations in January 2010, has prepared a 'Water Manifesto' at their First General Assembly, declaring that they want to ensure constitutional guarantee of the ‘right to nature’ and the public nature of water, advocating that;

- a) Nature exists on its own terms, and humans are only a part of nature, b) Nature is not an object, and it has a specific way of functioning on its own ancient principles,*
- c) Nature cannot be made a commercial commodity, d) Water belongs only to nature*

³⁷ “Don’t Bother Constructing HEPPs We’ll Knock Them Down On Top of You!” A song composed by a teacher and sung by his students during the protests against HEPPs in 2014 in the Boğazköy village of Tarsus, Mersin in Southern Anatolia became a motto of the massive protests.

³⁸ “Either I am too old and my time is up or someone stole our creek.” See Akbaş et. al. 2016, p.247

and is an integral part of it, e) Water belongs to the basin where it is located. It is a natural being, not a source, f) Water can exist only by flowing, and not a single drop of water in nature is wasted, g) Privatization of water and assigning a master to water is unacceptable, h) Principles such as sustainable development, preservation, water use cannot be justified for the exploitation of nature, and i) it is unacceptable to be taken out of the context of life by defining nature, which is the only source of life, as 'Environment' (Aksu, 2016, p.428).

Local resistance movements organized around this platform with the slogan *Anadolu'yu Vermeyeceğiz* (We Will Not Surrender Anatolia), and launched a march, called “the Great March of Anatolia”³⁹ on April 2nd, 2011 from five geographical regions of Turkey to the capital city, Ankara, and made the following statement, which had a broad repercussion in the media:

We, Anatolian people, decided to march to Ankara by leaving our villages, towns and cities in April 2011. Because, Anatolia which has been the cradle of human civilization for thousands of years, is under an unprecedented destruction today (...) The last decade witnessed the appropriation of our water resources by energy companies. Thousands of HEPPs and dams are built on these resources. Our mountains have been subdivided and riddled with holes. Our lives are under the threat of nuclear and thermal power plants (...) The seeds we have harvested for thousands of years are disappearing. Our forests are cut down. As a result of this destruction, the earliest settlements of the world, our common heritage, are being flooded. Countless species of animals and

³⁹ This march, which lasted forty days, was documented by director Hakan Tosun, who accompanied the caravans during the march. The documentary can be accessed at <https://www.youtube.com/watch?v=Kion-YmAlxk>

plants are becoming extinct. Our people cannot get enough of the fertile land where they were born. They leave their village, their homeland. Thousands of people migrate to cities, and ancient Anatolian cultures disappear one by one. (...) This establishment, which only care for benefits of a handful of people continues to occupy all over Anatolia, ignoring our nature, our people and our culture. (...) Therefore, we, Anatolian people, have decided to use our own will to keep Anatolia alive. We're uniting! We know that when we lose everything, we can work and get back on our feet. But never when we lose our nature! We join with everyone with a conscience and beat the pavement of Anatolia for 40 days and 40 nights from seven separate arms, and head to Ankara, running like rivers. We march for our respect to past and the future of our children, for the rights of nature and our right to live. And we do not come back until we get our water, our nature, our roots and Anatolia back. Regardless of any language, religion, race and political opinion, we invite all Anatolian people and humanity to join our march. We will not surrender Anatolia!

(Yeni Yaklaşımlar, 2011, May 20).

A total of 11 caravans of about 600 people, who began to march in April 2011 were stopped by the police when they arrived in the Gölbaşı District of Ankara on Saturday, May 21st after 40 days, and the marchers began a sit-in there. Fifteen people who left the group went to the Vişnelik facility of the Middle East Technical University, and set up their tents, so the struggle continued in two camp sites, Gölbaşı and Vişnelik. On the 17th day of their resistance, participants in Gölbaşı camp applied to the court for unlawful obstruction by the police and decided to continue their

resistance in the valleys under the name “the Resistance For Life Initiative” (Yeşil Gazete, 2011). The local symbols used during this march have become identifying markers of the associations and platforms that participated in the resistance and local people have resisted against HEPPs accompanied with their social and cultural values, enriching their activities with elements such as *tulum*, *horon*, *sarı yazma*, *atmaca* figures, and *ellik* (Şengül et al., 2017, p.2196). However, it is remarkable that Turkey’s first and only protest of rural origin with wide participation of people from different regions across the country, struggling for their livelihoods and life space, has not been elaborated enough with its positive and negative aspects, but only mentioned briefly or never mentioned in social movements literature that followed this period.

Some argue that the attitude adopted by the Türkiye Su Meclisi (Water Assembly of Turkey) with respect to basin plans was interpreted as the organization’s acceptance of water as an economic source and led to deterioration of ties among anti-HEPP organizations (Aksu, 2016, p.401). Nevertheless, Aksu suggests that although the Water Assembly of Turkey, founded under the leadership of Doğa Derneği (Nature Association) and TEMA, was disbanded due to disagreements during or after the march, it should be considered as the first ‘centralization’ effort of the ecology movement in Turkey (2016, p.429). Disputes between the participants of the Great Anatolian March and different actors of the environmental struggle even led to changes in the names of some local platforms, for example Water Assembly of Ardanuç changed its name to *Ardanuç Derelerin Kardeşliği* (Ardanuç Fellowship⁴⁰ of Rivers) (Aslan, 2019, p. 235). In an interview, lawyer Yakup Okumuşoğlu, an active member of the Water Assembly stated that the environmental struggle suffered from disputes between HEPP opponents, and although everybody contributed at the time,

⁴⁰ ‘Kardeşlik’ has been translated as ‘Fellowship’ in English throughout this thesis, since translations as ‘fraternity’ or ‘brotherhood’ in previous reports or publications all have patriarchal connotations.

the movement could be in a different place if they could act altogether in a solid way despite discrepancies, and added that as the movement grew, small groups were formed, and when people more experienced in organized resistance took initiatives, people who viewed the struggle only from the environmental perspective without any ties to an organization unfortunately stayed out of the movement (Erensü, 2016, p.447). A study comparing anti-dam movements in India and Turkey emphasized that the inability to create a homogenous struggle at national level has reflected itself in the outcomes due to resistance with no cohesion (Atvur, 2014, p.294).

Following the decision to continue the resistance locally in the valleys, the anti-HEPP struggle has been maintained individually by groups such as *Derelerin Kardeşliği* (Fellowship of Rivers Platform), *Karadeniz İsyanıdır* (Black Sea Uprising), *Yeşil Öfke* (Green Rage), *Yeşil Direniş* (Green Resistance), *Suyun Ticarileştirilmesine Hayır Platformu* (No to Commercialization of Water), and *Su Hakkı* (The Right to Water) due to disagreements between them. However, there is still a link between these groups and local movements through social media. The members of these groups are either those who are expats of the HEPP sites living in big cities or environmentalists who want to struggle against damages to the nature. However, it has been argued that even in the *virtual space* they do not have cohesion due to political and methodological differences (Şengül et al., 2017, p.2197). The struggle continues by organizing locals in rural areas such as the Fındıklı Valley in Rize, while organizing the urban activists in cities, as in the case of the Loç Valley in Kastamonu (Işıl, 2012, p.17). It has been suggested that this coalition of rural solidarity groups with urban environmental activists represents “a new type of environmentalism that goes beyond protection of nature by framing an agenda around social justice, capitalism and rural/urban divide “(Erensü, 2011, p.8).

On the one hand, it has been claimed that the anti-HEPP movement was able to make the HEPP struggle one of the primary issues of the country's agenda by means of information techniques on mainstream- and social media during the organization of resistance, but only limited public opinion was created (Aksu, 2016, p.403). On the other hand, a study examining the support provided by environmental movements to *virtual space* activities of groups who continue to struggle in *abstract* and *concrete* spaces, argued that anti-HEPP struggles have become inactive so that it would be difficult to refer to the presence of a widespread and strong *virtual space* environmental activism, which will move and empower local movements in concrete spaces to a virtual space (Şengül et al., 2017, p.2193). The latter study which traced virtual petitions used as one of the tools of anti-HEPP struggles found 32 petitions between 2013 and October 2017, 14, 3 and 4 of which had a target of 100, 500, and 1000 signatures, respectively, but all failed (p.2194). Engagement in the digital area under conditions in Turkey is limited since the main actors are urban people who constantly have a relationship of *reappropriation of space*⁴¹ with the rural, however the slogans 'Water is a right, it cannot be sold!', 'The streams are free, they will run freely!' are similar in each of these struggles as a reflection of the shared feature of platforms such as Black Sea Uprising, and Fellowship of Rivers (Şengül et al., 2017, p.2195).

Some anti-HEPP struggles that were maintained on site by the support of urban activist groups have resulted in court-ordered cancellations, while some others that have appeared to have cancelled the HEPP projects fell back where they started

⁴¹ The authors refer to LeFebvre's "reappropriation of space". LeFebvre makes a distinction between city and urban, claiming that the urban nurtures use value and the needs of inhabitants through interactions in a web of social connections, and appropriating space points. Here the authors claim that the main actors in engaging local people with digital sphere were the urban people who did not live in villages, but reappropriated with the village, and it was restrictive in nature because the demands and objections of local actors were filtered by urban actors in order to be able reach to the virtual space.

since the government confronted the arguments used during legal defenses in courts by enacting several omnibus bills. The main issue of the lawsuits opened by the valleys which were often organized as associations against HEPP projects, was the minimum water requirement (MWR), which is called *can suyu*⁴² in Turkish. It can be considered as the amount of water that must remain in the streambed to ensure the sustainability of aquatic life or as the threshold for benefiting from the stream after the flow of stream is diverted for power generation (Eren, 2017, p.388). For example, as reported by Eren, the value which was institutionally determined as 150 liters/s for the Cevizlik HEPP in İkizdere was increased to 500 liters/s, then to 2.800 liters/s, and finally to 2.600 liters/s by the courts. Eren (2017) suggests that the MWR recommended by scientists and the MWR approved by the courts have political context in such a way that the courts have first commissioned relevant experts, and then they dominated the inquiry process in addition to administering it, and by doing that “the scope was reduced from the knowledge presented as ‘truth’ in the EIA report, to the sustainability of aquatic life, and then further to the water flow required by a species of fish” in the valley (p.403).

As indicated by Eren and Büke, the villagers in the Fındıklı District of Rize who had a successful struggle against 24 HEPP projects to be built on the Çağlayan and Arılı streams perceived HEPP projects as a direct threat to their physical existence since the only condition to sustain meta-production was the subsistence relationship established as a common entity with water (2016, p.315). Referring to the necessity of looking at the agriculture-food nexus along with HEPPs, Eren and Büke (2016) point out that due to the neoliberal transformation, the government has

⁴² It means ‘water of life’ in Turkish, i.e. ecological amount of water that is required to sustain aquatic life. In Turkish, this term is also used for the first water that is given to a seed or a plant immediately after sowing or planting

abandoned its protective roles such as the provision of input subsidies, the base price, and guarantee of purchase for crops, and arranged its agricultural policies in accordance with the free market rationale so that small producers have found themselves in a trapped position, and underwent a worthlessness process, and they have tried to find a solution by working longer hours and doing more intensive work, and thus reducing their debts and living standards far below the potential, and in this case factors like HEPPs, dams, mines, and pipelines with a promise to pay for land or any products on it can easily become a life saver (p.319).

However, despite the unfavorable conditions dictated on them by neoliberal policies, farmers can still succeed in their struggle against HEPPs as exemplified in a case report by Eren and Büke (2016). Small farmers in the Black Sea Region living in an ecosystem, where switching to alternative products other than tobacco and nuts is not feasible, are left at the mercy of export companies and traders, who work for multinational food companies due to privatization of purchasers such as TEKEL (tobacco and alcoholic beverages company), Agriculture Sales Cooperatives and Unions and Fiskobirlik (Agriculture Sales Cooperative for Nuts). Eren and Büke (2016) noted that in Fındıklı, the HEPP process was cancelled before construction has started thanks to a strong struggle with a wide participation around the demand for ‘right to water’. “Organization” and “wide participation” was the key in their success. According to the authors, gradual politicization also played a significant role during this period of struggle by direct confrontation with representatives of the HEPP company, blocking roads, breaking into official company/government meetings, taking away measurement devices, water samples, and computers, calling them to account, organizing meetings and festivals, and organizing streets (p.328). The villagers were aware of the fact that they would not succeed only with legal struggle,

and they themselves were the main pillars of the struggle, and that's why they won their case, and they also took the advantage of working in non-agricultural jobs so that they were able to stand upright against job promises made by the HEPP company to abandon their struggle against HEPPs (Eren and Büke, 2016, p.331).

Similarly, lawyer Yakup Okumuşoğlu emphasized in an interview that all of the cases he attended had a social opposition aspect, and although the law provides a legal and legitimate area, the struggle cannot be sustained without the presence of a social opposition (Erensü, 2016, p. 448). Another lawyer, Fevzi Özlüer, a member of ÇEHAV (Lawyers of Environmental and Ecologist Movements), expressed in an interview that with the introduction of accumulation-based development model in the mining, construction and energy sector across Turkey, environmental problems have become no longer an issue of urban people, but also of rural people since they now have a direct effect on rural life, as well (Erensü, 2016, p.453). This also reminds us Eric Wolf's (1969) argument in his article *On Peasant Rebellions* that peasants tend to be conservative, even passive component of their community, but that passive trend may change if their minimal living conditions are threatened (p. 169).

When we look at the struggles that have been reflected in the press about the HEPP projects in valleys as hardly known as Solaklı, Fındıklı, Loç, Kamilet, Alakır, Ahmetler, Sülekler and Fırtına, it is important to highlight that the anti-HEPP movement is, in fact, a movement of local people living in these valleys although the projects have also been protested in cities and the local struggles supported by urban people. As seen in the example of Artvin, the struggle was also supported by groups with high-levels of education, white collar professional groups with high socio-economic status, who have a strong affiliation with the valleys under the threat of HEPPs and have a political stance even though they do not have a close relation with

natural resources (Adaman et al., 2016, p.308). Although public institutions engaged in energy and water use and HEPP companies portray this struggle as a revolt of a handful of environmentalists, it has been observed that people living within the borders of provinces like Rize, Tokat, Erzurum, Artvin, and Muğla have fought against HEPPs to protect their living spaces. Among the factors that trigger reaction of locals against these projects are reduction in agriculture due to restricted access to water, anxiety for subsistence due to reduced efficiency, changes in micro-climate conditions, drying pastures and damage to livestock, ecological destruction and decline in diversity, living spaces becoming unlivable, and concerns about displacement as well as the initiative undertaken by private companies with an understanding of profit-based marketization, as it was observed in the anti-HEPP movement in Artvin (Adaman et al., 2016, p. 307).

Hamsici asserted that although associations he describes as “capital-supported professional environmental organizations” such as Greenpeace, Nature Association and TEMA Foundation aimed to lead the struggle against the HEPPs, particularly in the Black Sea, they have failed due to reactions from the villagers (2012a, p.294). The Black Sea Uprising Platform, one of the powerful movements of the anti-HEPP struggle, also described such organizations as ‘Trojan horse’, and developed a questioning, reserved and distant attitude towards them (Aksu, 2016, p.421).

Villagers used various tactics to prevent the implementation of HEPP projects, such as intervening with EIA information meetings, blocking entry of company cars to the valleys, expelling company representatives from their valleys, organizing mass press releases, meetings and marches, and keeping guard in tents (Hamsici, 2012a, p.295). However, these efforts were not welcomed by the government. For example, in the Zile District of Tokat, gendarmerie troops intervened in the HEPP protests of

about two thousand people by using pepper spray and pointing guns at local people on 16 March 2015 (Hürriyet, 16 March 2015). In the Solaklı Valley in Trabzon, one of the hardest-hit places of hydro-energy investments with a total of 36 HEPP projects, gendarmerie and riot police used force and pepper spray to disperse around 200 villagers in November 2011, and revisited the valley with a force of 638 people in June 2012 to prevent the villagers from trying to stop construction activities of a HEPP project expected to be cancelled, and they accompanied the construction machines of the private company until the site (Oğuz, 2016, p.200). Associating the HEPP struggle in this valley, located in a steep and remote geography, with Martinez-Alier and Guha's concept of 'environmentalism of the poor',⁴³ Oğuz argues that while the struggle in Solaklı Valley cannot be reduced only to economic values, it represents environmentalism of the poor including rights and cultural values (2016, p.202). In addition to socio-economic and ecological risks, cultural threats due to HEPPs are also of serious concern. For example, Oğuz (2016, p.215) calls attention to the threat of an inevitable migration along with the extinction of a deep-rooted cultural heritage and a very specific language such as Romeyka⁴⁴, posing a threat to identity in the region, where the foot of each tree, and top of each rock have a name in this specific language (Erensü, 2016, p.58).

Yusufeli Dam, one of the large dam projects on Çoruh, was to flood the entire town of Yusufeli, and thus, its inhabitants tried to stop the project by initially organizing on the internet, and then through a local association. Their claim against the Ministry of Energy and DSI resulted in the withdrawal of European banks and companies from the project, however negotiations with the government started in 2006 when the government declared that they will finance the project themselves

⁴³ It defines struggle of poor or indigenous populations to preserve their own livelihoods against a threat.

⁴⁴ Last surviving dialect of Greek spoken in North-eastern Turkey (Sitaridou, 2013, p.98).

(Evren, 2016, p. 270). The most important factor in the withdrawal of European creditors was that anti-HEPP NGOs used exemption from the EIA Report as leverage against the project. With local struggle under the leadership of Yusufeli Cultural Association showing signs of fatigue following the government's decision of financing the project, the political climate of the town changed, bringing the ruling party to power in the local elections, after which everything was perceived as pro-government or anti-government, culminating in a decline in the anti-dam struggle due to a sense of alienation, hesitation and uncertainty (Evren, 2016, p.281, 287).

On the other hand, for Yaprak 1 and Yaprak 2 HEPP projects in the Central Black Sea region on Göğdere in the Yeşilırmak basin on which around 100 HEPP projects were to be installed, the locals did not oppose the project at first, with an expectation of the availability of electricity and drinking water, but they regretted it after the start of the projects. The resentment of local people was expressed in the words of the President of the Taşova Forest Villagers' Social Cooperation and Solidarity Association: "How one destroys his (her) future, region, forest, plateau, road to such an extent!" (Hamsici, 2012b, p.51).

During the full swing of anti-HEPP protests, in a statement made to journalists the Minister of Forests and Water of the period tried to underestimate the local aspect of the protests, saying that "There is a certain group of people, going from one place to another. Sometimes they are in Artvin, sometimes in Rize, some other times in Trabzon. I don't know those in Tokat, but those who travel between Trabzon, Rize, Artvin and Erzurum are all same people" (Sendika.org, 2014, November 12). It is obvious that he was well aware of the local aspect of the struggle when during the same statement he claimed that the struggle against HEPPs continued in a wide geography, and these urban-based activists provided support to local people. This was

one of the strategies pursued to alleviate the public reaction against the forceful ways in which local protesters were treated by the law enforces. This way the minister both tried to marginalize the activists and deprive the movement of its localness by presenting it as an action of a non-grassroots organization. The second strategy on the part of the government was to advise HEPP companies to have their own security units to avoid the undesired images of law enforcement officers confronting local people and exerting pressure and force on them on behalf of the private companies, as in the example of Ahmetler Canyon in Antalya (Şahin, 2013, October 9). Later on, private security guards of the HEPP company in Ahmetler village harassed villagers with guns, and 3 villagers were injured due to shots fired during the brawl (Su Hakkı, 2013, November 14).

While taking the protests to international level, particularly in projects where international banks and organizations are involved as in the example of Ilisu dam, has helped the cancellation or discontinuation of construction activities, the weakening of protests whenever domestic finance is involved is an important indication that grassroots participation was not enough. One of the most important reasons for this detachment is the frustration experienced by local people getting used to living with uncertainty, becoming unresponsive to and alienated by their own situation with an account of dam for years (İlhan, 2016, p.350). On the other hand, it has been argued that struggles at the local level cannot go beyond the boundaries of social relations rooted in space and local history, and it turns into prevention of a certain project in a process where fellow-townsmanship is reproduced based on their common birthplace, and delimits the struggle without establishing a relationship between the political and economic system and HEPPs and themselves (Şengül et al., 2017, p.2198). Şengül et al. (2019) also suggests that the cautious and non-committal attitude of major

environmental organizations to local movements has posed an obstacle to their unity in abstract and concrete spaces (p.2200).

Nevertheless, Aksu (2016) indicates that the anti-HEPP struggle has focused on three levels including legal, active resistance and developing public opinion, and significant achievements were obtained at all levels (p.400). Referring to the anti-HEPP movement initiated in Çamlıhemşin in 2011 as the first wave, Aksu (2016) points out that the valleys that achieved cancellation or suspension of execution at courts rested on their laurels and relented, however regions with multiple HEPP projects continued their struggle (p.402). Sometimes court decisions also have no influence on the outcome, as in the case of Ilısu dam, since the projects can be revived by enabling domestic finance sources as a result of delays due to international pressures (İlhan, 2016) or through re-intervention of government using some other methods that we can call ‘counter-strategies’ by reactivating a project that has been cancelled by a court decision through another HEPP company. One strategy on the part of HEPP companies is to launch a ‘counter-legal fight’ by filing suits against public/people to discourage protestors by intimidation policies as in the Loç Valley within the borders of Cide District, Kastamonu (Erensü, 2016, p.483) or in the Boğazpınar village of Tarsus District in Mersin. Apart from these law-based strategies, the government has attempted to take a wide range of initiatives to produce social consent and apply force; a combination of actions and strategies has been put into action to change the public opinion and behaviors through the use of common media tools, the use of force such as laws, soldiers, security guards, i.e. by means of ideological and repressive state apparatuses, and guide public sphere in order to create profit maximization for companies. From this perspective, the mainstream media as an ideological state apparatus has entirely become ‘multi-channelled but one-voice’

media as a result of handovers in media ownership structure between 2007-2013 (Sözeri, 2015, p. 12-13).

Early years of anti-HEPP struggles witnessed wide media coverage because the ownership structure in mass media had not changed hands yet, while as of 2015 there has been almost no news on this subject in mainstream media, and if any, they have been covered in favor of government policies. Since then, mainstream media has been the most important apparatus of the public sphere guided by hegemonic rhetoric. The circulating public accounts have been contained not only by pro-government broadcasts, but also by making these struggles publicly invisible and restricting access and participation of anti-HEPP groups and locals to mainstream media. Therefore, news about anti-HEPP struggles are, now, only accessible through websites of NGOs that are components of the movement or alternative media or opposing-public sphere, which has “provided new pockets of resistance by creating opposing public spheres in the virtual platform as ne new public realm” (Özturan and Örgel, 2015, p.85).

Erensü (2016) indicates that compared to the anti-dam movements across the world, we need to look at what has happened in Turkey in the past decade through a different lens since the movements in Turkey were engaged in small-scale HEPPs, except for Ilisu and Yusufeli dams, and the struggle was, in fact, not against the developmentalist government, but against private investors. The anti-dam movements in Turkey progressed almost independently from Western ecological and environmental activism, again except for Ilisu and Yusufeli dams, which provides striking evidence that neoliberalism is shaped in different geographies, in different ways and in different periods (Erensü, 2016, p.52).

Perhaps one of the sincerest critiques levied against neoliberalism and its economic growth fetish⁴⁵ is expressed by a businessman in the Solaklı Valley: “...If he has no stream, no human being, no hello, no culture, humanity, hugs, *horon*, *kemancha*, why grow? What will he do? ...” (Oğuz, 2016, p.211).

Following a review of the development theories, various aspects of water, ecological anthropology as well as negative impacts of HEPPs in Turkey and other countries, next section will focus on my fieldwork and findings in the Aksu Valley of İspir, Erzurum Province after construction of two HEPPs in the valley.



⁴⁵ A reference is made to the article by Akbulut & Adaman titled “The Unbearable Charm of Modernization: Growth Fetishism” in Yeşil Gazete on 17.07.2013.

6. FIELDWORK AND FINDINGS

6.1. Erzurum

Situated in the Northeastern Anatolian region, Erzurum is the fourth largest province of Turkey. It was an important center on the itinerary that used to be called the Silk Road. It has preserved its characteristics as one of the leading economic, political, military as well as cultural centers in the region throughout history. It extends on the East-West axis as a plain, and on the North-South axis as an upland. Urbanization rate, annual population increase, gross domestic product, and ratio of industrial workers to total employment is below the average in Turkey, while the ratio of employment by agriculture to total employment is above national average (Cengiz & Akkuş, 2012, p.67).

6.2. İspir

İspir, located in the upper reaches of the Çoruh River Valley, has been an important hub on the road connecting Eastern Anatolia with the Eastern Black Sea region and Caucasias throughout history. Administratively, it is subordinated to the Erzurum Province, however geographically it is part of the Eastern Black Sea region. The remains of a historical fortress and garrison found within the boundaries of the district give an important clue about the history of the region. The mountaineous district situated on the Central Çoruh Basin covers an area of 2805 km² (Aktemur & Kukaracı, 2004, p.3). The name İspir (*Speri* in Georgian, *Sper* in Armenian) is thought to derive from Saspers tribe of the Saka Turks, and has been settled by many civilizations such as Hurrians, Urartians, Saka (Scythians), Medes, Persians, Romans, Byzantines, Sasanians, Umayyads, Abbasids, Seljuks, Ilkhans, Karakoyunlu Turkomans, Timurids, Akkoyunlu Turkomans, Kingdom of Georgia, and the Ottoman

Empire (Çakır, 2009, p.109). It is referred to as Kulka (Qulha) in Urartian cuneiform inscriptions. It is mentioned as *Saspeir* in the History of Herodotus, *Hesperit* by Xenophon, and *Sber/Sper* by Byzantine Fastus (Özger, 2007, p.276). According to Özger, İspir was one of the first settlements conquered and settled in Anatolia by Turks (1408), and due to its location, it witnessed numerous movements of migrations and military campaigns. We can tell from the variety of archaeological remains, whether well-preserved or completely in ruins, spreading over a large area that İspir and its surroundings have a rich history and culture. The ruins of the fortresses, especially İspir Fortress, churches, and caravansaries, bearing the traces of different civilizations dating back to BC prove that the region played an important role in the history as a trade center. According to earliest data from the cadastral record books after the conquest of the region, the district covered a larger area in 1520, with a population of 19.869 people, of which 7.579 lived at the district center, and 12.290 in villages (Özger, 2007, p.279).

According to its residents who lived in the town in the 50s and 60s, İspir was a "withdrawn community, with almost no ties at all with the world, economically, a town just like what it was referred to as closed economy in books", implying that the towns and villages were mostly self-sufficient, and relied on outside sources only for sugar, salt and linen (Kösoğlu, 2008, p.7). In the proceedings of a local symposium on the history, culture and economy of İspir-Pazaryolu that was held in İspir between June 26-28, 2008, Kösoğlu indicates that every single citizen was responsible for the well-being of each other in the district, all the children wandered around freely, and safely, all the locally unavailable material and gas oil came to the town a couple of times every year by camel trains, and a large street market was setup every Friday as well as a leather market once a year, which was mainly for the sale of livestock raised

in the region. He adds that İspir's products sufficed for subsistence, and besides some neighbouring towns from Kaçkar Mountains, and other Black Sea settlements supplied their needs such as wheat and corn from İspir. Although it was a district of Erzurum, first they had to travel to Bayburt, stay overnight there, and then travel to Erzurum by lorries or coaches since there was no available direct route to Erzurum at that time. During that period, an alternate road to Rize was built, but it was not always accessible due to bad weather conditions. An expat movement gained momentum in those years due to the opening of new roads, and the closed economy started to dissolve gradually while new products such as watermelons and tomatoes were introduced, however it took a long time for people of İspir to embrace those new fruits (2008, p.9). Additionally, since the father of Kösoğlu was a trial attorney, he was familiar with the cases in general and stated that the cases were mostly about land, uplands, and water, all of which are very valuable for subsistence.

In 1990, the population of the town was 34.172, while it fell to 29.337 in 2000, and to 18.381 in 2007 (Sever, 2008, p.544) due to increased migration from the 1950s based on economic, regional and social factors. It is noteworthy compared to population of the district in 2012, with a total of 16.338 people, 6.570 living at the district center, and 9.768 living in villages (KUDAKA 2014-2023, p.103). A study conducted in the Kırık region of İspir, where almost all of the households had at least one relative who migrated to cities, found that the factors triggering the migration included children studying outside the village, lack of social security, number of relatives migrating, household head or a relative in expatriate whereas factors such as the amount of grassland, use of others' land, livestock, and number of cattle restrained people from migrating (Güreşçi & Yurttaş, 2008, p. 185). Among factors that played

significant role in migration were multipartite and scattered nature of arable lands, simultaneous activities of crop-livestock, lack of modern agricultural machinery use, difficulty in irrigation as well as lack of employment areas other than limited number and capacity of industry (Sever, 2008, p.545).

Wherever they migrated, people from Ispir largely dealt with bakery, which had a history of nearly 200 years in their homeland (Aksoy & Yılmaz, 2008, p. 199). The bakers from Ispir who went to work in Russia before the Russian Revolution, and returned to their hometown after the revolution, scattered to different parts of Turkey along with migrations and continued this profession, which was performed mainly by the non-Muslim population during the Ottoman Period. According to Aksoy and Yılmaz, half of the approximately 120 million breads baked in Turkey are produced by bakers from Ispir (2008, p. 200). They add that based on the data from the Bakers Federation, more than 150 of the 250 bakers producing bread in Ankara alone are from Ispir.

In general, the economy of the district relies on horticultural crops and vegetable gardening (Gündoğdu, 2008, p.178). Local bean and pepper-melon are peculiar to the region. Approximately 3249 tons of Turkey's annual production of 225,000 tons of beans are produced in Ispir in the Coruh Valley (Elkoca, Kantar & Yıldırım, 2008, p.303). Mulberry and mulberry products (fruit roll-up, dried mulberry, molasses, churckhela) are among the most important sources of subsistence. The district is also rich in forest land, open pastures and grasslands, endemic plants and animals. Fiftyfour percent of the land is used as grass and pasture (Akbulut et al., 2008, p. 381). Livestock breeding is mostly carried out in higher villages, the uplands and pastures of these villages. Trefoil and white clover are naturally available feed crops. In addition, kapari, rosehip, thyme and salep are

abundant in the region. In recent years, greenhouse cultivation and beekeeping have gained importance. İspir is poor in forests, and due to its location, it is in transitional zone from Eastern Anatolian Steppe to rich Eastern Black Sea forests, and forests are especially concentrated throughout the Coruh Valley (Bektaş, Tizi & Baki, 2008, p.579). Red-spotted trout are abundant in the natural environment in the district, which is rich in cold water sources, and trout production is carried out in several places in the district. Unfortunately, rich wildlife makes İspir and its surroundings attractive for hunting tourism. Geological reserve of copper deposits of 200 million tons are remarkable for mining. According to Mineral Research and Exploration (MTA) surveys, there are copper, molybdenum, coal and marble mining formations in İspir and its vicinity (Demirci & Yüksek, 2008, p. 239). As of 2008, there were 61 mine license areas in İspir region, three of which were already active. Within the district borders, there are ongoing 29 HEPP and 4 dam projects (KUDAKA 2012-2023, p.106), and according to KUDAKA (North Eastern Anatolia Development Agency), among the weaker aspects of the district in terms of development are destruction of HEPPs on the rich flora and fauna of the region, and lack of control and water shortage of HEPPs. In addition, transportation problems resulting from HEPP and dam constructions have a negative effect on the tourism potential of the district.

6.3. Çoruh River

*Kara bulut kimi dağa çökersin
Açar yumar Ulubel'e tökersin
Dört kişinin bellerini bükersin
Bele firget ölüm sebep elinden
Sebep elinden de firget ölümünden⁴⁶*

Ulubel Koşması (Ballad)

⁴⁶ From a ballad, telling the story of four young girls who went to Çoruh to collect beets on a sunny, calm air, and drifted down with the current and drown due to a sudden change in the river flow.

It is not possible to think about İspir and its surroundings without Çoruh River, which also has a significant role in the folklore of İspir. Çoruh is a 431 km long river, rising in the Mescit Mountains, it flows through the towns of Bayburt, İspir, Yusufeli, and the cities of Artvin, and Batum (Georgia) and pours into the Black Sea⁴⁷. Çoruh Valley is considered one of the 34 biodiversity hotspots by international environmental protection agencies such as the WWF and the CI⁴⁸ (Özgül, Zengin & Turan, 2008, s.265). In the meantime, it is considered a natural border between the Eastern Black Sea Region and the Eastern Anatolia. Çoruh is one of the world's fastest flowing and deepest rivers. With a target of generating power from water resources as a renewable energy, the Ministry of Energy have planned to construct 10 dams on the mainstream, 60 run-of-river type HEPPs, and 5 dams on the major tributaries of Çoruh River (Meral, 2008, p.216). The large dams include Laleli, İspir, Güllübağ, Aksu and Arkun dams on the Upper Çoruh Basin; Yusufeli and Artvin on the Middle Çoruh Basin; and Deriner, Borçka and Muratlı dams on the Lower Çoruh Basin (Sever, 2008, p.543). Upon completion of the entire project, a total of 8137 hectares of land will be flooded, including 5015 hectares (62%) of forestland, 63 hectares (0.8%) of settlements (Yıldırım, Özalp & Yüksel, 2015, p.4). Additionally, a total of 8412 people is estimated to be displaced, influencing 1 district center (Yusufeli) and 7 entire villages, 22 other villages to a large extent, and 32 other villages partly (Sönmez, 2012, p.216). Furthermore, endemic flora and fauna species will be critically endangered due to inevitable destruction in their natural habitat as a result of these dam and HEPP projects, and thus immediate action is required to put some biodiversity areas under protection (Çakmakçı et al. 2017, p.1789; Külekçi, 2016, p.132).

⁴⁷ Ch'orokhi in Georgian (pya)

⁴⁸ Areas rich in biodiversity that is threatened by human activities

A significant portion of the area with intense olive cultivation activities along the Çoruh River have been flooded after construction of the Deriner Dam, and a total of 28 villages were affected, including 2 villages (Zeytinlik and Oruçlu) entirely, and 26 partly (Orhan & Gök, 2016, p.133). In a study carried out in these evacuated villages, the authors indicate that displacement resulted in many economic and sociocultural consequences; the state was not involved in determination of new settlements; the money paid for migration and expropriation was spent for consumption, not for any investments; and incentives and support should be provided to local people to resume olive cultivation and fruit farming.

In 1993, Çoruh River hosted the 4th World Watersports Championships, since it used to provide excellent conditions for white water tourism for sports purposes (Sever, 2008, p.552), however water sports that once became very popular such as rafting and canoeing are now abandoned due to the water of the river that became stagnant after the construction of dams in the Çoruh Valley. In fact, Çoruh River was an important source of income thanks to its rafting course before the construction of large and small scale HEPPs. Here is an excerpt from the goodbye letter of a tourism company that organized the initial rafting tours in the region:

In 2009, we witnessed the first developments in the construction of Çoruh dams, which the state has been planning and completed its tenders for years. The Ispir valley has been almost destroyed. Now we only have a few days left to see the world-famous cascades, the white riders of Coruh. The Alternative tour was a first in Çoruh in 1992. Maybe 2011 will be too late for this! Coruh's water will no longer be free... He won't find the şarlaks (waterfalls-pya) that will go up the fish, Coruh's. Farewell to Çoruh who gave us our free spirit... Goodbye to you. ("Alternatif Tour" n.d.)

The Çoruh River Basin contains large and small water sources, streams that run during different seasons; the major streams that feed Çoruh River are Ovit, Çatak, Zatin, Büyükdere, Çamlıkaya and Aksu. A report prepared for the protection of the endemic flower of İspir çingırağı (*Campanula troegerae*) which is on the brink of extinction due to its low ecological tolerance points out to different microclimatic characteristics of the Çoruh River, contributing to the faunal and floral diversity in the region (Şahin & İmamoğlu, 2017, p.15). The authors indicate that plants that are normally cultivated in warmer geographic regions such as rice, paddy, and pomegranate grown between Çamlıkaya and Yusufeli are specific to transition climate. Çoruh River is also located on the migratory routes of birds.

6.4. Aksu (Salaçur/Salaçor) Valley

Although Aksu Valley is administratively located in İspir District of Erzurum in Eastern Anatolia, geographically it lies on the southern outskirts of the Kaçkar Mountains in the Eastern Black Sea Region. It is 163 km from the city of Erzurum, and 20 km from İspir. Within a transition zone between the terrestrial climate of Eastern Anatolia and the Eastern Black Sea climate, Aksu is a green and narrow valley that begins at the confluence of Aksu Stream and Çoruh River at an approximate altitude of 1000 m, and extends to the borders of Hemşin District in Rize Province, ending at Verçenik Hill, the peak of the Kaçkar Mountains at an altitude of 3711 m.

There are four villages in the 35 km long valley; Aksu Village consists of 18 quarters situated on both banks of the streambed, Yedigöl Village is situated on the Northern end of the valley, reaching to the Kaçkar Mountains while Çatakkaya and Yıldıztepe villages are situated on neighboring valleys. Starting at the confluence of Çoruh River until the 10th km, the narrow valley is covered with cultivated small

lands, orchards, and forests, and the area between the 10th and 15th kms consist of various forestlands and woodlands. The highlands after the 15th km consist of arable lands and meadows (Aksu, n.d.). Of 330 dwellings in the valley, 165 are in 4 quarters of the Aksu village, 70 in Çatakkaya, and 85 in Yedigöl, and 573 more in Yıldıztepe. The valley population varies depending on the season of the year. The winter population consists of the 450 permanent residents, mostly the elderly, and in summer it rises to approximately 2000 people. According to the 2013 address-based census records, the population of Aksu Village was 443, the most densely populated village in İspir while the population in Yıldıztepe, Yedigöl, and Çatakkaya villages was 49, 268, and 75, respectively. The local people indicated that approximately 200-250 years ago, their ancestors were settled in the upper valley in Gahmut (present Kuşdili), and then some moved down the valley to Kadıbağı, Gılok and Dereagzi quarters due to tough weather conditions. This account is parallel to a study on traditional houses in Yedigöl village located on the upper part of the valley, which confirmed that the houses in this villages were built at late 18th century, 19th century and 20th century based on their inscriptions (Köşklü & Önal, 2017, p.178).

The architecture of the traditional houses also reflects transitional geographic feature of the valley between Black Sea and Eastern Anatolia. They are usually small houses with a tandoor and a barn on the ground floor, and rooms without an anteroom on the second floor. Almost all of the structures have a tandoor house (*tandirevi*, *yerevi* in Gümüşhane and Bayburt, *aşhane* in Black Sea region) with an underground tandoor inside the house, which has a rectangular plan, used for daily eating and drinking, bathing, resting, chatting as well as sleeping (Önal, 2015, p.3). My informants told me that they are still gathering around this tandoor usually located at the center of a large room to keep themselves warm, and sleep by extending their legs

toward the tandoor in wintertime. The chimney of the tandoor is made by narrowing the walls upwards from all directions, and at the top there are shutters locally called ‘*aşgana*’, usually 80x80 in dimension. These shutters are opened and closed using chains hanging from the ceiling. The top of these tandoor houses is covered with a *kırlangıç/tüteklikli* roof or rafter roof. *Kırlangıç* (sparrow in Turkish) roof is a traditional covering made of wood with a dome shape in the Erzurum region (Özkan, 2012, p.20). Since the winters are very cold, the outer walls of the houses are very thick, reaching up to 75, 80, 90,100, even 120 cm in some houses. Most of the houses are made of rubble walls, and they have wooden runner beams (*hatıl*) to fortify the system against destruction (İnan & Tanyeli, 2014, p.11) since the region is located on a seismic belt. The outside store houses are topped with a saddle roof and covered with metal sheet to avoid weather conditions. The stables are very simple, and rectangular in plan. They are usually topped with wooden rafter roof. The barns (*merék*) used to store hay and feed for animals are seen near the houses dealing or used to deal with livestock (Önal, 2015, p.7).

The consanguineous marriage is common in the valley. Although there is no official source to confirm it, locals reported that almost 90% of villagers are related to each other from either maternal or paternal side, which is extremely higher than the average rate of %20-25 in rural areas in Turkey (Türkiye Aile Yapısı Araştırması, 2014, p.132). As a self-sufficient community until the 1970s during which a major demographic change occurred in the valley, some young men went to big cities to look for a job due to sources of subsistence that fell short with increasing population. After a while, some were followed by their immediate families. Now, most of the families have two homelands; ‘place of birth’ and ‘place of breadwinning’. A vast majority of those living in large cities are engaged in baking as throughout Ispir

district. Some work as seasonal workers in other cities, especially at workplaces of their fellow citizens, and return to the valley in summer to deal with their own land and orchard. This seasonal population diversity demonstrates a complex relationship between village and city life as will be discussed later. Due to its geographical location, the valley is isolated, especially in winter, while there is a high traffic of people coming and going from/to place of breadwinning from April to October, particularly during religious holidays.

While the rate of arable lands in Erzurum Province is 17.93%, it is approximately 6.70% in İspir (Öztürk et al., 2008, p. 279). As reported by Necati Aksu in his website, it is not suitable to use agricultural machinery such as tractors and reapers in the valley due to large degree of inclination and narrowness of the arable lands, therefore the locals made terraced orchards and gardens by carrying soil and partitioning with low-earth banks. No artificial fertilizers or pesticides are used for agriculture and vegetation, and since the soil and water sources are not contaminated yet, there is an abundant variety of produce and organically cultivated plants. The water temperature does not go below 10 °C, therefore it has ideal conditions for trout farming. In addition to the suitable climate and water conditions, lack of potential contamination with inorganic or industrial wastes provides good opportunity for aquafarming (Aksu, n.d.).

The economy of the valley is based on fruit and vegetable-based production in the lower parts of the valley, and livestock in mountain villages where mainly cheese and butter are produced. For example, *civil* cheese, dried cheese, breakfast butter and honey are local products made from livestock, while beans, mulberry, dried mulberry, mulberry molasses, mulberry roll-up, apple, dried apricot, purple basil and cranberry are from locally grown products. Besides the dried beans identified with the name

Ispir in Aksu valley, fruits such as berries and mulberry products (kavut, roll-up, dried mulberry, molasses, mole, etc.) are produced and various winter vegetables are grown. The majority of the farming performed on the terracing created by transport soil consist of local varieties, such as pears, quince, red and white berries, apples, plums, cherry, apricots, turmeric, peaches, pomegranates, walnuts, cranberries and grapes. In highlands, all naturally grown *Berberis* (barberry), *Prunus* (wild plum), *Cotoneaster* (tavşanelması), *Crataegus* (hawthorn), *Sorbus* (eğvit), *Rubus* (raspberry and blackberry) and *Mespilus germanica* (medlar) species, apples, cherries, pomegranates, nuts and countless medicinal and aromatic plants grow naturally (Aksu, n.d.).

The region also contains many plant types that can be used in the field of medicine, and pharmacology, chemistry, cosmetics, and also for making beverages, and other plants that can be used as spices, dyestuff, plant protection, extending shelf-life of processed food, ornamental plants, and many other plants that can be used for their anti-oxidant, and anti-microbial features in the alimentary industry. Other species that are common in Aksu Valley and are economically important are as follows: *Thymus* *Origanum* and *Satureja* that are rich in thymol and carvacrol, *Nepeta* that is used as herbal tea; aromatic *Ziziphora*; *Melissa* (lemon balm/melissa) its leaves are used as spice, herbal tea, its essential oil is used in the food industry, cosmetics and pharmacology; *Menta* (mint/pennyroyal) the source of menthol used in the pharma industry, food industry, in gums, toothpaste and cosmetics; *Salvia* (sage); *Ocimum basilicum* (basil) is the only spice plant that is cultivated locally; *Hyssopus officinalis* (hyssop) its essence has antimicrobial and antioxidant features; some types of *rubus* (raspberries and blackberries) rich in antioxidants, widely used in fruit juice beverages, yoghurt, jellies and jams, syrups, liquor and frozen products;

Capparis (caper plant) that is planted to prevent landslides, an important source of alimentation, and for pharmacology; *hibiscus* used for jellies and jams, fruit juice herbal tea, and for the vitamin enrichment in fruit and vegetables juices; *Hypericum* (Clusiaceae) (Aksu, n.d.).

Bears, grizzly bears (endangered), wild goat (endangered), chamois (endangered), wolf, fox, wild rooster, ur partridge, red-legged partridge, magpie, common raven, starling, falcon, hawk, squirrel, sparrow hawk, owl, eagle owl, woodcock, wild duck, jackal, wild boar, vulture, bearded vulture, griffon vulture, weasel, badger, porcupine, various snake and lizard species, wildcat (almost extinct), otter (endangered under IUCN protection), hare, rock pigeon, stock dove, black bird, eagle, many insect species, many butterfly species (around 138 based on researches), Caucasian bee, fly species, groundhog, waterfowl, bee-eater, and migratory birds such as storks, swallows are among the known species in the area. Every year, birdwatchers visit Aksu Valley, particularly Yedigöller Village. The Verçenik Region has been declared as a Wildlife Protection and Improvement Area by the Ministry of Environment and Forestry.

Beekeeping is common in almost all the neighborhoods of the valley. Due to its geographical location and ecological environment, honey produced in abundance is a source of subsistence for a significant number of families who reside in the valley. Honey production reaches approximately 20 tons per year with the number of honeycombs around 900-1000 (Aksu, nd). A difference of 1-2.5 months for the start of the season between low altitude places and high-altitude places allows beekeeping in lower parts in spring and uplands in summer (Karlıdağ & Güreşçi, 2008, p.425).

6.5. Aksu Stream

Aksu Stream is mainly fed by a total of 38 large and small natural glacial lakes, including Yedigöller, Çiftgöller, Verçenik Malgöl, Hemşin Lakes, and Çatakkaya Lakes, and floodwaters from the range of Kaçkar Mountains at an altitude of 2000 to 3711 m pour into the Çoruh River at 850 m at the end of Aksu Valley (Çakmakçı, Erdoğan & Ayyıldız, 2008, p.461). With a clean and drinking quality water, the stream is inhabited especially by red spotted trout (*salmo trutta macrostigma*). Since the area surrounding the Çoruh River and tributaries is rich in flora and fauna, the region has an important eco-tourism and/or eco-village potential (Çakmakçı et.al, 2008; Külekçi, 2016).

6.6. Meeting with the valley and first impressions

*“While cherries grow on one end, snowdrops sprout on the other end.
Such a unique valley!”
(M.D., Aksu Valley)*

When you take the Rize-İkizdere road through the Black Sea highway and start climbing the Ovit Mountain, you leave behind the lush cover of vegetation of the Black Sea and enter the Eastern Anatolia steppe with steep and naked cliffs begin while navigating between clouds and twisting fog. I would, later on, recognize that in this region where nature spontaneously draws boundaries, natural conditions and climate have a significant impact on the culture. Numerous HEPPs we saw on İkizdere along the road, were precursors to hundreds of other HEPPs that are being built and/or were built in the region. When we arrived in Ispir, it took me a long time to conceive that the water flowing on one side of the road was, in fact, Çoruh River, so called “the fastest flowing” river in Turkey. After crossing the Güllübağ Tunnel, the magnificent image of the canyon, was immediately lost in a cloud of dust created by bulldozers and trucks that ran for road construction. After passing by the HEPPs

built by SOYAK and HİTİT within few seconds later, it became clear that this part of Anatolian geography, including both Black Sea and Eastern Anatolia was under the attack of big-scale development projects.

As we climbed the path of the narrow Aksu Valley, which we arrived late in the afternoon after a long journey, the trees surrounding the road in parallel to Aksu stream, the small lands cultivated by terracing, and the steep cliffs rising at the end of these small lands gave a quick idea about the harsh living conditions of the valley. Later, one of the villagers (Y.A, 56 year-old male) told me that "In 1974, everyone voted for CHP⁴⁹ during Ecevit period, hoping that he would build the road to the valley, but they couldn't finish it in the following 4 years, and when Demirel became the prime minister, he pulled back all the dozers and machinery. Our road could only be built after the 80s when Özal became the prime minister.". Actually, the asphalt road reached until the border with Yedigöller, where the second HEPP was built, however the HEPP contractor deposited all the debris from the tunnel construction onto the road and banks of the stream, which deteriorated quality and level of the asphalt to a great extent, it goes without saying that it deteriorated quality of the water as well. The impact of bulldozers and heavy machinery was evident on the road, which was full of holes, and one needed to travel throughout the valley only by all-terrain or utility vehicles, and later on we had a hard time even riding our mountain bikes.

The Dereagzı Quarter, situated immediately at the entrance to the valley, was mysterious, hiding houses and common life spaces behind the bushes and trees. The next quarter, Gılok (currently Otluca) was situated right on the roadside. Children were playing in the street and people were having a chat or sitting in front of their

⁴⁹ Republican People's Party (CHP)

homes. The next quarter, Kadıbağı was our last stop and home for next two months. I was familiar with this quarter since I had seen many photos shared by Hanifi Aksu, the President of the Aksu Valley and Villages Society for the Protection of Natural Life on social media (I will refer to him as H.A from now on). The gazebo next to the Aksu Stream at the center, which was frequented mostly by the men of the quarter was also going to be a place for me to visit often to have some chat with people (or men) of Aksu Valley. At my first visit to gazebo upon our arrival with Cengiz, my husband, who accompanied me throughout my fieldwork, it wasn't such a hearty welcome. In the absence of my key contact and key informant (H.A.), the men who sat under the gazebo answered to Cengiz despite the fact that I was the one who was asking all the questions. However, with the arrival of H.A., the tea he made in samovar (traditionally used to prepare tea in the region) and his 'infusive' small talk somewhat comforted everyone. An anecdote from the first night was a poem that Mehmet Aksu wrote for the Aksu Stream and read to the judge in the courthouse (See Appendix D). During this first night chats, almost all of the men at the gazebo seemed to have opposed construction of the HEPPs in the valley. I was lucky to live in the lodging building inside the school compound in the center of the village so that I would be able to at the center of all traffic in the valley during my fieldwork. Next day I took a walk to the fourth quarter, Massırdap (currently Yolbilen) lying on a slope on the opposite side of the stream and saw that it was neglected compared to other three quarters. So, I was ready to get in contact with people in all four quarters of the Aksu Village.

6.7. Water in the Valley

"I think, we made a huge mistake; we took our drinking water to the sewer system, and stored it close to the stream, and connected all our houses directly,

and discharged it to the stream, and we betrayed the Aksu Stream. It still supplies our lands. I still feel uncomfortable.”

(Y.K., 40-year old male, Gilok, Aksu Valley)

A commonly used analogy is that water is like blood in the veins; if that is the case, the valley is the veins, and the stream is the blood. Then, it is possible to suggest that the Aksu Stream is synonymous with life in the valley. In 2012, when I did my fieldwork, the villagers mentioned that they got water connected to all houses from uplands for almost 10 years, and now they were using stream water only for irrigation. In general, when I talked about the stream, everyone told that they didn't comprehend the value of it until now, and they took it for granted, and they contaminated the water by throwing all their waste, and even their sewage. Some believed that all microbes would be gone if they stored the sewage somewhere else and did not allow upper villages to dispose their waste directly to the water. Yet, they all seemed happy and satisfied with the yield from their orchards and fields since as one of my interviewees said “the stream water “vitalizes” (*şenertmek*) wherever it touches”. During an in-depth interview, one of the expats explained what Aksu Stream meant to him as follows:

This is what Aksu Stream to me: whatever a mother means to her child, Aksu Stream is also like that in my eyes. I always feel like, I hear like the lullaby; especially I don't want to think of any night that I do not hear its sound, I think it's a sound specific to this region- I think it's the rhythm of the region for people living here. Aksu Stream is something extraordinary for us. (In-Depth Interview, Z.D., 41-year old male, Aksu Valley)

The meaning the stream for inhabitants of the valley may be best traced in the defense they gave to the court during their lawsuit to appeal the decision made by the court for HEPP construction in the valley:

Respected board-members, after all, for our people the stream is not just a plain water that runs through the valley, but it has a special value and place for each individual living in the valley. Although there were times when this stream had run our homes down and destroyed our fields, and even killed around 8 or 10 of our people, to our knowledge, it still has our blessings. We would be willing to even die for it. We would not want it to abandon us. Because the blood that is circulating in our veins a product of the food we supplied with this water. We had spent at least 1/5th of our childhood in it, except the times we spent sleeping. It is our water that enliven us, irrigate our fields with, that we guzzle, that we give to our animals. It our swimming pool where we learned how to swim; it is our sea where we feel the cool breeze in summer; it is our mother whose voice we listen to, to hear the lullabies. It is the name of our village, it is the name of our valley, it is our last name. Briefly, it is our everything. We live here in this valley because it is here in this valley. (from court documents, source: Lawyer E. Özcan).

It is evident that Aksu is a stream of life for residents of the valley. It is mainly used for irrigation as well as entertainment purposes such as fishing and swimming. All the villages and quarters in the valley supply their drinking water from groundwater sources. Until 15 years ago, they were getting their household water from the stream in jugs and buckets, however now they all supply their drinking water

through a network fed from various springs. They were using a traditional irrigation system by diverting water from the stream through *harks* (ditches) to their orchards and fields before the construction of HEPPs. In this sustainable system, water diverted from the stream was circulating through naturally formed channels in a collective way by blocking or releasing stones for each field to be irrigated. Once irrigation was finished, stones were put back to block the flow, and water in the ditch was released for diversion to next field. Based on a social contract, they usually knew when and who was irrigating and in contact each other all the time, and there was no flaw in the system. In this socially well-controlled and regulated system, there was no disputes and no fights. The ditches were naturally surrounded by flowers and plants specific to the valley, creating a perfect environment especially for birds. This irrigation system, which also allowed the sustainability of natural life in and around water, had been transferred from generation to generation as a product of collective labor in a mutually shaping relationship with water. During our chats, in addition to scarcity of land, the villagers attributed this smoothly running system to abundance of ditches and abundance of water. And, some added that "We get along well because we are from the same origin." It should be noted that besides being from the same origin, joint management of a physical environment in direct contact should have reinforced their family bonds and local identity. I was able to observe how this direct relationship with water was embodied by local women during one of my morning routines; I was helping a few local women to pick mulberries when I saw mother of H.A. She lived in a big city and did not visit her homeland for about 30 years, but she started to come back and work hard in her orchard for the last 2 to 3 years. I admiringly watched how she diverted water from the ditches skillfully, and how she used a shovel to grade the soil. She was able to maintain her internalized work rhythm

and orcharding skills even when she was away from homeland, and land work for so many years. I think our bodies remember everything even sometimes our minds fail us. Later on, I learned that this work almost all women in the valley did early in the morning was called *sivarmak* (irrigate in English) in the valley. They were getting up early to irrigate mulberries or sweep the bottom of trees by a broom, or pick mulberries with an empty yoghurt container or a tin container every morning from June to September.

Other than a source for their irrigation system, water was an inherent part of their daily life. Children (better to say, boys) playing, swimming and catching fish in the stream; women and girls were spending almost every day outside nearby the stream, irrigating, gardening, picking vegetables and fruits, chatting, sometimes eating, and setting fire in their courtyard or near the stream under cauldrons to cook mulberry molasses ('pekmez'), which was a main source of subsistence for many of them; and retired and older men were sitting all day long in the gazebos located mostly on the streamside in each quarter, young and working men accompanying them during their resting hours, chatting and drinking tea, even eating while enjoying the view. While I was talking to an expat woman, I asked if any women swam in the stream, she told that when her grandchildren went swimming in the stream last year, villagers talked behind her back. Actually, she said before they got water network at houses, they used to do laundry at the stream, and the linen washed beautifully, and it was also good for their skin, so good that their landlord in İzmir used to call her "Erzurum plateau", however when they moved to Aydın, her cheeks and skin weren't as good as before.

Gözes (springs) on the mountains for drinking water were particularly important. Since my fieldwork coincided with Ramadan, particularly those who lived

in Kadıbağı carried water from a few *gözes* to the table right before *iftar* every evening, and they definitely used that water to make *iftar*. In summer, men gathered together to make picnic near one of these springs, slaughtered sheep or veal to broil and eat there, drank tea, and played horon. An anecdote on *göze* was that during a visit to a woman and her children who were engaged in beekeeping near the Yedigöl regulator, the woman, H.F., had lost her husband when she was 45, he had died after slipping on a slope in winter in the mountains. She was still mourning for him. As we were having a conversation her son brought us water from a *göze* to drink, as soon as she took a sip, she made a sour face, and told him that she always preferred the water from another *göze*, which was at a much higher altitude than this one, that that water was much colder and tasted a lot better.

With such a background, whenever I asked something about their water, everybody had such a great feeling of injustice despite their struggle against the ‘self-invited’ guest that they were ready to talk about it for hours without stopping. The next section will focus on the two HEPPs built and what had been experienced in the valley during and after these constructions.

6.8. HEPPs and the Contractor Company in the Valley

The construction of two hydroelectric plants was completed on the 35 km long Aksu Valley in the summer of 2012, and three more were on its way. The construction work was carried out by Makyol & İsmil, consisting of two tunnels (10.696 m in length and 4.4 m in height) with excavation of approximately 460.000 m³ rock and earth, and 98.000 m³ concrete work. These derivation-type hydroelectric plants were built in cascade arrangement between 1598 m and 1057 m according to the information on the website of Prosem Engineering, which re-prepared the final design and the architectural project. Both plants are operated by Borusan EnBW

Energy, a partnership of EnBW Holding Ag, one of the leading energy companies in Europe, and Borusan Holding, one of the leading companies in Turkey in the field of steel, logistics and energy. Borusan acquired the operation rights from Manas Investment Holding, who initially won the tender on 04.12.2003, and then obtained the license for Yedigöl plant on 08.10.2005, and for Aksu plant on 23.03.2010 (Borusan 2008 Activity Report, Energy).

The total installed power of these two plants, the first HEPP projects of Borusan, is 48 MW, and the investment in the valley consists of 2 regulators, 2 transmission tunnels, 2 power plants and switchyards (substation of the electricity production, transmission and distribution system, where voltage with transformers is converted from high to low or vice versa). The constructions started without an EIA report in accordance with the Environmental Impact Assessment Regulation no. 26939 dated 17.07.2008, based on the certificate dated 23.02.2006 issued by the Erzurum Provincial Directorate of Environment and Forestry, stating that "EIA Is Not Required" because the installed power was claimed to be under 50 MW. However, nowadays when you visit operator's website, the total installed power for two plants is reported to be 50.3 MW. A water use right agreement was signed for the Yedigöl power plant on 03.10.2005, and for Aksu power plant on 01.03.2006. The first power plant, Yedigöl HEPP, started to operate on October 14, 2011 while Aksu HEPP started to operate on September 14, 2012 (Borusan, 2015). Based on the information I received from the Operations Manager, drop height between the source and the power plant is 238 meters. The production capacity of Yedigöl and Aksu plants is 77 GWh/y and 86.39 GWh/y, respectively. Both plants are included in the YEKDEM (Renewable Energy Support Scheme) List, that was developed by the government to

encourage investments in renewable energy with a guarantee to buy electricity from license holders on the basis of feed-in tariffs in foreign currency for 10 years.

Four quarters are directly affected by the construction of 2 HEPPs built in the valley: Kadıdağı, Massırdap (currently Yolbilen), Gılok (currently Otluca) and Dereağzı. In addition to these two HEPPs, there is a dam project (Aksu Dam) at the confluence of Aksu Stream and Çoruh River to produce 344.4 Gwh electric per year. Although it is claimed that no settlement will be affected from this project other than Göçbahçeleri and Dereağzı, a 10 km portion of the İspir-Yusufeli highway will remain in the reservoir area, and an agricultural area of 429 hectares will be lost (Sever, 2008, p.547). These two settlements at the mouth of the Aksu Valley will be evacuated since they will be entirely flooded. The 49-year production license of Aksu Dam and HEPP Project was obtained by Çalık Energy Group and in February 2012, and the Dokay-EIA Environmental Engineering Ltd. was hired to make a report on The Environmental Impact Assessment.

After a brief summary of the technical properties of the hydropower plants constructed, and other projects related with the Aksu Stream, the next section will provide information about the problems local people experienced during the constructions in the valley.

6.8.1 Problems During the Construction of Plants

"The state doesn't know what they're doing, and if they knew, they wouldn't do it. Either they shouldn't declare this a National Park, a Wildlife Protection Zone, it is the National Assembly that declared it, or they won't build HEPPs here. It's one or the other."

(C.A., 65-year-old, male, Kadıbağı, Aksu Valley).

As Jamie Linton points out, it's hard to write, talk, or even think about water without involving people in the story, and thus "The state of water always reflects, in one way or another, the state of society." (2010, s. xvii). Accordingly, I believe the

waters of Aksu Stream have witnessed and suffered a lot after the arrival of construction machines about 13 years ago. In villagers' account, they came out of the blue since neither official authorities nor the contractor held an information meeting before starting the construction work. First, villagers were told that they came to enlarge their road, so they were well welcomed. But after a period of time, everything has changed in the valley by exploding dynamites without any warnings in advance, the noise and tremors they caused, thousands of trees cut down, a heavy traffic of hundreds of trucks and off-road vehicles running up and down the valley, thick layers of dust on windows, trees, plants and crops, hundreds of dead red spotted trout, blurry stream water, blurry irrigation water, waste water deposition into the stream, piles of rubble on the land, damaged road and roadsides, damaged graves, rocks rolling down from the hills, and endangered wild goats becoming easy targets for hunters when they come down to drink water. While the valley road and the stream were running at the same level in most places, the road became higher by filling earth. When the tunnels were drilled, they couldn't sleep, even nighttime they had tremors like an earthquake, which damaged some houses, particularly in Gılok. During this period, it became clear that they were going to build two hydroelectric power plants in the valley based on the projects prepared years ago. The projects claimed that no people were living in the construction areas, which were covered with heaths and it was a frog land.

Although the valley people became aware of these HEPP projects with the first drill at Yedigöl, they understood that the decision was made years ago when the officers from the land registry cadastre came to the valley. Reportedly, the officers "didn't write down many places so that the company could easily maneuver." (Focus group, men, Kadıbağı). The construction sites had already been determined and large

fields near the potential approach tunnels were intentionally not registered. Complaining about this insidious treatment, they were shamed to fail to understand these signs. H.D., a 42-year-old male running the only grocery store in Kadıbağı said that a few people were looking for a rental house before the road work began, and when asked, they said "We're going to pierce these mountains and make a tunnel. We're going to turn this water into electricity". He told them no one from the village would offer them a rental place. However, all valley inhabitants were not thinking in the same way. Those living in the upper parts of valley that are outside of the impact area of the plants collected signatures in favor of their construction, with the hope that their road would be improved. And, then the company started buying land, some villagers were eager to sell their land even at the expense of embarrassment to their community. While the contractor worked day and night, blowing tons of dynamites, accompanied with frequent visits by many vehicles with 06 (capital) license plates, the dust started to dry the valley, the soil and the trees.

In the meantime, according to the information provided in Borusan's website, road and sounding work had started as of June 2008 in Aksu Valley, and in order not to 'disturb' the inhabitants, the site facilities were positioned 3,5 km away from the village on a field approximately 9.3 acre in size. A total of 350 persons were employed at the site, of which 48 were from the neighboring settlements. On the other hand, according to villagers, Borusan hired 15 persons from their village in 2011, and normally they had to pay 1500 TL a month to each security guard, but paid only 700 TL a month per guard, because there were many who were eager to work there. Being very angry at their people, some said that "instead of working for Borusan for this kind of money, they should have worked in a bakehouse and made at least 1 billion TLs (in old TL), it's a shame that they were selling themselves for that kind of

money” (focus group, men, Kadıbağı). In the summer of 2012, the Operations Manager told me that among 40 staff, 30 were outsider, and 22 were local, and he was himself from İspir.

During the construction, there were some work accidents and accidental deaths, as it came up during my meetings with the villagers as well as in social media. Villagers told that local authorities found it normal stating that "... This is a construction site, 10 or 15 people can die." and they added that probably 5 or 6 people died, but they could not follow it up, and if there 15 deaths or so, the state would certainly shut down the business, therefore, the company was hiding information about the deaths. A press release by *Karadeniz İsyandadır Platformu* in 2012 on the deaths of HEPP construction workers reports that "So far at least three workers died in a terrible way during the Yedigöl and Aksu HEPP constructions by Borusan EnBW Energy company in İspir, Erzurum. Borusan Holding tries to ignore the nature and cultural massacre carried out in Aksu valley with fake presentations in company websites and Borusan Culture and Art events, and also manipulates public opinion to prevent the public reflection on worker deaths" ("HES'ler İşçileri Öldürüyor," February 2011). The statement of an Aksu villager was also included in the release:

"Aksu residents became accustomed to the sound of dynamites, as well as the siren sounds of ambulances. We hear sirens all the time, especially after the explosions; Ambulances come and go all the time. But we don't know exactly how many dead, how many wounded they are, they won't tell. About 17 workers are said to have died in total, we hear them, but we don't know the exact number. "

On the other hand, Borusan EnBW were claiming that they are constantly improving their business processes to ensure occupational health and safety,

environmental protection and social development, "by keeping the environmental and local people at a minimum of impact, optimizing projects, periodically inspecting and keeping them under control" (Borusan, 2015). In addition, the company created a concept called "İyi Enerji" (Good Energy) as a social responsibility project, and opened a portal (www.iyienerji.net), however for unknown reasons the website is unavailable now (May, 2020). Using this portal, the company tried to improve their image by launching a program called "Komşularımızla İyi İlişkiler" (Good Relations with Our Neighbours). This Public Relations program turned out to be a failure because the videos they used in the program were products of only one day that they had spent in the valley. They were dramatizing that they invested a lot to keep good company with the local people. Furthermore, their approach was unethical since they didn't give information how and where they were going to use the photographs and videos they took. During our interview, the Operating Manager told me that their programs were human-based, and they had "many sociologists, some psychologists to make studies and report the demands and complaints of local people.". In the account of villagers, Borusan used a strategic tactic by changing operating manager of the plant very frequently so that every newcomer would be able to start over, and act as if all complaints and promises could be negotiated again. In the meantime, the company made another investment, and commissioned an irrigation project to one of the scholars in Erzurum University. In the summer of 2012, the pipe system was installed and ready to be tested in order to replace the traditional irrigation system that has been jointly managed for centuries without any problems.

In the meantime, the complaints of villagers turned into anxiety and anger with the concern of losing their land combined with indifferent attitudes of local authorities. The authorities did not show interest in the questions they asked, and the contractor ignored their problems. They even sent a letter to Abdullah Gül, the President of the time in 2009 with 1690 signatures to ask for his help. Then, they decided to close the road and stop contractor's vehicles entry to the valley.

6.8.2. Protests

"The knowledge that we have now, if we had it back then, this HEPP people would not have even approached here, not even one inch"
(O.D. 54-year old male, Kadıbağı, Aksu Valley)

The main theme in the protests was that they were not against HEPPs, but they didn't want them to be constructed in their valley. In their account, they were getting benefits of development, and now they had many electrical appliances in their houses whereas their parents had nothing, and so there was no ground to oppose it. They were not opposing to the fact that the state would make use of natural resources and get rid of dependency on foreign energy sources. Their anger was directed at the contractor, rather than the decision-makers. Most of the villagers, women or men highlighted that they are always loyal to the state with their heart and soul like their ancestors. And, if it was for the national interest, they would accept it voluntarily, but the state should not have left them to the mercy of evil-minded contractors. The main motto was that "We do not do anything wrong against our state!" For example, a 29-year old male from Kadıbağı, A.D. reported that although they all agreed that they would stand up and leave the area when officials came to the valley to convince them during the protests, nobody moved after he completed his speech explaining why they were opposing it, and particularly elderly people did not keep their promise in the strong presence of the state. During this period, they decided to establish a society

(Aksu Valley and Villages Society for the Protection of Natural Life) to coordinate activities against the HEPP projects in the valley. The society was financed by wealthy expats and membership fees of the society. During our interview, the first president of the society highlighted that he read all the paperwork, and everything seemed proper in the project file because it was indicated that the processed water would not be released directly back to the stream nor to the land. According to him, what the authorities lacked was to conduct necessary inspections during the construction and operation phases.

The protests started with a high participation rate. At the beginning, voluntarily or involuntarily, almost everybody in the village, women, men, children, and elderly were on the main street of valley. They marched along the stream, shouted anti-contractor slogans, climbed up the lamp posts and unfurled banners on the bridge at the center of Kadıbağı quarter for several days. However, authorities came up with forceful solutions. As one of my informants expressed “Maybe they (contractor) already knew that we wouldn’t oppose to the state, so they constantly made us to confront with gendarmerie, security forces, district governor, and tried to repress our reactions”. During this period, many other valleys were suffering the same problems across the country, and the course of proceeding was almost the same for contractors and authorities. When you read academic studies carried out in other valleys, or online archives, you see that only the name of the valley changes, everything else is the same, even the content of EIA reports regardless of the geographic and topological differences between these valleys. The resistance in neighboring and/or remote valleys grew and fostered into a network of people from different valleys which were under the threat of HEPPs and urban people supporting them, and environmental organizations as I already discussed in the protests across Turkey.

In 2011, about 70 people including some activist groups and local people from other 'wounded' (an expression used by H.A.) valleys visited Aksu Valley to support local protests. They also helped to organize some protests in İstanbul, and these demonstrations were influential in getting media's interest. During their visit to the valley, *Karadeniz İsyandadır Platformu* sought for a symbol to represent the valley in their struggle against HEPPs with something specific to the valley. While they were inquiring about myths or stories about something related with water or stream in the valley, they found out that *boldoroz* was a perfect local symbol because it was a water monster. Although villagers were not able to tell much about this water monster supported by any stories or beliefs, *boldoroz* was used to keep children out of the stream by their parents - especially mothers- since it was a water monster who lures people to stream. In fact, the name sounded similar to a creature known as "Wild Man" in a wide geography from Central Anatolia and Black Sea region in Turkey to Balkan Peninsula including Greek, Bulgarian, and Serbian folklore as *karakoncolos/kalikancaros* or *kallikantzaros* (Şimşek, 2018). They searched for pictures of water deities from the Internet. But no one knew what *Boldoroz* looked like. They found a few options, and showed them to the locals, and agreed upon one of the pictures; it was an Aztec mask in jade (See Appendix B). Then, they made paper masks of this creature together with the children of the village. The theme they used during the protests was favoring *Boldoroz* as a guardian of the Aksu Stream against the HEPP contractors. Later on, they used the same masks in demonstrations in İstanbul in front of a concert house where Borusan Quartet was giving a concert. Interestingly no one had told me about *Boldoroz* when I asked lots of times if there were any legends, myths, figures or stories about the stream during my stay in the valley. When I returned home, I coincidentally saw a protest video with *Boldoroz*. In

the next few days, I was lucky to meet one of my interviewees in İstanbul for a dinner at her daughter's house to ask more about Boldoroz. She said that nobody saw Boldoroz in the valley, but she thought that probably it was the otter that has not been in the valley seen for a long period of time.

They also participated in protests in front of the Grand National Assembly with broad participation of urban and local environmental groups against the Biodiversity and Nature Protection Law that would get through the assembly (Agaclar.net/Forum). After the protests in İstanbul, Borusan had to accept publicly that they cut a total of 244 trees, and in return, they donated 8000 trees to the state. However, local people told that only the number of hazel woods and walnut trees they cut in the valley was more than 3000. They complained that while they needed to get permission from authorities to cut down even their own trees, Borusan made a massacre up to down in the valley, and it was all overlooked. H.A. notes that whenever they made a protest in İstanbul, Borusan had to come up with some solutions, otherwise they were deaf to the complaints made.

The valley was also represented in the Great Anatolian March, mainly by H.A. As I have already discussed above, after the protest groups dissolved due to disagreements, the Water Assembly of Turkey had declared that participants would continue their struggle in the valleys. However, the claim they made "Resistance begins now!" would tend to fizzle out, and each valley would take care of themselves. So, did Aksu Valley.

6.8.3. Process of Lawsuit

They were only left with the legal struggle that started in 2008. They asked Erol Özcan to represent them as lawyer, because he previously had managed to have two quarries closed in the Firtına Valley, where the first HEPP projects came up in

the Black Sea region, and succeeded to have the execution stopped for HEPPs planned to be built at Hemşin and Fırtına Valleys. In 2008, a request was made to the Erzurum 1st Administrative Court for suspension of execution of the permission granted for the construction of HEPPs by İspir Society for Cultural Solidarity, Dadaşlar Social Assistance Education and Culture Association and Erzurum Solidarity Promotion and Culture Association on behalf of 138 villagers against the Ministry of Environment and Forestry (Erzurum 1st Administrative Court Principal No: 2008/1632). In the petition dated 12.02.2009, following the opening of the case, the Ministry of Environment and Forestry claimed that the administrative decision taken with the letter of the Provincial Directorate of Environment and Forestry of Erzurum Governorship no. 24 dated 24.02.2006 was notified to the residents of Aksu valley, therefore, the time for filing a notice of appeal was expired. Lawyers representing the residents of the valley objected in their response that such a notification was not made by the mukhtar or district governor and that the case was still valid. Only after clearance of this obstacle, the process of lawsuit continued. The request included and documented all the complaints of the villagers during the construction work as well as the minimum water amount to be released.

Additionally, during the expert investigation of this case, another petition was submitted to the Erzurum Governorship on behalf of the demandants on 08.09.2009 to stop the damages caused to the environment due to illegal acts of the Yedigöl Hydroelectric Production Trade Inc., including depositing excavations on the road and roadsides, leading to thousands of trees remain under these excavations, discharging construction wastes into the stream without any treatment, and thus damaging the aquatic life in the stream and irrigation of lands with stream water, making access to stream difficult, work accidents due to negligence in safety of

workers, and dust covers, even mud on crops. The petition required authorities to carry out site inspections, and apply legal procedures, however, nothing happened.

During the process of lawsuit, although a decision was made by the Presidency of the Provincial Assembly of the Erzurum Provincial Administration (decision no. dated 07.05.2008) by highlighting that a 950,000 m² of cultivated and planted area would dry out and the stream would become completely dry in the summer months, and social contributions as well as economic contributions of the plant should also be emphasized and the local zoning plan was disapproved, the administrative court, which was held on 16.06.2010 and concluded on 25.06.2010, dismissed the case filed by 138 villagers. The only favorable decision this court made was to increase the ecological minimum amount of water from 200 lt / sec to 840 lt/s as determined by the Committee of Experts as well as proper installation of the fishways in both plants. Based on the decision no. 2008/1632 E.2010/1043 of Erzurum 1st Administration Court, the lawyers filed an appeal to 6th Division of the Council of State.

One of the inhabitants (M.Ç., a 45-year old male, Massırdap), who felt that their trust in the Turkish justice system was shaken, made following comment: "... Because justice is on the side of the rich, and it is true for whole country.". The villagers, especially those in Massırdap said that their private registered land remained under the deposits, but the company did not make any payment to compensate for their damage. They pointed out that the company got away easily since it took 2 to 3 years for the court to conclude, and there was no way back anymore. They also noted that all administrative functions such as the mukhtar, the district governor, gendarmerie acted to the advantage of the company, and they had even changed a sergeant major who had good relations with the villagers and

appointed someone else. They claimed that they resisted the most, because they were the ones who suffered most from the construction phase of the Yedigöl plant.

6.9. Change with HEPPs

"... Actually, it is not the citizens who should be satisfied with what is left from HEPP, just the contrary, HEPP should be satisfied with what is left from the citizens. This is the truth. However, now we're going to try not to dry up with the water left from HEPP, try to stand on our feet, try not to die. I don't know anymore."

(M.D., 51 year-old male, Kadıbağı)

Place is the most important component of our understanding of identity. Each place is different only because of its relative location, and no other place has the same location, in this sense, because each place is unique, it is blended with meaning and cultural significance (Entrikin, 1991, p.16). From this perspective, people from the Aksu Valley culturally and geographically identify themselves with the Eastern Black Sea, but when it comes to official identity, they embrace their Dadaş⁵⁰ identity with an emphasis on their Seljuk- and Ottoman roots. As a typical reflection of this, while *tulum* and *horon* are, often, played at picnics, weddings and for entertainment in daily life, *davul* and *zurna* often take the stage in official contacts with the district. In fact, this sense of identity is not homogenous in all quarters. For example, those from Massırdap claim that local people do not much associate themselves with Erzurum and they do not look like them because they see themselves as from the Black Sea region. They also add that "Maybe you did not hear, İspir is a separate, autonomous state." However, when they are asked where they are from, their answer is that they are from İspir.

⁵⁰ *Dadaş* refers to a person from Erzurum, a province located in the North Eastern part of Turkey or a dancer of *bar*, a regional folk dance. It is associated with the words 'brother', 'gazebo', 'brave', 'trustworthy' and 'comrade'.

Kadıbağı residents were more or less the same in cultural aspects, however they completely refused to be from the Black Sea region: "... our mentality never matches the Laz people." They indicated that they have kinship because they 'take bride'... and said that "There's a little bit of blending, but our national feelings are not aligned.". During focus group sessions, it was totally different in Gılok because women insisted on their Dadaş identity, while most of the men emphasized their Eastern Black Sea traits. However, both women and men specifically mentioned that they did not have anything in common with the Kurdish people of Erzurum. I think the geographic in-betweenness of the region is well reflected in social, cultural and socio-economic aspects. Even though the valley seems remote and isolated, once being at the crossroad of camel trains as a bridge from Eastern Anatolia to the Black Sea through Kaçkar Mountains, the region must have been in contact with diverse cultures and peoples as well as having undergone movements of migration and conquests throughout its history. Geographically, easier access to Rize compared to Erzurum, probably made these contacts more favorable for the Black Sea region, as one of the interviewees mentioned "Nobody knows the streets of Erzurum here, but all streets in Rize," while joking about his wish to have a dual citizenship for both Erzurum and Rize. Their food, musical instruments, and folk dances are much closer to those of the Black Sea region. Their official identity of *Dadaşlık* seems to be rather related with national identity because they immediately refer to their Seljuk- and Ottoman roots when you mention the word "Dadaş", a tendency common in all multi-ethnic, multi-religious and multi-language geographies across the world. They claim that they are the real *Dadaş* because they had 123 martyrs during the Russo-Ottoman Wars when the Ottomans retreated from the region leaving its soldiers dead.

When asked to tell positive and negative aspects of the HEPPs and the changes they experienced in their daily life after the construction of these plants, most of the participants from the Gilok quarter said that: "it had around 20% return; some of our people benefited, but for 70% it costed a lot". People from Massırdap said there was no positive aspect, they were all harmed in one way or another while the people from Kadıbağı said that the only positive side was "... that we learned how to lie from them."

The most common problem expressed in all of the quarters during the interviews was that the dust, raised by the vehicles on the road, piled up on the crops. Their main concern was its impact on the crops. For example, inhabitants of Gilok used to grow enormous grapes and tomatoes, and took them to the marketplace to sell. They had the same problem with fish because they were poisoned. They said that the contractor intentionally discharged concrete into the stream with mixers, and all the fish washed up onto the shore of the stream.

As we know from studies on HEPPs from the perspective of various disciplines, HEPPs are associated with severe impacts in many realms of daily life. Therefore, any study on the impacts of HEPPs through powerful research tools of anthropology, including in-depth interviews, participant observation and focus group sessions, is important to gain an insight into the living habits and conditions of local people, their relations with nature, the balance of nature, and the relationship between water resources and local peoples in case of forced interventions, and thus contribute to the fields of Ecological Anthropology and the Anthropology of Development.

Although the areas of impact are all interrelated and cannot be dissociated from each other, I would like to share my findings in this respect in four dimensions: ecological, socio-cultural, socio-political and socio-economic changes.

6.9.1. Ecological Changes

This road, we used to climb, and would never feel the sun on our body. It used to be cool. There always were trees all over the place. Walnut trees, hazelnut trees, but all is history now. (F.D., 37 year-old female, Kadıbağı).

It appears that not everybody agrees on the outcry of one local, exclaiming: "It's not just family that is honor. The earth is also honor. He's taken your land!", but almost everyone seems to agree that the HEPPs would result in many ecological changes in the valley. The extent of destruction caused during the construction works was best voiced by an expat, whose mother and elder brother still live in Aksu in a text he wrote during the protests:

As you approach Dereagzi, the bitterness in you multiplies exponentially. A pain strikes your heart. Some of our signs at the entrance of the bridge are laid on the side, others are broken. Construction warning signs are erected instead. On one side, there is a sign saying "HUNTING IS FORBIDDEN", right next to it there is another that reads "CONSTRUCTION ZONE – NO TRESPASSING". There is a 'WILDLIFE PROTECTION ZONE' sign on one side of a signboard, and an 'EXPLOSION SITE' warning mounted on its other side. Ridden with contractions! The valley is no longer a wildlife conservation area; the life of humans, mountain goats and other endangered animals in the valley will no longer be the same; wild animals will no longer be able to drink the water they drink away from places of human life peacefully along the valley of 35 km, and they will always be hearing an engine roaring. (Z.D., 49 year-old male, expat living in İstanbul).

Unlike his concerns about the threats to wildlife in the valley, some inhabitants complained a lot about the bears eating the mulberries and destroying their crops. They claimed that one day the bears would start eating human beings because they were recently hearing news of many bear attacks in the neighboring valleys. One of them came up with an idea to leave a radio open around his mulberry trees all night long so that bears wouldn't dare to approach. On the other hand, some highlighted that wild goats felt depressed during the construction, and now they became easy targets for hunters since there are only a few spots they could come down the stream to drink water. One of the expats argued that his people couldn't care less about the ecological consequences of HEPPs if they didn't need the water for irrigation purposes. Even though it sounds a little bit exaggerated, considering that residents in upstream quarters were still discharging their sewage and waste to the stream, or as one of the female expats complained "they throw their children's diapers to the stream, they contaminate the stream themselves!", he might have a point since ecological problems were mostly addressed by expats during my interviews. Furthermore, when referring to the trees cut by the contractor, the locals I talked mainly complained about walnuts, cherry trees, cranberries and hazelnuts, likely because they picked their fruits. I attribute their ecological awareness, addressing the issue within the framework of the political world order and the ecosystem to the exchange of ideas with academics and environmentalists, who visited the valley, although they felt contradictory.

Although local activists thought that the Wildlife Zone status was leverage for them during the protests or legal proceedings, they were disappointed with the court's ruling disregarding the protection status of the valley, so the status granted by the state was of no use to them against another official decision. The environs of İspir

were declared as a Wildlife Protection and Reproduction Area in 1980 by the Ministry of Forests, and then the valley was registered as İspir Verçenik Mountain Wildlife Development Area in 2005 under the responsibility of General Directorate of Nature Conservation and National Parks (OrmanSu, 2018, p.10).

The contours of the narrow valley became more prominent during nighttime in complete darkness, especially when we visited beekeepers' camp site upstream away from the residences a few times. Accompanied by the stories about casual encounters with bears, wild goats, chamois, Caspian snowcocks, snakes, and vultures during the nighttime picnic with local people, the darkness made me comprehend the wild nature of the valley more deeply. Some nights, occasional rifle shots to keep bears away from mulberry trees and the crops were distressfully echoing in the valley.

Tens of thousands of tons of construction debris poured into the streambed resulted in irreversible changes in the integrity of the stream, damaging the habitus of aquatic forms, altering the waterways and polluting a pristine environment by chemicals and cement. As already discussed in the Ecological Anthropology section, such changes are mostly associated with climatic changes. One of the focus group participants in Massırdap said that she was in the valley for 52 years, and she had never seen it to get that hot, and that she usually wore socks during summer, but she couldn't wear them that summer. The road was also elevated up to 7 to 8 meters at some points, most of the walnut trees being buried under debris. Thus, there were no trees left to make shade on either side of the road from the Aksu regulator up until the Yedigöl plant, and it was not possible to go down to the stream to refresh oneself due to elevated road at many places, so people suffered walking under the sun throughout the valley. Furthermore, millions of endangered red speckled trout died due to the contractor's repeated discharge of cement and other waste into the water. Other than

being a natural asset in the valley people's accounts, the endangered trout was a nutritional and recreational source for them. During my stay and all my interviews, the red speckled trout was one of the main issues people wanted to talk about. One of the female expats claimed that "Consequently, we will end up like the fish that were left without water". They were trying to figure out how the officials let the contractor get away with such a big-scale ecological slaughter and geographic destruction when the local people were fined by the gendarmerie for fishing even one single endangered red speckled trout.

Another prominent impact of the HEPPs was the reduction in the number of *gözes* in the valley. They were concerned that they got their drinking water from such specific springs on the hills despite their tap water being supplied from the Kaçkar Mountains, and now they lost their access to these sources. One of the locals said that she was 48 years old (S.T., Massırdap) and had never seen a time when those springs didn't appear until that year. Furthermore, wild goats and chamois strolling around the valley were getting their water from these springs. Now, they had to come down to the stream, but they were either frightened by motor vehicles or became easier targets for hunters. The valley people seemed conscientious about hunting, and they often blamed people from neighboring districts and cities who came for hunting activities even though there were rumors about some local people guiding or going hunting with these outsiders since they knew the region better. Furthermore, the operation manager of the plant said that he heard about some local families who had goat meat all year in their refrigerator.

During my interviews, the residents of the valley expressed their reservations about the efficiency of the new system established by the contractor as a result of the replacement of the traditional irrigation system. When these reservations were

actually combined with another concern, the anxiety doubled. The locals were worried about the limited amount of water that would be left in the stream for living organisms and irrigation. With this system, they would lose direct contact with nature; instead of diverting the water with blocks of stone, they would start to use valves. As if capturing the stream's water into tunnels not enough, now with a piped system, their direct contact with the water as well as the soil, plants and animals of the valley would be interrupted. Besides, the implementation of this highly expensive project was rather sloppy, although it was designed by academics at the Erzurum Atatürk University. At some points along the road, the pipes that went under the ground were rising above the ground in unexpected places, the valves on the edges appeared to be buried in the ground; some pipes disrupted the greenery and landscape of the valley as well as being open to all kinds of external influences. It also seemed that it would be physically difficult to open and close the valves as we tested it with H.A.

Furthermore, the fish passers and fish ladders built by the contractor did not comply with the official requirements as it is usually the case in other HEPPs (Başkaya et al., p.3288). Although the amount to be released to the stream was increased to 830 lt/s by court's order, the mukhtar claimed that even this amount was not enough in summertime since their soil is sandy and does not retain water. The locals did not even want to think about the consequences of reducing the amount of water that would inevitably cause damage to the animals, the environment, natural food sources such as fish as well as their crops. Unfortunately, the disruption in the integrity of the stream seems sufficient to justify their concerns. Also concerned about the impact of decreased water on the early morning dew, the valley people think that all trees would inevitably dry up after 5 to 10 years.

On one hand, the high potential of ecotourism in the region and commercialization of other crops in addition to İspir bean, such as mulberry, mulberry molasses, nuts, etc., is often highlighted in many official and unofficial sources in relation to the region's richness in medicinal and aromatic plants, endemic flora and fauna, wildlife, while on the other hand, the presence of HEPPs and dams are indicated to be a threat to this potential (Çakmakçı et al, 2009; KUDAKA 2014-2023). The negative environmental impact of HEPPs in the Aksu Valley was graded moderate in a study by Başkaya et al. (2011, p.3287) with respect to habitat deterioration (3 over 5), fish and wildlife passage (3 over 5), environmental flow (3 over 5), high-voltage power lines (unknown), wastes (3 over 5), dust and noise (3 over 5), rehabilitation and restoration (3 over 5), visual pollution (3 over 5) and illegal hunting (1). However, it seems quite clear that the ecological importance of the valley had been ignored by the decision-makers, and the two HEPPs constructed in the valley had significant ecological impacts such as damage to wildlife habitat, aquatic ecosystems, destruction of forests and vegetation, agricultural products and even scenic lands. Interestingly, most of the valley people believed that if Borusan constructed a pond as promised, then these ecological damages could be mitigated with evaporation, their landscape would be beautified, they could maintain their irrigation system, and they could eat their local fish again.

6.9.2. Socio-cultural Changes

It starts in Ispir, the big nightmare. The smell of work machines is down to the cobblestones. The streets of Ispir, where previously vehicles with plate no. 25 roamed are now full of trucks with different plates with signs that say construction this, construction that, with many different firm names, engineering this, engineering that, plenty of pickup trucks... Some of our people even think that they are going to make money out of this, some have found work where they use their motor vehicles, some others became their workers. There are even persons who rented their minds. Everyone's looking for their share of the cake.
(Z.D., 49 year-old male, Kadıbağı, Aksu Valley)

Memory and identities are not fixed things, but representations or constructions of reality, subjective rather than objective phenomena; if memory has its politics, so too does identity (Gillis, 1994, 3). The quotation from an Aksu expat above, in fact, reveals the dimension of the change since the changes in the valley are also reflected in the 20 km away district center. Unfortunately, Aksu residents' struggle against HEPPs has been viewed negatively in the district center. As Z.D., a 49-year old male expat, reported, "Being an Aksu resident is now perceived differently in Ispir. Before, when I said I am from Aksu, we were having intimate chats about trout, glacier lakes, wildlife and mountain sports, which were now all replaced by HEPPs. They call us 'anti-HEPP people' and they criticize us mercilessly."

In fact, everything seemed to change in the valley in respect to people's states of mind, their social relations and cultural habits. First of all, constant noise, blasting, damages in the houses, damages to graveyards, dust on the agricultural crops, trees and vegetation, trees cut, thousands of trout washing up on the shores of the stream, electricity poles, restricted freedom and diseases had remarkable psychological impact on the valley people, especially on women. Everybody was talking about being poisoned (themselves, plants, and fish) by the construction debris discharged into the stream. Some said, "We never visited a doctor until now, and now even for

any small thing, we go to see a doctor.” (Focus group, women, Gılok). During the construction process of the plants, they were unable to walk on the road or they had to wear boots all the time due to the destruction and/or mud. Women complained that they had to walk through many strangers early in the morning, and when they did, there would be gossiping about them by their own people. Thus, they had difficult times for irrigating and picking mulberries for almost two years. They said that the workers were wandering around in their swimsuits, which was very uncommon for the locals. One of the young women (S.D., 21-year old) who lived in the village said that a few times she encountered strangers on her way from home to the village center, and she was very frightened because it was a very unusual situation for her. She also added that they would also lose their visual pleasure since the stream was literally frozen in wintertime when the water is gone. The villagers were also unable to sleep due to blasting since the contractor was working day and night.

During the summers, children, especially boys in the valley used to gather and swim upstream during the day, and then at night fish and cook the fish on wood fire while camping. Most of the adult males who visited the valley during their vacation were also carrying on this tradition, gathering with their fellow countrymen to roast a whole lamb on a spit, and enjoy their time and the view in the upland forests. But they were not swimming anymore. Some women who used to spend a lot of time near the stream expressed that they were now afraid of the water because they believed it was polluted.

The most important social space in the valley was gazebos in each quarter. They were usually located at the center of the quarter, near the stream, and mostly occupied by older men all day long, which in fact, can be considered to function like a *kahvehane* (traditional Turkish coffee house). The gazebo in the Kadıbağı, the central

quarter of Aksu Village, had the most traffic during the day and at night. It appears that this gazebo was the center of all decisions made by the notables of the valley. Even mukhtar told me during our first contact that I could learn everything I wanted to hear about what happened in Aksu during the construction of HEPPs and protests if I chatted with people at the gazebo in Kadıbağı. On the other hand, gazebo was a nuisance for both expat and local women who complained that the men chatting in the gazebo all day were staring and laying eyes on them and gossiping about them and their bodies regardless of their age. Even older women also complained that they didn't like to pass near the gazebo because they heard them talking about their body and posture. One day, one of the expats insisted to accompany me when I would ride to Gılok to do some interviews, and after a while he spilled the beans, and said that if Cengiz did not want to come with me driving anywhere in the valley, he would be pleased to accompany me, and he added: "You know the people in gazebo!". Only in Gılok, there was a park where mostly women gathered and chatted. Although women in Kadıbağı asked for a gazebo specific for their use, they did not succeed to get one. The park in Gılok was named after the famous singer-poet of the village, Aşık Canımoğlu. In other quarters, women were gathering outdoor somewhere near their houses.

My fieldwork coincided with the Ramadan. Because of the unusually hot weather for some time, the main activities in the valley were *sıvarmak*, and picking mulberries for women early in the morning or late in the afternoon and praying in the mosque and chatting in the gazebo late in the afternoon for men. Although it is a well-known tradition in Turkish culture, I noticed that very few villagers hosted a fast-breaking meal for other residents. I believe it was somewhat related with the imbalanced power in their relationships with each other that have become more

evident after the arrival of the HEPP contractor and the protests. Even though all of them were related, rich expats of the Kadıbağı quarter seemed to be dominant in every aspect of the plans pertaining to the valley through the society AVKDYKD. Some of them, all expats, were very kind to invite us for fast-breaking meals and share their table. Only one night, we ate at separate floor tables in different floors as women and men since our host had also invited the *imam* of the village to the meal. Even in reconstructed or new constructed houses, the floor table was common. Unfortunately, I was unable to reciprocate their invitations due to limited cooking facilities in the lodgment.

The traditional communal irrigation system was an important cohesive factor in the valley since it was dependent on social contract and collective action for hundreds of years. With the intervention in the stream flow, and more importantly, with the introduction of a piped irrigation system, the so called “gift from Borusan to the valley people” as it was referred by the Operations Manager, this cohesion was on the brink of disintegration. Everybody was concerned about the amount of water to be released and the next year’s crops since they couldn’t predict what would happen when the new system started.

One of the most significant sociocultural impacts of the HEPPs in the valley was the loss of trust and broken relations between the villagers. They all complained that their attitudes towards each other changed following the arrival of the contractor. When the protests started, everybody seemed to act in unison, however after the contractor succeeded to buy off some villagers, and their solidarity collapsed, “The village was divided into two” since “some opponents were silenced by money”, as one of my female interviewees (Y.Y, 31-year old, Gılok) expressed. For instance, the teacher of the primary school, who was also a local, said with a great disappointment

that after all these he understood that money could change everyone and everything. He indicated that they -the opponents- were left alone because of those who were deceived by the money. However, despite being very angry, he also added: “Which one should I write off, they're all my relatives; and we have to be able to look each other in the face”. Still he was avoiding contact with other people, spending much of his time in his camping site for beekeeping. It was obvious that those who sold their land or negotiated with the contractor for some benefits, mostly construction material for their new houses or restorations, were isolated in the community, and nobody was talking to them. They also implied that there were also some people who were seemingly opponent to the HEPPs, but were trying to get their needs from the contractor. That was why backbiting was very common, and they were accusing each other of being dishonest. These disputes were also related with the imbalanced payments by the contractor. It seems that the degree of relationship with Borusan started to play a significant role in the daily relations between people.

Loss of land, either by selling or by expropriation, and fear of displacement were, in a way, related with concerns about belongingness and loss of ancestral property in addition to losing a source of subsistence. The idea of social solidarity, in which the wealthier protected non-wealthy relatives and provided job opportunities, seems to have taken a major blow, and now they seem to keep their distance from each other. This change, which destroyed '*memleket*', the basis of identity and feeling of belongingness for expats, and 'hope' for those living in the village, usually of low income, seemed to be a big threat to localness.

6.9.3 Socio-economic Changes

When the irrigation is over, there is nothing left here

(M.D., 53-year-old male, Kadıbağı)

It is the relation that defines the essence of what water is (Linton, 2010, p. 223). If we talk about ‘hydrolectics’⁵¹ as introduced by Linton (2010) of Aksu Valley, the Aksu Stream is an economic medium, which irrigates the fields of the İspir bean, and the mulberry trees or for those who are involved in cultivation or in apiculture since the stream is the source of their subsistence. This subsistence economy depends on the principle of collectivism, togetherness and reciprocity in a balanced daily life with nature. Among the crops and fruits, İspir beans and mulberry trees were given the utmost care. Some villagers were stretching large cloths under the mulberry trees. The cooking of mulberry molasses was usually carried out outside in big cauldrons, sometimes collectively, sometimes in turns. One of the wealthy villagers (Y.A., 56 year-old male, Kadıbağı) reported that they had an income from mulberry molasses around 15 to 20 thousand Turkish Liras every year. Almost everybody was selling mulberry molasses in smaller or larger scale depending on the number of trees they had. The same was true for İspir beans. There were some women living alone or with a few relatives, and totally depended on their yield in the summer. Or some women who lived in the cities were procuring their winter supply from their production in the summer to support their families or selling their surplus crops. Therefore, limited access to water resources and land loss were the most important threats to their livelihood and economy.

⁵¹ Hydrolectics conceives of a water process out of which particular instances of water get fixed or instantiated in social relations. Water is redefined in terms of its social relations and circumstances since it is different things to different people, depending on their modes of engagement.

Villagers, particularly those living in Gılok and Massırdap said: “We lost a lot of land, for some we were paid, some still remain unpaid”. Those who were paid complained “We spent the money, and now we have no land”. They lost their land not only by expropriation, but also by floods resulting from the intervention in the streambed. Some villagers whose lands were expropriated and who were left without land said they started to cultivate their relatives’ land in order to continue their subsistence rather than migrating to other cities. The traditional tandoor bread was being already rarely baked due to conversions in the houses for more space, and almost everybody was buying bakery bread from the grocery. There were two groceries, one in Kadıbağı and the other in Gılok, in the Aksu village. Also, there was a mobile grocery store that visited all quarters in the valley three times a week. During my 2-months stay, I was able to taste their tandoor bread only once in Gılok. However, later on, I learnt that the restaurant project, for which Borusan and the AVKDYKD were negotiating for the catering needs of Borusan workers twice a day, was cancelled because of disagreements about the fixed number of meals, and the place that would be rented for restaurant became a bakery in 2015 as the most prominent example of becoming a market economy.

There were also occupational changes. Mainly dealing with their land or husbandry, some of the villagers now started to work on a salary basis. However, villagers said that due to high demand, Borusan hired approximately 15 people, mostly as security guard, but they paid half of the usual salary (700 TL instead of 1500 TL, in 2012). The villagers were angry at those who wanted to work for Borusan, and said that the latter would earn at least 1000 TL instead if they worked for an expat baker. However, when I talked to those working for Borusan, they said that they preferred to work for less money since they were living near their families,

and also, they were taking care of their land in addition to obtaining a regular salary and social security. Even the first president of the AVKDYKD that was founded against the HEPPs was working for the company as a security guard.

One of the main sufferers of the HEPP constructions was the owner of the fish farm (salmon trout) which was active in the valley since 1995. He lost his fish reserve twice. Once they all died because of the cement discharged to the stream water. He said that his loss was compensated partly by the company, but he suffered significant losses just when his business was about to get on its right path. Apiculture was also a major source of income in the valley. I visited three different sites during my stay, and all of the beekeepers said that the quality of their honey changed after the HEPPs due to the damage given to vegetation, and most of them moved their hives upstream. The bees were also affected by the noise of motor vehicles and they became aggressive as A.D. (29 year-old male) mentioned. All the cultivation was based on organic agriculture with heirlooms and organic seeds in a sustainable way. No pesticides were used while manure-based fertilizers were commonly used in the valley. This, in fact, presented a good opportunity for the sales of their crops in the future, considering the increasing interest in organic foods all over the world.

It appears that capital-based economy has replaced sustainable subsistence economy that was solely dependent on water resources in the Aksu Valley. The local economy is no longer self-sufficient, and the inhabitants of the valley have been introduced to the rules of market economy by turning them into consumers or workers on their own land.

6.9.4 Socio-political Changes

*All government agencies are on their side.
There was a sergeant major who favored the valley people.
They even replaced him.*
(A.D. 29-year-old male, Kadıbağı, Aksu Valley).

One of the most frequent claims of the Aksu inhabitants was that they were never a burden on the state because they built their mosques, schools, and bridges with their own resources, and never asked anything from the state. All quarters were connected to a water distribution network originating from the mountain (ten years ago in 2012). Only Kadıbağı and Gılok had a sewage system installed, but other quarters were still discharging their waste to the stream. However, after the HEPPs, the daily life, which seems to have been isolated from the outside world in a self-sufficient and independent way, was over, and decisions for public investments were completely left to the mercy of company officials. The mukhtar was no longer running the task of representing the village vis-à-vis the state, but the company. The AVKDYKD which was formed mainly by expats during the protests also had power in the valley, and any public need or request made either by the mukhtar or the society was directed to Borusan by the officials, and they both had to negotiate with the company.

In the 2012 sustainability report, Borusan claimed that other than an irrigation project commissioned to the Erzurum University, they built 2 bridges, and approach roads in cooperation with the district governorship, and contributed to the maintenance and repair expenses of the mosque, school, courthouse (probably in İspir), and village clinic (Borusan report, 2012, p.28). However, the villagers told that the company only undertook the repair of the village clinic and the construction of two bridges in Gılok and Edilli. Other claims in this report, including the

improvement and renewal of roads, retaining walls (most probably the wall of the graveyard that collapsed during the construction in Gılok), burying electricity cables underground, renewing drinking water lines, and the septic tank, and meeting the hardware requirements of the primary school, were unknown to the villagers. In fact, other items listed in this report under the Aksu Hydroelectric Plant actually included their social responsibility activities in their wind power plant in Bandırma, Balıkesir, represented a good indication of the slapdash work by Borusan (Borusan report, 2012, p.29). The company also hired 3 brothers from the Massırdap quarter to use their passenger van as a school bus in order to take the children from upper and lower quarters to the primary school in Kadıbağı, as well as serving as their personnel bus between Aksu and İspir. This service, initiated during the construction phase, continued. I also used these services from time to time just like most of the villagers.

The main sociopolitical change in the valley was in the control of water. As described in an analysis on enclosure elegies (*çitleme ağıtları*) by Özberk (2018), this is an enclosure, the seizure of the commons by the state or corporate powers, and we find the clues of this enclosure, a special threat to the people and nature, well reflected in the elegies of folk poetry in two poems about the Aksu Stream (See **Appendix D**), one by Erdal Yılmaz from Yozgat, who worked in the region for years, and the other by Mehmet Durmaz, an Aksu expat (Özberk, 2018, p.70). This change from freely running water as a common source managed by a social contract, to its enclosure started with land registry and cadastre works, and the pattern was similar to that in other valleys. In the case of Aksu, they misrecorded land tracts to create confusion and a process of legal action among Yedigöl and Aksu villages that would take many years to resolve. In the meantime, the contractor arrived in the valley ‘to enlarge the

roads', and then started to expropriate or buy lands within the reach of the two power plants. Until the villagers found out that they were going to build HEPPs, the contractor had already started their physical intervention in the streambed and the surrounding vegetation and trees. And until the legal process was completed, two hydropower plants were almost completed. The collaboration of corporate power with the state was evident in every aspect of this transition such as the underestimation of impacts by the construction process in the EIA reports, the use of military power or judiciary system in any obstacle, and in the end, the access of local people to their water resource was restricted by coercion and domination.

Whenever local people protested and tried to prevent the contractor's activities, they found the gendarmerie standing against them, whereas they were expecting the gendarmerie to be on their side against the improper working conditions of the contractor that threatened and changed their daily life. During my interviews with them, the villagers all mentioned that this was a real disappointment for them, particularly given the fact that the gendarmerie has a particular place in the daily life of rural people because their 'sons' also become gendarmerie when they serve in the army, so each *Mehmetçik* is perceived as their own son. Frequent confrontations with the gendarmerie and their negative approach to the demands of the local people resulted in villagers' loss of trust and respect in this institution as well as the state itself (Aydemir, 2013, p.121).

A striking example to use of military power during the protests was the arrest of A.D, a 29-year old local man, for making a speed bump in front of the grocery in Kadıbağı, the epicenter of the valley. Although A.D. warned the company officials many times, the vehicles were not slowing down, and he filed an official complaint with the gendarmerie. In the meantime, in order to prevent an accident until the

arrival of the gendarmerie officials, he dug a ditch instead of the bump. Upon arrival, the gendarmerie officials questioned the locals about the identity of the person who dug the ditch, and when he came forward, they asked him to fix it. When he didn't accept it, they arrested him instead of making the company to build a speed bump for the safety of the children and the elderly of the village. Similar acts resulted in the lack of confidence in military forces and officials as well as the judiciary system when they could not get any positive response from the court, except for their request of increasing the ecological amount of water. Interestingly, after all these experiences and disappointments, some said that their political views would not change, even though they were angry about the HEPPs. One of the locals, who was engaged in beekeeping (Y.D., 32 year-old male) said that Borusan's HEPP construction was not about the current government, and that years ago, the same attempt was made during the Demirel period, and thus, it was not the current government's fault; and even if it were, he wouldn't allow anyone speak against this government at all, because it was with this government that people behaved freely and comfortably about their religious beliefs, which in fact reflected the common opinion in the valley. It was interesting since they did not feel uncomfortable with losing their right to question the accountability of the state, at least through the ballot, and being dependent on corporations.

In summary, the HEPP projects can be regarded as a tool of political and economic hegemony on the environment since they constrain access to water resources, force local people to migrate or submit to private companies and generate new local power relations through negotiations. In the power relations between the state and the citizens there is now a third actor involved, and the government prefers to play a passive role in the administration of this relationship, only providing force

when necessary. Furthermore, the villagers, who have been able to act independently within the framework of a social contract arising from the use of common stream water by means of horticulture, irrigation, and harvesting crops, have lost their independence after the control of water and the new irrigation system has been taken over by the company through valves in addition to the decreased flow of stream water, illustrating yet another case in which neoliberal policies strike a heavy blow against democracies. The valley is now turned into a commercial area, forming an immediate market economy compared to previous indirect contact through expats, and the residents of the valley now buy even their daily bread from İspir or at present from the bakery in the Kadıbağı quarter, rather than making bread in their tandoor at home.

Following the traumatic physical, social, economic, and psychological experiences during the constructions, one of the expats (M.D., 59-year old male) in the Aksu Valley drew telling analogy saying that the bulldozer in the valley, in fact, has now replaced their water monster, Boldoroz, and become a threat to their daily life. In fact, this was exact the opposite of the guardian role of Boldoroz used during the protests. The analogy between bulldozer and Boldoroz in fact seems to be a functional referral rather than just a resemblance of sounds or wordplay. During the construction process, the villagers were often urging their children to keep away from the bulldozers so that they wouldn't get hurt. In the end, the destructive aspect of the bulldozer seems to have 'developed' into a monster in their eyes, which can be explained by the 'uncanny'; In Freudian terminology, the uncanny is the mark of the return of the repressed. The uncanny arises as the recurrence of something long forgotten and repressed, something superseded in our psychic life - a reminder of our psychic past. The conflict between the locals' interpretation of Boldoroz as a source

of fear and the activists' interpretation of it as a guardian is an indication of the fact that social memory, or better to say cultural memory, works in various ways. As indicated by Harrington (n.d.), for some, the bulldozer is an icon of social progress while for others, it is a symbol of destructive exploitation; it is either worshipped as a machine of liberation or feared as a tool of repression, and the bulldozer has reshaped cultural perceptions as it has transformed urban and rural landscapes. In fact, 'Bulldozer neo-liberalism' (Lovering & Turkmen, 2011) is a term that sort of summarizes what the global spread of authoritarian neoliberalism is all about. Why bulldozer? Because bulldozer is an important tool of development, which, as described by Arturo Escobar (1995), "relies on setting up the world as a picture, so that the whole can be grasped in some orderly fashion as forming a structure or system." (p.56).

7. CONCLUSION

We know our water like our body knows our heart.
A woman living in a village of 250 inhabitants near Ramallah, Palestine⁵²

I guess each fieldwork in anthropology is a journey to a ‘land’ of unknown or known but waiting to be unfolded probably having full of surprises. It was a little this and a little that for me. This journey was different from travelling in my own country or abroad for business, touristic or visiting purposes. I had some questions in my mind, and I was preoccupied with a topic I wanted to focus on. I wanted to get answers to my questions using empirical tools of anthropology, keeping in mind that anthropology is somewhere between science and art. Aksu Valley was a *terra incognita*, and its inhabitants were ‘indigenous’ to me. My focus was on water; so vital and so vulnerable to external factors except fire, yet stable despite never-ending interventions by humankind, so simple and so complicated, and so fluent and so stagnant, embracing thousands of descriptions as I tried to summarize in the Water and Life section of this thesis. Whatever adjective you use, it well suits with this ‘quicksilver’ element. For thousands of years, humankind has found ways to exploit, regulate and/or ‘develop’ it, and where we stand now is an era of global ‘water crisis’, ‘water scarcity’, ‘water stress’, or ‘water shortage’ whichever term we use to name it. The more we have developed it, the more we have forgotten one simple fact; water is ubiquitous, and it is essential not only for humankind, but for every living organism as a natural right, and it is a vital part of our planet’s ecosystem. As we cannot ‘grow’ water, we need to understand, and get along with it as an important actor in our life while always keeping the environmental dynamics in mind.

⁵² A quote from Naguib, Nefissa (2010). Aesthetics of A Relationship: Women and Water. In *The Social Life of Water*, (ed. John R. Wagner), pp.82-97

My fieldwork questions were mainly related with what occurred and changed in daily life and environment of people living near water resources in their isolated valleys in Anatolia due to a drastic intervention in their life spaces following a big surge in construction of hydroelectric power plants (HEPPs) on water resources, and sudden rush of corporations from various sectors such as MNG, Doğuş Holding, Borusan, Trabzonspor, etc. into hydro-energy sector to get a slice of the cake in privatization of energy production and distribution as a result of the assertive energy plans of the ruling party in early 2000s. The protests against these HEPP projects across Turkey during this surge were crystal clear in pointing out that these HEPP projects are developed only considering the economic value of water while social, ecological, and cultural aspects of water resources and negative impacts of these plants on these aspects have been ignored for the sake of profitability as in the rest of the world.

During my two month-stay in the Aksu Valley, I conducted focus-group sessions and in-depth interviews in addition to participant observation in order to be able gain insight on local people's perception of water, and changes in their life style and their environment after the construction of two HEPPs in their valley. The impact area of HEPPs included four quarters, namely Dereagzı, Gılok, Kadıbağı and Massırdap. My first impression was that the valley has preserved its pristine ecosystem to a moderate extent and the valley people were trying to dress their wounds, or better to say pick up the pieces after what they went through during construction of these HEPPs. The sociocultural context was complicated mainly because of the geographical and socio-economic in-betweenness of the site, which was well reflected in daily cultural patterns. The social organization was mainly based on kinship, and reportedly there were a few families sharing blood ties with a high

level of sociocultural integration. Not surprisingly, the Aksu Stream was central to all human activity in the valley, which was seemingly minimal until the construction of HEPPs. There were only ditches carved into the soil and/or rocks depending on the topography of the valley, and reportedly some interventions in the streambed for flood control. The orchards and arable land plots were small, but well-cared. However, all quarters, except Kadıbağı and Gılok, were discharging their sewage and waste material to the stream, which was believed to wash away all wastes and contamination even during summertime. The stream was not only an economic resource that flowed through the valley for its inhabitants, it was also a socially and culturally bonding medium.

Lack of public utility infrastructure and services and proper transportation facilities in the valley seem to be associated with uneven development plans that have been implemented since the early days of the Republic in Turkey. As it has been discussed in the Development section, in line with the experiences in other developing countries, free market economy adopted by the civilian governments after the 1980s seems to have helped only the expansion of global capital while there have been tremendous impacts in social, cultural and ecological scales, such as urbanization, population growth, abuse of natural resources, the subordination of public interests to the demands of national and international corporations, etc. Unfortunately, it is now clear that the rapid economic growth achieved through the use of these policies has not translated well into development across the country mainly due to the lack of comprehensive planning and auditing activities in development plans, and local participation in decision-making processes. Furthermore, widely opening its gates to national and international corporations for privatizations, Turkey has focused solely on economic growth figures, but not on humanistic development. National

development plans focused mainly on the urban industrial sectors, and the concept of sustainable development was first included only in the Third Five-Year Development Plan covering the years 1973-1977 while human-oriented development management approach and protection of natural and cultural heritage was mentioned only at the ninth Five-Year Development Plan in 2006. The regional development agencies that were established in 2002 aimed to reduce inter-regional and intra-regional differences in development. Although addressing regional problems by means of local-scale programs can be technically regarded as an improvement in development plans rather than implementation of programs enforced by international actors such as World Bank, OECD or European Union with an expectation that all factors specific to regions could be taken into consideration, it appears that the regional plans or considerations cannot be put into practice due to supra-national commercial treaties. For instance, the district reports issued by the North East Anatolia Development Agency (KUDAKA) highlight the significance of biodiversity and wildlife, and the negative impacts of road, HEPP and dam constructions and existing power plants on the ecosystem in the İspir region, those projects are being implemented in full course. As already discussed, privatization has also been offered as a progressive solution to Turkey's energy deficit, securing the country's geopolitical position as an energy corridor between Europe and Asia, and thus Turkey has been undergoing a process of commodification of water and privatization of water services such as surfacing, processing, distribution, and wastewater collection and treatment, just like many other developing and underdeveloped countries, and consequently the public aspect of water has been lost to a private and profitable commodity through legal mechanisms.

Due to aggressive energy plans on water resources, almost all valleys in Turkey look like a construction area right now, with a heavy pressure on both the

non-human and human life surrounding these waters in Anatolia. Energy service is not a public service anymore, but subject to profit-loss economy. Almost all the running water in the country has been captured by the private sector for a period of 49 years. The governing party, which is in power since 2001 believes that running waters are being wasted in Turkey. People living near the HEPP project areas are eventually being forced to immigrate to towns or cities, which will drastically change the whole panorama of rural life in the country. During the construction of hydroelectric plants and overhead power lines, many agricultural land tracts are being expropriated, resulting in damage to the economic life of inhabitants, who are mainly dependent on subsistence economy. The villagers who are highly vulnerable to economic and political pressures are not paid fairly for these expropriations as in the case of Aksu Valley. As a result of expropriation of these small land plots, people are left without land, even without houses in their own valleys. Their ecosystem is being severely destroyed, but yet they are asked to keep silent. While their land, houses, social memory, ancestors' graves, lifestyle, and the heartbeat of their culture are being taken away, and the streams and forests are filled with diggings, they are advised not to resist; and those who do resist are considered traitors and being suppressed. The massive protests that started in urban and local areas and joined under the slogan *Anadolu'yu Vermiyoruz* by a large-scale march in 2011 from participants from all valleys suffering from HEPPs failed to force government to cancel the projects due to police force used during these protests as well as disagreements between the organizing NGOs, and thus the protestors decided to continue their struggle locally in their valleys.

Despite many efforts and traumatic experiences by inhabitants of Aksu Valley for cancellation of the HEPP projects with the support of urban activist groups, two

plants have already been constructed in the valley, and three others are on their way. The government not only gave the entire control of water to the contractor company for 49 years, but also left all the public services in the valley to the mercy of the company, although the common use of water has been historically well-managed in a sustainable way by the local community so far. While most of the villagers attribute the failure of their struggle to the fact that theirs was the first site in the region that has undergone a systematic expropriation and construction process, strong emphasis on national identity, socio-economic polarization between the quarters and lack of strong participation by women compared to other valleys seemed to be the major underlying factors. The national identity perceived by local people does not allow them to oppose any influence from the state as they repeatedly claimed to be citizens who pay their taxes regularly, are ready to sacrifice their life for their native country, and pursue their love for their homeland, people and religion. Kadıbağı quarter, the center of Aksu village, is mainly occupied by expats, mostly businessmen, either bakers or constructors, of higher income, who spent effort and money to avoid any environmental or social disruption in the valley because their notion of homeland was associated with the nature of the valley. However, in other quarters, Gilok and Massırdap, some families with lower income showed a tendency to compromise with the contractor company for material benefits. The same pattern is also supported by the profiles of activist groups.

In a valley with a microclimatic social and natural environment that makes an effort to keep pace with modern life and pull themselves up by their bootstraps, through contact with expats, without being exposed to developmentalism since the early days of the Republic, two HEPPs, built with the reckless insidiousness of neoliberal policies represent introduction of capital to an organic valley which has

been under the threat of immigration since the 1970s. In fact, the Aksu Valley is an example of semi-urban and semi-peasant lifestyle, which has developed in parallel to immigrations to big cities from Anatolia due to economic problems in 1970s. However, as a result of the neoliberal policies implemented all over the world, the decrease in the rural population, migration, poverty and rapid urbanization make the issue of 'peasantlessness' or 'depeasantry' an important debate topic. In the meantime, while it is a known fact that even developed countries seek to return to more organic methods due to overuse of chemical fertilizers, insecticides, pesticides, and herbicides or growth hormones, any threat to subsistence of local people who cultivate using more natural and sustainable ways by development projects, in return, also limits urban people's accessibility to organic foods. We become increasingly aware of the fact that subsistence economy is not an economy of poverty, but on the contrary, a strong indication of self-reliance and self-sufficiency.

Although it is thought that the peasantry has come to an end in the familiar sense, we can assume that semi-urban/half-peasant population did not sever their ties with their village in the geography of HEPPs. Local people in the study area strive to see their land, stream, garden, and house in the village as an escape point that is still decorating their dreams of retirement, and we can see this dream as a challenge to the neoliberal policies of dispossession of peasantry and reduction of rural population irrespective of the resistance in their valleys with positive or negative outcomes.

Occupying a central place in this overall picture of confrontation between the rural residents and the neoliberal actors over the use of natural resources, water has become a compelling issue to explore in anthropology. For anthropologists, water is not only a resource, but a substance connecting many realms of social life to be studied such as the different forms of valuing water, unequal distribution of water,

rules and institutions that govern water use and shape water politics and knowledge systems of water. We are all aware of the cultural and symbolic value of water as well as its vitality for physical survival, and for human spiritual, psychological and social wellbeing. It has an additional economic value as it undergoes a systematic control, collection and treatment process along with many other physical, chemical, psychological attributes.

As part of the contemporary process of capitalist expansion, neoliberal policies on water prioritize the transferability and marketability of water, as well as the increase in the efficiency and productivity of water use. It is argued that given the water scarcity problem all over the world, price mechanisms will adjust resource use to halt depletion, and the scarcity can be managed by privatization, public-private partnerships and full cost recovery. Proponents of neoliberal policies believe that this is a 'democratic way' of managing water-related problems. However, neo-liberal water reforms do not come in isolation, but form an integral part of the reorganization of capital on a global scale with ever increasing income disparities, merging of transnational companies and domination of legislative powers on supra-national levels. Through the transformation and individualization of property rights, water and water rights become commodities that are transferable, disconnecting them from historic labour investments and disassociating them from their cultural and social significance. Through an emphasis on ownership as the qualification for economic and political agency, the much-praised freedom to own property, in actual fact, causes new social inequalities and exclusions and exacerbates the old ones. Pro-developmental policies created and promoted by the nation-state and corporate power groups are based on a particular paradigm which understands the separation of community from its livelihood and the separation of individual from its community

as a pre-condition for modernisation and economic development. Such understanding of development cause local conflicts since it is mostly associated with violations of economic, social, and cultural rights as well as disturbance of ecosystems through development and infrastructure projects.

Following my fieldwork, I evaluated those local conflicts experienced by the inhabitants of Aksu Valley in four interrelated dimensions; ecological, socio-cultural, socio-political and socio-economic. First of all, the landscape of the valley has changed drastically due to thousands of trees cut down by the contractor and construction debris dumped into the streambed and roadsides, leading to damage in the aquatic ecosystem and biodiversity although the area was previously declared a Wildlife Protection Zone. The integrity of the stream was compromised, and thousands of an endemic fish specie (red spotted trout) listed as critically endangered died because of the cement wastes discharged into the stream, so it was a direct threat to the habitat. The wild animals, especially an endemic specie, chamois became easy targets for hunters due to restricted access to stream banks from elevated roadsides. The reduction in number of *gözes* was also a threat for wildlife and local people since they were using them as freshwater sources. The reduction in water flow was also a main concern for flora and fauna of the valley as well as their crops. The traumatic experience seemed to make them aware of their environment, and ecological consequences of their actions, which were taken for granted until now. I believe their ecological awareness, addressing the issue within a framework of the political world order and the ecosystem, was also related with the exchange of ideas with academics and environmentalists, who visited the valley, although the villagers consequently felt contradictory with them.

The main socio-cultural changes were related with their social relations and cultural habits as well as psychological and health concerns experienced during the construction of plants. First of all, there were strangers in the valley, interrupting their social cycle and freedom of movement, particularly for women, in their own valley. These strangers were not like tourists, and stayed in the valley almost two years, and became part of their daily life against local people's will. The relationship among the people as well as among the quarters were adversely affected by the influence of a third actor, the contractor, in the valley, and after a while people were divided into two groups; pro-HEPP and anti-HEPP people. Furthermore, the solidarity between the expats, majority being against HEPPs, and locals took a blow while mutual support and common resources provided a strong shared social capital. Another established system in the valley, which served as a bonding medium based on a social contract, was the traditional irrigation system. The contractor's new irrigation system commissioned to a local university was far from being practical, having a potential for disputes and conflicts among the villagers in the future.

Socio-economic changes came mainly with limited access to water resource and land loss. Having a subsistence economy, most of the local people were dependent on their crops. Some of those who lost their land by expropriation started to cultivate their relatives' land. Some started to work on payroll for the contractor. The owner of the fish farm suffered significant business losses when all of his reserves died due to cement-mixed stream water. Beekeepers had to moved their hives upstream due to reduced quality in their honey. In the bakers' homeland, everybody started to buy bread from a local baker. They have become either consumers and/or workers on their own land under the rules of market economy.

Lastly, the socio-political changes included presence of a third party in all public matters since any request made for the valley by locals was transferred or referred to the contractor by officials. The state became available only to use force in case of any disputes, and functioning body for legitimization, maintaining its presence as an actor that produces economic incentives and sanctions. All development commitments made by officials or candidates during elections seem to have been subcontracted to the private company. New emerging power relations seem to serve dissociation of local people from their immediate environment.

In sum, neoliberalism's definition of nature-as-source and development projects lacking social, environmental and cultural aspects are threats to people living near dams and hydropower plants and their immediate environment. Neither ecological and cultural dimensions nor political dimension of water can be ignored in order to be able to pursue sustainable living. In the face of such multi-faceted assaults perpetrated by neoliberal policies and their actors on local communities and ecosystems over the globe, development studies should undergo a theoretical renewal process. In an era of ongoing discussions about 'water scarcity' and 'access to water as a human right', no political entity should have the right to privatize water resources and hand them over to a group of companies. The water should be conferred again as a basic living right and a public good. During this process, anthropology can play a decisive role as a discipline that should swim against the currents of the mainstream on behalf of the vulnerable human communities and other living beings, finding out how they are relating to their constantly changing environment in a sustainable way.

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APPENDICES

APPENDIX A - Maps

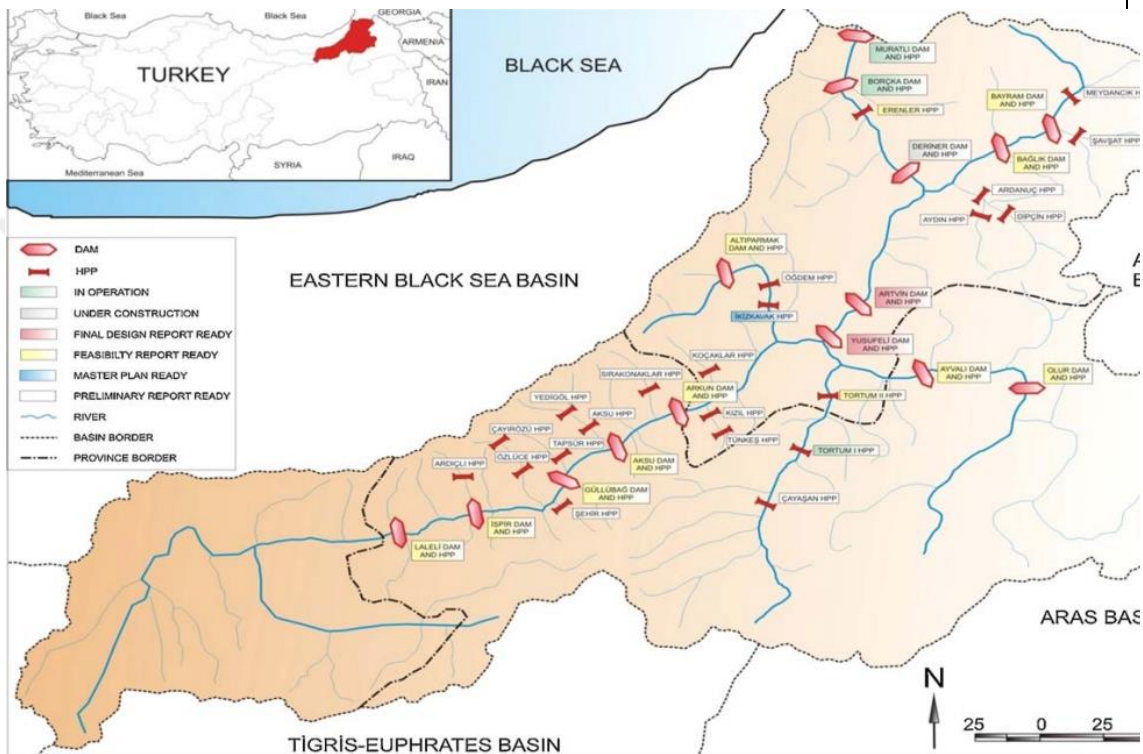
APPENDIX A-1: River Basins In Turkey



Turkey basins map - Source: Fanack

Source: Fanack

APPENDIX A-2 Çoruh Basin Development Plan



Source: A. Akpınar et al. / Renewable and Sustainable Energy Reviews 15 (2011) 1201–1209

APPENDIX A-3 : İspir and its environs



Source: Google maps

APPENDIX B - Photographs from the field

Aksu Valley & Aksu Stream, 2012



Photo by Bülent Erkan



Photo by Bülent Erkan



Photo by Zafer Durmaz



Photo by Cengiz Aydemir



Photo by Cengiz Aydemir



Aksu Valley & Aksu Stream, 2012 – continued	
	
	
 Photo by Cengiz Aydemir	 Photo by Cengiz Aydemir

Subsistence & Main Crops in Aksu Valley, 2012



İspir Bean



Mulberry trees



Beekeeping



Trout farming



Mulberry molasses



Husbandry

Daily Life & People Of Aksu Valley, 2012



Bridge, Massırdap



Çaynik



Aşgana



Tandoor bread



Gazebo, Kadıbağı



Gazebo



Haying in upstream



Chatting in park, Gılok

Daily Life & People Of Aksu Valley, 2012 (continued)			
			
		 Photo by Hanifi Aksu	
			
			

Daily Life & People Of Aksu Valley, 2012 (continued)		
		
		
		
		

Traditional Irrigation (Harks), 2012	
	
	
	

Traditional Irrigation (<i>sivarmak</i>), 2012		
		
		
 Photo: by Hanifi Aksu		 Photo: by Hanifi Aksu

New Irrigation System Commissioned By Borusan, 2012		
		
		
		

Destruction During Constructions (Photos from Zafer Durmaz's archive)	
	
	
	
	

Destruction During Constructions - continued
(Photos from Lawyer Erol Özcan's archive)



Destruction During Constructions - Continued
(Photos From Lawyer Erol Özcan's Archive)



Protests (Photos from the Valley Society's archive)



Before the Great March of Anatolia



During the Great March of Anatolia



Protests on social media



Protests on social media

Protests – Continued (Photos From The Valley Society's Archive)



Boldoroz mask used during the protests



Hydroelectric Power Plants Run By Borusan, 2012



Borusan Yedigöl Plant



Borusan Yedigöl Plant



Approach tunnel, photo by Zafer Durmaz (2009)



The bridge built by Borusan



Borusan Aksu Plant



Borusan Aksu Plant



Road construction, 2015 (Photo by Hanifi Aksu)



Road construction, 2015 (Photo by Hanifi Aksu)

Special Events & Gatherings In Aksu Valley, 2012



Picnic, 2012



Picnic, 2012



Picnic, 2012



Picnic, 2012



Researcher In The Field, Aksu Valley 2012



Aksu Stream (Photo by Cengiz Aydemir)



Dikenliyayla (Photo by Hanifi Aksu)



Dikenliyayla (Photo by Zafer Durmaz)



Dikenliyayla (Photo by Zafer Durmaz)



Picnic, 2012 (Photo by Hanifi Aksu)



Photo by Zafer Durmaz



Photo by Cengiz Aydemir



Photo by Cengiz Aydemir

Appendix C – Focus-Group Chart & Discussion Guide

	Number of Female Participants	Duration	Site	Number of Male Participants	Duration	Site
Kadıbağı Quarter	5	01:11:43	Primary school	6	01:36:33	Village room
Otluca (Gılok) Quarter	6	01:05:12	House of an inhabitant	7	01:04:31	Mosque
Yolbilen (Massırdap) Quarter	6	00:19:50 + 00:29:59	House of an inhabitant	5	01:05:03	Gazebo
Total number of participants	17 females			18 males		

My name is Pervin Yanıkkaya Aydemir. I am a graduate student at the Anthropology Department of Social Sciences Institute, Yeditepe University in İstanbul. I would like to gain insight about your life and effects of the HEPPs constructed in the valley on your daily life and have your negative and/or positive thoughts about these plants. I will be audio recording our conversation, but your name will be kept confidential. I would like to thank you for participating in this study.

1. PERSONAL INFORMATION

- 1) First of all, can you please introduce yourself briefly? Your name, age, marital status, education, children if any, where do you live and occupation.
- 2) If you come to Aksu only during summertime, when and why did you move out? If you live here throughout the year, why did you prefer to stay here?
- 3) What does Aksu or “being from Aksu” mean to you? Do you consider yourself part of the Eastern Black Sea culture or Eastern Anatolian culture?

2. WATER AND DAILY LIFE IN AKSU

- a) What is the role of water in your daily life here? For what do you need to use water? (tap water, irrigation of field/orchards, laundry, dishes, fishing, swimming)
- b) What is the significance of Aksu Stream in your daily life?
- c) Do you experience any problems in sharing water while utilizing it for irrigation in a common system? If you do, what kind of problems do you have?
- d) Do you have any specific practices with water in case of major events such as birth, death, wedding, or any traditions or customs related with water?
- e) Do you have any poems, nursery rhymes, mani or song related with water specific to your region?

3. HEPPs and DAILY LIFE IN AKSU

- a) When was the first time and how did you learn that hydroelectric power plants would have been constructed in the valley?

- b) Did you ever hear about HEPPs before? Where and how?
- c) When you first found out about construction of HEPPs in the valley, how did you and other people react to this?
- d) Have you been informed about what was HEPP and their negative or positive changes that would be created in your daily life by? If yes, who told you that and what did they tell you?
- e) Have there been any negative or positive reactions among people for construction of HEPPs? Did you ever have any disagreements, disputes or fights?
- f) How did you resolve the disagreements, arguments, fights or resentments that took place?
- g) Did anybody change their mind, and if yes, why did they change it?
- h) Has the HEPP construction brought any positive changes in your life and environment? If yes, what do you think they are?
- i) Has the HEPP construction brought any negative changes in your life and environment? If yes, what do you think they are??
- j) Did you make any protests when the contractor arrived in the company for construction purposes? What happened during that protests?
- k) How did gendarmerie or security forces act during these protests?
- l) How was the judiciary process when you decided to take your struggle to the court?
- m) How do you provide financial support for protests and demonstrations in and/or outside the valley and in the files against the state?
- n) Do you think that these protests and demonstrations have come to a conclusion? If not, what is the reason?
- o) What do you think the biggest negative impact of the works during the construction of power plants in Aksu Valley?
- p) What could have been done differently in order to avoid these negative consequences?
- q) Have there been any individuals or environmental organizations who came to support those who opposed construction of HEPPs? Do you think they had a positive contribution to the struggle for Aksu Valley?
- r) Do you follow what happens in HEPP constructions in neighboring or remote towns and villages? If yes, how and where do you follow?
- s) Do you know where this energy to be produced from the plants on the Aksu Stream will be used?
- t) How do you imagine Aksu Valley in the future?
- u) Is there anything else you would like to add?

Thank you very much for your participation and time while fasting during the Ramadan.

Appendix D - List of Interviewees (In-depth Interviews) & Question Guide

		Duration	Remarks
1	Dereağzı Quarter, Female, 51-year old	00:22:32	One of the females who remained in the quarter after all other inhabitants moved upstream was interviewed in front of her house. The interview lasted short since their impact process was different than in other quarters, and they were not involved in the protests.
2	Dereağzı Quarter, Male, 81-year old	00:28:51	One of the males who remained in the quarter was interviewed in front of his house since all other inhabitants moved upstream. The interview lasted short since their impact process was different than in other quarters, and they were not involved in the protests.
3	Female, local*, over 70 year-old	00:45:54 + 00:17:40	*Local = who lived in the valley throughout the year. The interview was carried out in her house.
4	Male, expat**, 41-year old	49:17	**Expat= who lived in the city but visited his village during summertime. The interview was carried out in the school lodgement I stayed during my fieldwork.
5	Former president of the valley association, local, Borusan employee, 40-year-old	01:02:42	He lived in the valley throughout the year. He was interviewed in the mosque following the focus group study with male inhabitants of Gılok quarter.
6	Male, local, 29-year old	00:55:31	A local young protester from the valley was interviewed in his beekeeping area.
7	Mukhtar, local,	01:27:03	The mukhtar responsible for four quarters was interviewed at his house.
8	Borusan Operations Manager, Yedigöl and Aksu Plants,	02:07:43	The authorized director of the power plant at the time was interviewed at the Yedigöl power plant. He was from İspir.
9	New president of the valley association, expat, 45-year old	00:49:30	The President of the Valley Association was interviewed at the school lodgement I stayed during

			my fieldwork. He was an expat but spending most of his time in the valley.
10	Activist, female, 34-year old	01:00:47	A participant of the Great Anatolian March, and an environmental activist who abandoned her work in İstanbul, moved to the Black Sea region and provided support to protests in the İspir region. She was interviewed in her office in Rize.

My name is Pervin Yanıkkaya Aydemir. I am a graduate student at the Anthropology Department of Social Sciences Institute, Yeditepe University in İstanbul. I would like to gain insight about your life and effects of the HEPPs constructed in the valley on your daily life and have your negative and/or positive thoughts about these plants. I will be audio recording our conversation, but your name will be kept confidential. I would like to thank you for participating in this study.

1. PERSONAL INFORMATION

- a) Birthplace
- b) Age
- c) Marital status (information on children and spouse, if married)
- d) Occupation
- e) Previous and current residence

2. FAMILY

- a) Parents
- b) Siblings
- c) Other close relatives (aunts, uncles, etc.)

3. AKSU and LIFE in AKSU

- a) Can you please provide me with a short history of the Aksu village or valley as you've heard from your elders? When did your parents come and settle here?
- b) Would you please describe a section of your life here in wintertime? What do you do in a typical day? (Past and present)
- c) Would you please describe a section of your life here in summertime? What do you do in a typical day? (Past and present)
- d) Do you still have local traditions that you used to observe and experience in special occasions and holidays? If not, why do you think it is like that?
- e) Do you think that you still have local cuisine and costumes? If not, why do you think it is like that?
- f) What region do you think Aksu Valley and yourself belong to, Eastern Black Sea or Eastern Anatolia?

4. WATER & DAILY LIFE IN AKSU

- f) Considering how you spend a typical day, where do you use water, and where do you get it from?
- g) How do you manage to use “hark” system collectively to irrigate your orchards and fields?
- h) What does Aksu Stream mean to you? How do female, male, children and elder people of valley relate with the stream?
- i) Do you have any specific practices with water in case of major events such as birth, death, wedding, or any traditions or customs related with water?
- j) Do you have any poems, nursery rhymes, *mani* or song related with water specific to your region?

5. HEPPs and DAILY LIFE IN AKSU

- v) When was the first time and how did you learn that hydroelectric power plants would have been constructed in the valley?
- w) Can you please tell me about what happened in the village afterwards? -initial reactions, whether you have been informed by officials, disagreements between pro- and anti-HEPP people, resolutions, reasons of changing their minds if there was any, legal difficulties
- x) What have you done to make your voice heard as inhabitants of Aksu Valley regarding the inconveniences you’ve experienced? Do you think that the participation was sufficient? If not, why do you think it was like that?
- y) How do you finance such events and legal processes?
- z) What were the most negative and positive effects of HEPP constructions on the valley and your life?
- aa) What could have been done to avoid such adverse effects?
- bb) Do you follow what happens in HEPP constructions in neighboring or remote towns and villages, and do you communicate with them?
- cc) Considering current conditions and developments, how do you imagine Aksu Valley in the coming years?
- dd) Is there anything else you would like to add?

Thank you very much for your participation.

	Duration	Remarks
Bülent Erkal (Bülent the Son of Mountains-Dağların Oğlu Bülent)	01:10:36	A life history interview was carried out with a local social media celebrity who lived in the upstream and devoted himself to the wildlife in the Kaçkar mountains, frequently sharing photographs about the wildlife in Kaçkar in social media.

VIDEO RECORDINGS

	Duration	Remarks
Production of mulberry molasses	Almost two hours	A video recording was made with a couple while cooking mulberry molasses outdoor in a cauldron in the backyard of their mansion.
Aşık Mustafa, the song poet	Almost one and a half hour	A video and audio recording was made by Aşık Mustafa, a song poet of the village in his house. Another recording was planned with a female song poet (Aşık Ayşe), however I was unable to meet her since her husband died in an unfortunate traffic accident two days before the interview.
A traditional picnic organized by the Aksu Valley Association	Almost three hours	A video recording was made during the picnic organized upstream by the valley association with participation of about 400 people from all quarters in the valley.

Appendix E – Two poems about Aksu Stream

1

Aksu Köyü Öyküsü İspir

Bir torun
 Bir dede
 El ele
 Güneşin doğduğu tepelerde
 Torun
 Heyecanla soruyor
 Hani bizim köyümüz
 Hani nerde
 Göster göster artık sende...
 Dede
 Gözleri buğulu, hüzünlü
 Şöyle bir iç çekiyor
 Uzun yıllar ötesinde kalan
 Anılarına gidiyor
 Yüreğinde buruk bir acı
 Sol böğründe bir sancı
 Boğazında düğüm düğüm hıçkırık
 Gözleri ağlamaklı
 Öylece kalıyor
 Sonra
 Demir canavarlarca
 Karnı deşilmiş
 Yüzü
 Çizgi çizgi bozulmuş
 Çocukluğundaki
 Köyünün yamaçlarını hatırlıyor
 O an
 O günleri yaşıyor.
 Dedenin çehresinde
 Köyünün yamaçları gibi
 Sıra sıra
 Derin çizgileri
 Daha da derinleşiyor
 Parmağı ile
 Karşı tepeleri göterip
 Eyy torunum diyor
 Biliyormusun
 Köyümüz işte oradaydı
 Suların yuttuğu yerde
 Orada
 Benek benek Pullu alabalıklar vardı
 Tüyleri Nokta nokta dokulu vaşaklar yaşırdı
 Suyu buz gibi soğuk
 Akan dereleri
 Arada sırada taşardı.
 Ahşap cumbalı
 Çinko çatılı evlerinde
 Bazen
 Yangınlar çıkardı
 Hurra

Köylü hep orada
 Yangını söndürmek için
 Kovalarla
 Acelece
 Sular taşınırdı.
 Senin yaşındaki çocuklar
 Korkudan
 Oraya buraya kaçışırdı...
 Kışları
 Bir gürültüyle
 Tepelerden çığ yürür
 Evleri önünde taşırdı
 Olsun
 Biz yine de mutluyduk
 Bu mutluluğumuzu gören
 Herkes şaşardı...
 Sabahları
 Tepelerde
 Çengel boynuzlu dağ keçisinin
 Haşmetli duruşlarıyla
 Acı acı çıkardığı
 Çoruhun derin vadisinde yankılanan
 Sesleriyle uyanırdık...
 Boz ayıların
 Arı kovanlarımızı
 Çalıp ormana kaçarken
 Yamaçlardan nasıl yuvarlandığını görür
 Kahkahalarımızı tutamazdık...
 Çaşur toplamaya giderken
 Gaak gaak gubalak
 Ötüşleri arasında
 Pır diye uçuşan
 Kınalı kekliklerin çıkardığı
 Akustik sesleriyle
 Yaban hayatını yaşar
 Vahşi hayatla çoşardık...
 Bazen
 Aksu çayı kenarında oturur
 Su samurlarının
 Telaşlı halleriyle
 Yuvalarını örüşlerine bakardık...
 Derken
 Çalılar arasından
 Homurtularını duyduğumuz
 Domuzların korkusundan
 Arkaya bakmadan kaçardık...
 Çeşit çeşit
 Çiçekler cümbüşünde uçuşan
 Çeşit çeşit kelebeklerin
 Kanatlarına vuran

Güneş ışıklarının
 Yansımaları kamaştırırdı gözlerimizi...
 Dut ağaçlarından
 Yapraklar koparır
 İpek böceklerine götürürdük
 Çıtır çıtır yesinler
 İpekten dokudukları
 Kar beyazı iplikleri
 Metrelerce örsünler diye...
 İspirden
 Yusufeline doğru
 Bir hışımla akardı
 Adım başı asma köprülü
 Hırçın Çoruhu...
 Aksu köyünün
 Tüm meyve
 Sebzeleri bulunurdu çevresinde
 Bahçelerde
 Gizlice buluşurdu sevdalılar
 Masumca eleri ellerinde.
 Yeminler ederlerdi
 Birbirleriyle evleneceklerine
 Kalpleri
 Duracak gibi hızla çarpardı
 Birileri görecekti diye...
 Arada sırada
 Çoruhun azgın akan suyunda
 Raftingciler geçirdi
 Sağa sola savrulan botları
 Kürekleriyle...
 Eyy torunum
 Bir gün
 Demirden Azrailler çıkageldi ansızın
 Çoruhun özgürlüğüne
 Kademe kademe prangalar vurdu
 Acıması yoktu vicdansızın...
 Em taa şurada
 Gelin kayası vardı
 Üzgün mü üzgün
 Sesi de çıkmazdı
 Çünkü
 Sevmediği birine verilmiş
 O da yolda giderken
 Allaha yalvarmış
 Beni taş eyle yarab demişti
 Anında
 Taş kesilmişti
 Onu da çoktan kaybettik
 Başımız sağ olsun
 O da sulara gömüldü

Aşkına kavuşmak üzere
 Kendi sessizliğinde
 Sessizce öldü...
 Ya
 Köyümüz, tarihimiz, yaban hayatımız
 Tarlamız, ormanımız, bahçemiz, ağacımız
 Kültürümüz, çiçeklerimiz, kelebeklerimiz
 Yavuklumuzla gizlice buluştuğumuz
 Yerler
 Onlar nerede
 Ne oldu
 Tarihin derinliği gibi
 Derin sularda boğuldu...
 Göç ettik göç
 Oraya buraya
 Bizim yerimiz yurdumuz
 Kalmamıştı artık buralarda
 Veda etti herkes
 Nazlı gelin Aksuya...
 Eyy torunum
 Aksu köyü
 Anlatılmaz yaşanır.
 Bunları
 Başkaları bilmez
 Bu köyden çıktı
 Dünyanın en iyi fırıncıları.
 Ömür tazelerdi
 Yedi gölleri yaylaları
 Görüyorsun ya
 Güya
 Kamu yararı
 Kurmuşlar barajları
 Hidro elektrik santralleri
 Katletmişler buraları...
 Otuz yedi
 Baraj ve santral
 Yetmiyormuş gibi
 Aksu köyümü de koydular
 Sıradan dördüncüleri...
 Kime gittikse torumun
 Olmadı.
 Bakmadı yüzümüze
 Bakanları
 Başbakanları
 Cumhurbaşkanı.
 Durduramadık bu katliamları...
 Daha ne diyebilirdi ki dede
 Üzgündü
 Gözlerinde yaş
 Torununun elinden tuttu

Torunu görememişti köyünü
 Onunda gözleri buğulu
 Arkalarına bir daha dönüp bakmadan
 Dede torun
 Anıları geride bırakıp
 Yürüdü yürüdü...
 Tarihin derinliklerine terk ettiler
 Benekli Alabalığı, vahşi Kediye
 Ne güzel de anlattın Erdal
 Sözde koruma altına alınmış
 Bu kanyonu
 Bu vadiyi

Erdal YILMAZ -15.08.2009- Kayseri.
<http://www.antoloji.com/aksu-koyu-oykusu-ispir-2-siiri/>

2

AKSU SEVDASI

Cahilim, sandım ki; bu bir hizmettir,
 Bu hizmeti yapan baba; devlettir,
 Allahın verdiği büyük nimettir,
 Bitmeyecek bizde Aksu Sevdası!...

Aksu bir sevdadır; cana canandır,
 Ey Canan! uğrunda canımı yandır,
 Vatanın içinde başka vatandır
 Bitmeyecek bizde Aksu Sevdası!...

Berrak sularında pullu alası,
 Aksu'da oluyor balın âlası,
 Zemzem gibi suyu, temiz havası,
 Bitmeyecek bizde Aksu Sevdası!...

Dediler alırsız suyun azını,
 Kuzu diye yedik elin kazını,
 Kılsalar da cenaze namazını,
 Ölmeyecek bizde Aksu Sevdası!...

Boz aylarımın soyu bitmekte,
 Dağ keçilerim de çekip gitmekte,
 Alabalık zaten can çekişmekte,
 Bitmeyecek bizde Aksu Sevdası!...

Dozerlerle mezarlarım eşildi,
 Dinamitle yaralarım deşildi,
 Suyum berrak; vadem ise yeşildi,
 Bitmeyecek bizde Aksu Sevdası!...

Ne dirimiz rahat; ne de ölümüz,
 Savaştan çıkmışa döndü halimiz,
 Para etmese de artık balımız,
 Bitmeyecek bizde Aksu Sevdası!...

Bu topraklar hangi cenge girmemiş,
 Tarihinde böyle vahşet görmemiş,
 Düşmanına mezar dahi vermemiş,
 Bitmeyecek bizde Aksu Sevdası!...

Güneş bile bana solgun baksa da,
 Suyum bile yaslı yaslı aksa da,
 Çiçeklerim hep dinamit koksa da
 Bitmeyecek bizde Aksu Sevdası!...

Dik yürürüm diye sanma gamsızım,
 Çayım güzel amma; biraz demsizim,
 Eğer susuyorsam ben de densizim,
 Bitmeyecek bizde Aksu Sevdası!...

Herkes ne düşerse yapsın payına,
 İnanç oku gerek; dava yayına,
 Kanım karışsa da; Aksu Çayı'na,
 Bitmeyecek bizde Aksu Sevdası!...

Bitmez desem bile dinmiyor tasam,
 Önümde ölüyor en büyük sevdam,
 Kurtulacağına inancımız tam,
 Bitmeyecek bizde Aksu Sevdası!...

Mehmet Durmaz, Aksu, İspir