RETHINKING HYDROPOWER IN THE ANTHROPOCENE: A STUDY OF DARIBÜKÜ VILLAGE

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
OF
ISTANBUL ŞEHİR UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN
CULTURAL STUDIES

NOVEMBER 2017

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Cultural Studies.

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Hacer Şartepe Gören

ABSTRACT

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MA in Cultural Studies

Thesis Advisor: Assist. Prof. Ebru Kayaalp

November 2017, 100 pages

Excessive anthropogenic interventions into the environment have led to the Anthropocene, 'the era of humans'. Against the impacts of this privileged human position, there has been worldwide increasing tendency to renewable energy. Turkey has also made certain attempts in this scope, and water, as an important source of renewables, has come to the fore. This has resulted in continuous proliferation of hydroelectric power plants which have created vulnerabilities and disentanglements in certain contexts. In this regard, the thesis focuses on Darıbükü village of Isparta city, a village third of which was covered with water upon the construction of hydroelectric power plant. Drawing from the recent research in Science and Technology Studies (STS), the thesis dwells upon this transformative process which human (villagers) and non-human (water) have undergone, and stresses the complex network of relations among multiple actors in the village. The research is based on a multi-sited ethnography which lasted three months and is compiled of semi-structured in-depth interviews with villagers, academicians, activists, a journalist, lawyer, accompanied by participant observation in the village and several expert meetings.

Keywords: Anthropocene, Science and Technology Studies, Darıbükü Village, Hydropower, Multi-sited ethnography

ÖZ

ANTROPOSEN'DE SU ENERJİSİNİ YENİDEN OKUMAK: DARIBÜKÜ KÖYÜNÜ'NÜN VAKA ÇALIŞMASI

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Kültürel Çalışmalar Yüksek Lisans Programı
Tez Danışmanı: Yrd. Doç. Dr. Ebru Kayaalp
Kasım 2017, 100 sayfa

İnsan eliyle çevreye yapılan aşırı müdahaleler, Antroposen, yani "İnsan Çağı"nın başlamasına sebep olmuştur. İnsanı imtiyazlı konuma yerleştiren bu yaklaşımın etkilerini azaltmak için dünya çapında yenilenebilir enerjiye eğilim artmıştır. Türkiye de bu anlamda birtakım önlemler almış ve su, yenilenebilir enerji kaynakları arasında ön plana çıkmıştır. Suya eğilimin artmasıyla birlikte ülke genelinde hidroelektrik enerji santrallerinin sayısında büyük bir artış yaşanmıştır. Bu artış, birtakım kırılganlık ve çözülmeleri beraberinde getirmiştir. Bu kapsamda tez, hidroelektrik enerji santralinin (HES) inşasıyla üçte ikisi sular altında kalan Isparta İli'ne bağlı Darıbükü Köyü'ne odaklanıyor. Bilim ve Teknoloji Çalışmalarından (STS) beslenen tez; köylülerin ve insan olmayan (non-human) bir aktör olarak suyun geçirdiği dönüşümü merkezine alıyor. Bunu yaparken, köydeki çoklu aktörler arasındaki kompleks ilişki ağına dikkat çekiyor. Ayrıca bu çalışma; köylüler, akademisyenler, aktivistler, bir avukat ve bir gazeteciyle gerçekleşen, katılımcı gözlemle zenginleşen ve üç ay süren yarı yapılandırılmış derinlemesine mülakatlardan oluşan çok sahalı (multi-sited) etnografiden besleniyor.

Anahtar Kelimeler: Antroposen, Bilim ve Teknoloji Çalışmaları (STS), Darıbükü Köyü, HES, Çok Sahalı Etnografi.

PREFACE

The thesis primarily intends to shed light on the transformative process commencing with the construction of hydroelectric power plant which inundated the third of the Darıbükü Village of Isparta City. It specifically analyses vulnerabilities and disentanglements which appear upon this energy transition with the joint contribution of multiple actors. Drawing from the recent research in Science and Technology Studies (STS), it feeds from a multi-sited ethnography which was conducted with villagers of Daribükü, academicians, activists, a journalist, lawyer along with participant observation in the village and several other events.

It aspires to be among the first academic studies in the country elaborating on the commodification of *cultura animi* which leads to deepening of *a priori* distinctions between humans and non-humans, between the social and technical in the Anthropocene. It also intends to provoke further thinking or rethinking about human interventions into the nature and its severe impacts. And it has been this purpose of the thesis that has kept me more motivated and resilient in the face of difficulties of my research at various sites. Semi-structured in-depth interviews and interaction with people of various backgrounds have been other motivating points.

I hereby would like to extend my heartfelt thanks to those who have supported me during the whole process. My mother and father, who have always stood by me, deserves more than thanks. I owe special thanks to my thesis advisor, Asst. Prof. Dr. Ebru Kayaalp for her support and invaluable contributions. And my husband Orhan also deserves my special thanks for his lovely support.

I also would like to thank each jury member for their contributions. Only me could be held responsible for any shortcomings or mistakes of the study.

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CHAPTER 1

INTRODUCTION

Excessive human interventions or disruptions have led to the Anthropocene, which could be literally translated as "the era of humans." This era has been characterized by the environmental the impacts of the climate change including rising greenhouse emissions and sea temperatures, melting glaciers, deforestation, extinction of animals, and so on. Coined by Earth scientists Paul Crutzen and Eugene Stoermer in the early 2000s,[1] the term Anthropocene has also come to signify apocalyptic anxieties that everything on Earth is within the reach of human industry and interference. Nevertheless, it has also helped somehow in decentering the always-already privileged status of humans and human agency.[2] Although it is a disputed term to be included within the formal geological times, it has proved to be influential in changing the way how humanity perceives the Earth and the devastating impacts it has made on it. In other words, it does not only refer to a new geological era, but also to the emergence of a new physical and conceptual space formed by a sense of inhabiting an environmental impasse that humans have made and now exist inside.[3] In this regard, increasing awareness of the Anthropocene and the current long-lasting impacts on the environment has led people to begin to take precautions both at home and abroad, however late they are. Among these precautions, renewable or clean energy attempts come to the fore. Turkey has also made certain attempts and efforts toward more renewables and a cleaner future. Within this scope, among its renewable energy resources come out hydropower, geothermal energy, biofuels and waste, wind power and solar power against the background of increasing carbon gas emissions and climate change problem. Nevertheless, Turkey has been mostly

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[1] Olson, V.& Messeri L. 2015, "Beyond the Anthropocene: Un-Earthing an Epoch", in *Environment and Society: Advances in Research 6*, Berghan Books, p.28-47: 28.
[2] Glabau, D. 2017, "Living in the Anthropocene: Course starts March 8th", Retrieved from https://danyaglabau.com/tag/anthropocene/
[3] Olson, V.& Messeri, L. 2015, "Beyond the Anthropocene: Un-Earthing and Epoch" in *Environment and Society:Advances in Research 6*, Berghan Books, p.28-47: 28.

criticized for its increasing use of carbon fuels, especially lignite and hard coal, which are the main triggering forces behind greenhouse gas emissions.

The most rapidly expanding branch of Turkey's renewable energy sector in recent decades has been especially hydropower. The expansion of hydropower has been facilitated by the role of the processes of privatization and urgent expropriation (*acele kamulaştırma*) in neoliberal Turkey. In this direction, the number of dams and hydroelectric power plants has soared in the country specifically with the enactment of the Electricity Market Law in 2001. And increasing number of these hydroelectric power plants and dams have followed policies and trajectories that have brought about certain vulnerabilities, contingencies, transformations, or disentanglements. As a backlash against these excessive anthropogenic interventions, certain resistance movements, -some showing success while some others failing- have also appeared in many regions of the country. Thus, basing on these human-caused interventions or disturbances which are proposed as renewable energy resource in the form of hydroelectric power plant development, it could be claimed that the privileged position of humans and human agency has also made the *a priori* distinction between humans and non-humans, between the social and the technical more evident in the Anthropocene. In other sayings, the anthropogenic (human-made) uses or interventions that have led to the Anthropocene, have most often disregarded non-human entities and what is social and cultural, widening the gap or *a priori* distinction between humans and non-human entities, between the social and technical.

Here, I believe that what is ironic derives from the persistence of such divisions or distinctions even in the Anthropocene where the devastating impacts of human interventions on the climate and the environment are critically felt and experienced. Or what is more ironic is that the renewable energy attempts that have been suggested as solutions for the Anthropocene actually reinforce the impact of the Anthropocene itself. In a similar vein, with the subtle intrusion of energopolitics or energopower and the concomitant network of relations in the neoliberal context, these attempts and efforts could be doomed to fail anyhow. Hence, under such a scene, the question arises whether these "renewable" or "clean" energy attempts

serve for a sustainable and a green future or turn into floating empty signifiers that disguise the underlying need for more economic growth, development, and thus even more energy.

Within this scope, the case of Darıbükü, (a village whose third of which was covered under water with the construction of a dam and hydroelectric power plant and with the underlying urgent expropriation decisions and which consists of almost merely old illiterate people), poses a perfect example in displaying the extent of such excessive anthropogenic interventions in the form of renewable attempts. In this sense, it has been water (once an intrinsic part of life and culture) that turned into a commodity and drastically changed the whole life. Moreover, it has been energopolitics or energopower where power has dominated over and through energy with the network of the state, the energy company, economics, and technical knowledge in the village. Similarly, the attempts taken under the name of hydropower as a renewable energy source have widened the *a priori* distinction between humans and non-humans, between the social and the technical.

The theoretical framework of the thesis is enriched by Actor Network Theory within Science and Technology Studies (STS), which opposes to any taken for granted, absolute and fixed concepts and proposes to deal with the difficulty of assembling collectives made up of so many new actors once society and nature are simultaneously set aside.[4] In this sense, the thesis draws on the work of Bruno Latour and Michell Callon, prominent scholars who emphasize the role of things, objects, and non-human entities as entangled and associated with humans. Additionally, the thesis uses the concepts of energopower or energopolitics, two relatively new but widely used concepts among anthropologists of new energy anthropology. As a footnote to and a genealogy of biopower[5] these two terms mainly signify rethinking political power over and through energy.

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[4] Latour, B.2005*, Reassambling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press Inc., New York, p. 301:259.

[5] Boyer, D. 2014, "Energopower: An Introduction*"*, Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.37:22.

Among the limitation of the thesis, the biggest one has been the reluctance of people to answer my phone calls or e-mails during my initial attempts to contact specialists dealing with renewables or climate change. Here, I should also state that this has indirectly influenced the results of my multi-sited ethnography. Moreover, another issue -more preference than a limitation that I faced during my research- was the difficulty of combining two rather different focuses: energopower and energopolitics issues in a neoliberal context in the Anthropocene on the one hand, and Science and Technology Studies (STS) with a particular emphasis on Actor Network Theory (ANT) on the other. Here I could also say that the difficulty of this combination has made my thesis what it is.

Within this general framework, the rest of the paper intends to further elaborate on each chapter of the thesis in specific. The second chapter of the thesis surveys the anthropologists writing new energy anthropology, which is anthropology's third-generation engagement with energy. These researchers mainly base their work on energy transitions, renewable energy attempts and climate change mitigation efforts within different contexts in the Anthropocene. Their efforts focus on energopolitics and energopower, or in other words the intricate ties between politics or energy. Likewise, a remarkable number of scholars question the clear-cut boundaries between humans and non-humans or between the social and the technical in the context of Science and Technology and Studies (STS). Each of the studies I survey here has inspired me to conduct a multi-sited ethnography on a critically important issue that has not been adequately debated or covered in Turkey. Here, I should also express that I have tried to combine two different scopes and theories: energopolitics and energopower issues in a neoliberal context, and Actor-Network Theory within Science and Technology Studies (STS).

The third chapter "Turkey in the Anthropocene" primarily aims at laying out the general context and short historical trajectory of the subject of my research. The chapter provides an overview of developments and legal changes that have provided the grounds for the construction of dams and hydroelectric power plant and discusses the vulnerabilities or contingencies that have resulted at the level of the

village and the country. It questions the role of Turkey in increasing greenhouse gas emissions and how the country is influenced by these in return in the Anthropocene. It also discusses the development of renewable energy in Turkey, as well as the country's current efforts to mitigate the effects of climate change and the broader international context of which they are a part. Turkey is accused of dragging its feet in signing two significant conventions or treaties, namely, the Kyoto Protocol and the UN Framework Convention on Climate Change (UNFCCC). What is more, along with its relative improvements in energy transitions, Turkey is also criticized for overemphasizing hydropower even though it has more capacity for solar and wind power. In this context, the country is seen in a rush to hydropower with construction of an ever-increasing number of hydroelectric power plants at home, which result in excessive interventions in the environment and culture of the places where they are built. As the underlying force of this rise is seen the privatization process accelerating with urgent expropriation process and the Electricity Market Law numbered 4628 and dated 2001.

The multi-sited ethnography chapter, "Energopolitics and Energopower as Facilitators in Demise of the Village Daribükü", commences with my first impressions and observations of the Darıbükü village. The village, upon urgent expropriations, is divided into two, namely *the old village* (a third of which under water with a few remaining isolated homes) and *the new village* (consisting of recently-built uniform houses of 50 square meters) as the result of urgent expropriations. This very division of the village results in misery, confusion, anxiety and a loss of hope among villagers. The chapter then goes on to discuss a network of relations among multiple actors that have transformed the village. This complex network brings together the state and corporate power along with technical knowledge and legal structures. For instance, the mukhtar, as the sole representative of the state in the village, becomes the perfect collaborator of the energy company in persuading people to evacuate their homes and remove their belongings. Likewise, power shift from the state to the corporate power in a neoliberal context or the resultant blurring roles between the two and the confusion among villagers all manage the whole process. This management is characterized sometimes by the withdrawal of the state and other

times by its involvement as a facilitator that grants certain approvals and makes legal changes. For instance, in a perfect example of rising corporate power in the neoliberal context, the construction of the dam and hydroelectric power plant began even before the project was approved by the relevant ministry. Similarly, remarkable changes in urgent expropriation decisions, one of the fiercest forms of privatization, exemplify how the state shows its existence when necessary.

The fifth chapter "Environment Impact Assessments (EIAs): An Example of Infidelity to One's Raison D'être", stresses how EIA reports often fail to assess the environmental impacts of certain developments or projects. The chapter begins with a quick glance at how they originated in Turkey and, the shortcomings in their implementation. It continues with an emphasis on the actancy of water as an influential non-human actor establishing and modifying relations and the culture in the village, which comes to halt with its commodification as hydroelectric power plant. Afterwards, the chapter focuses on the way how the EIAs transform water and thus *cultura animi*, -which is alive, fluid, unfixed and unaccountable- into standards, terms, numbers, charts, or statistics thanks to the calculative capacity of economics and technical knowledge. It is not only the ungraspable water that turns into an accountable and visible hydroelectric power plant but also villagers, plants, trees, homes, and the culture that are now accountable and visible. In this way, the chapter concentrates on the way how EIAs, as socio-technical *agencements,*[6] lead to series of disentanglements (re-entanglements) of things and humans. For instance, water, once an intrinsic part of nature and society, is disentangled from the Köprüçay river[7], and is objectified, becoming almost a stranger to the villagers whose lives had been closely tied to the river before. Lastly, another point that is made in the chapter is the divisions or distinctions between the social and the technical or between the

[6] Socio-technical *agencements*, as highly influential economic actors conceptualized by Callon, refer to collectives of human beings, technical devices, algorithms, tools and so on. See also: Hardie, I.& MacKenzie, D.2006, "Assembling an Economic Actor: The Agencement of a Hedge Fund", presented at the workshop "New Actors in a Financialized Economy and Implications for Varieties of Capitalism", p.49:1. Retrieved from http://www.sps.ed.ac.uk/__data/assets/pdf_file/0014/3416/AssemblinganEconomicActor.pdf

[7] Köprüçay, ancient Eurymedon (Ancient Greek: Εὐρυμέδων) is a river that is situated in Antalya Province, Turkey, and empties into the Mediterranean. Retrieved from https://en.wikipedia.org/wiki/K%C3%B6pr%C3%BC%C3%A7ay_Riverhtml

scientific and the social that reveal the depoliticization process. In other words, it could be claimed that the divide between the technical and the social, or the distinction between the scientific and the social is intentionally created so that the political can subtly infiltrate. To sum up, EIAs could be said to have transformed the Darıbükü village thanks to the performativity of economic and technical knowledge and representations that commodify and ignore the water and what is social and cultural.

1.1. Methodology

My research is mainly based on a multi-sited ethnography carried out over a period of roughly three months. Marcus proposed multi-sited ethnography rather than traditional single sited ethnography as a means of moving beyond local situations to examine cultural meanings, identities, and objects in diffuse time-space. [8] On this basis, I opted to perform my fieldwork in multi-sites, not only geographically but also culturally and socially in diffuse time and space. Hence, instead of conducting my research in a single field site for a certain period of time, I multiplied my sites and traced the resulting associations in different settings of a complex cultural phenomenon (renewable energy in simple terms) which is given an initial, baseline identity that turns out to be contingent and malleable.[9] Here, "site" does not literally refer to a place, but rather to institutions, experts, NGOs, indigenous people or juxtapositions of them. To be more specific, I have traced the associations and connections regarding hydropower at multiple sites, be they experts, activists, local people, or academicians each of whom are assembled around the transformation of water into a commodity. This unfolding process has showed that the transformation of water into hydropower, which is taken for granted as a renewable and sustainable form of energy, has proven to be rather contingent and malleable. This has provided me with the chance to do a research that acknowledges the macro theoretical conceptions and narratives of the world system but that does not depend on them

[8] Marcus, G.E.1995, "Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography", Annual Review of Anthropology, Vol. 24, p.95-117:96.
[9] Ibid., p.106.

for the contextual architecture establishing a group of subjects.[10] In brief, since the object of study is ultimately mobile and multiply situated,[11] associations and connections for the construction of knowledge have been of utmost importance and relevance during my fieldwork.

Marcus describes different modes or techniques in performing multi-sited ethnography. These include following people (e.g., migrants across borders), a "thing" (e.g., commodities, gift, money circulating at different hands), a metaphor (signs and symbols), plot or story, a biography, or a conflict.[12] In this context, I have mainly "followed actors" in Latourian terms. These ranged from a "thing" as non-human entity (water *vis â vis* hydropower) and people (Darıbükü villagers and a group of experts including academicians, activists, a journalist, and a lawyer) along with the concomitant entanglements, contingencies, and networks for a better and fresh analysis of a complex cultural and political or energopoliticial process diffused in time and space. In other words, avoiding the precedence of humans to non-humans, my fieldwork is mainly based on Actor-Network Theory (ANT) which opposes to any taken for granted, absolute and fixed concepts and proposes to deal with the difficulty of assembling collectives made up of so many new actors once nature and society have been simultaneously set aside.[13] To this end, I have followed how water, in the process of turning from an intrinsic part of nature and cultural life into a commodity, has enormously influenced people's livelihoods and formed a complex network of relations, thereby becoming a significant issue for many experts including lawyers, academicians, and activists in the Anthropocene.

Again, for the same purpose, I have focused on the village of Darıbükü in the town of Sütçüler in the city of Isparta. It is a village consisting almost solely of old people and a third of which was covered by water with the construction of a dam and

[10] Marcus, G.E.1995, "Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography", Annual Review of Anthropology, Vol. 24, p.95-117:110.
[11] Ibid., p.102.
[12] Ibid., p.110.
[13]Latour, B. 2005, Reassembling the Social: An Introduction to Actor-Network-Theory, Oxford University Press Inc., New York, p.301:259.

hydroelectric power plant upon urgent expropriation decisions. To briefly describe the village, it is a Yoruk-Turkmen village in the Turkish city of Isparta with the inhabitants aged average 65 and with population of 111 as of 2016.[14] The villagers used to meet their basic needs via subsistence farming in their yards and through traditional means with no recourse to fertilizers and pesticides. Fruits they grew in the yards were all-inclusive ranging from high quality mulberry, cherry, grape, apple, plum, peach and even kiwi, goji berry, and so on. The climate and the land of the village used to be appropriate for growing vegetables both in winter and the summer thanks to the Köprüçay river.[15] As for husbandry in the village, due to restrictions and bans on raising goats by the Ministry of Forestry and Water Affairs for long years, there exist no longer sheep or goats in the village. And cattle farming also ended due to the migration of the youth to big cities.[16] What is more, as my informants stated, many types of herbs including thymes, bee balms and lemon balms used to constitute one of the main livelihoods in the village.

Furthermore, each family used to have separate house made of wood and stone. And as the figure 1.1. shows, almost each house included large yards, haylofts, and some of which had also outbuildings and barns. Additionally, each house used to have large traditional hearts for cooking ("ocaklık" in their sayings) and huge windows.[17]

[14] See also in Turkish: http://www.nufusune.com/15960-isparta-sutculer-daribuku-koy-nufusu
[15] Okdemir Kandt, S. 2015, Socio-economic evaluation report of Darıbükü Village based on short interviews with villagers, not published, retrieved from one of my informants, p. 1.
[16] Ibid., p.2.
[17] Ibid., p.1.

Figure 1.1. A typical house before the construction of hydroelectric power plant in the village.

Yet, as my informants also stated, urgent expropriation decisions, accompanied by the construction of the dam and hydroelectric power plant, forced half of the village inhabitants to migrate to Isparta, while the other half had no option to migrate and had to move to new uniform buildings of 50 square meters, typical houses being displayed in the figure 1.2. News reports on the fading away of a culture and a people's past, present, and future distressed me and motivated me to find out more about the village. This initial research constituted the very beginning of my study on the societal impacts of energy transitions in the Anthropocene, where a renewable energy resource such as water has turned into an unrenewable and unsustainable one with disproportionate anthropogenic interventions that completely disregarded the social and the cultural.

Figure 1.2. Uniform houses after the construction of hydroelectric power plant in the village.

In this direction, I formed two groups of semi-structured in-depth interviews: one with villagers of Darıbükü in Sütçüler, Isparta and the other with academicians, activists, a lawyer, and a journalist. I also conducted participant observation in the village and attended several events. I carried out semi-structured in-depth interviews with ten people and short interviews with five other people. In this respect, my fieldwork primarily relied on qualitative analysis of these in-depth interviews as well as participant observation. I should also state that I do not disclose the names of participants in this study for ethical reasons, instead either using pseudonyms or describing them except for Mr. Uysal since he voluntarily stated that his name could be included. As a well-informed villager in his fifties and who used to work as a construction foreman and now lives in Isparta city, he stands out as the only one who is continuing his legal struggle against the misery and the losses the whole village has undergone because of urgent expropriation decisions. And his mother, aged 76 and now living with him, used to have a life in the village before their homes and all belongings including hand-made rugs and family heirlooms were covered by water.

During my visit to the village he accompanied me and was of great help in interacting with villagers. Although constructing my research specifically upon dynamic, face-to-face interviews and fresh knowledge at multiple sites has motivated me during the whole process, the biggest limitation or demotivating point has been the difficulty in reaching these sites and the reluctance of people to answer my e-mails or phone calls, which might have indirectly impacted my research findings.

CHAPTER 2

LITERATURE REVIEW

2.1. Triggering Force Behind the Look for Renewable Energy: The Anthropocene

The ever-increasing need for energy worldwide, especially in the forms of coal and oil, has brought about certain consequences, whose impact is deeply felt in today's world and will maintain its existence unless necessary precautions are taken. In other words, humanity's desire for more growth, more capital and development, in short for more energy, has led to the onset of the Anthropocene, a new geological epoch in which humans had altered the planet.[18] To be more specific, it does not only denote a new geological era, but also the emergence of a new physical and conceptual space formed by a sense of inhabiting an environmental impasse that humans have made and now exist inside.[19] And the Anthropocene has manifested itself either as ocean acidification, climate change, global warming, increasing carbon gas emissions, depleting natural sources, extinction of certain species and so on. As for the etymology of the term, "anthropo-" corresponds to "human" and "-cene" to the standard suffix for "epoch" in geological time.[20] Therefore, the term could easily be interpreted as "the era of human". One could also rightfully claim that it is this human-centric or anthropogenic position that declares humans as the master of nature and deserve them the right to make selfish use of nature while non-human entities have been increasingly disregarded.

Within this context, Cymene Howe, as an anthropologist at Rice University writes mainly on environment, ecology, and energy, activism and human rights, Latin America (Mexico, Nicaragua)[21], and delicately explains the unprecedented human

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[18] Krutzen, P.J.& Schwagerl, S. 2011, "Living in the Anthropocene: Toward a New Global Ethos", Yale Environment 360. Retrieved from http://e360.yale.edu/features/living_in_the_anthropocene_toward_a_new_global_ethos

[19] Olson, V.& Messeri, L. 2015, "Beyond the Anthropocene: Un-Earthing an Epoch" *in Environment and Society:Advances in Research 6*, Berghan Books, p.28-47: 28.

[20] The Anthropocene, (n.d.), in Encyclopedia of Earth, Retrieved from http://editors.eol.org/eoearth/wiki/Anthropocene

[21] Rice University, Center for the Study of Women, Gender, and Sexuality, (n.d.), Retrieved from https://cswgs.rice.edu/howe/

imprint on the planet. Strikingly referring to displacements and replacements the anthropology of energy has undergone upon the appearance of the Anthropocene, Howe (2015) states that it was once the climate, the seasons and the ecology that shaped the cultural life, intensely being studied, and debated. However, now it is claimed to be the human habits and social life that irreversibly changed the climate, the seasons, or the ecology.[22] Even though it is a disputed term to be included within the formal geological times, it proves influential in changing the way how humanity perceives the Earth, the devastating impact it has made on it. Likewise, it is due to the urgency and critical importance of the Anthropocene that a remarkable number of scholars, researchers, or anthropologists have started to make more meticulous emphasis on the term. Thus, they aim to make the concept Anthropocene well-embedded in people's everyday lives and to help people reinterpret the world and understand the impact left by very themselves.

This part of the paper firstly intends to limit those working on the Anthropocene with anthropology of third-generation engagement of energy (which will be detailed below). In this sense, it intends to elaborate on how this anthropology's third-generation engagement of energy dwells on energy transitions, renewable energies, clean technologies, climate change mitigation efforts, with particular emphasis on intricate relations between the natural, the social and the technological realms. Moreover, the paper also argues that these anthropologists mostly concentrate on the terms energopolitics and energopower when it comes to the Anthropocene. Within this context, it aspires to shed light on how these two terms have emerged and been widely used regarding clean or renewable energy attempts. And it also investigates the *a priori* distinction between human and non-human entities, and between the social and the technical, both of which stand as important handicaps in the Anthropocene. Lastly, it analyzes how the neoliberal context dominates the atmosphere in Turkey in its attempts and policies regarding hydroelectric power plant developments as a source of renewable energy in the Anthropocene.

[22] Howe, C. 2015, "Life Above Earth: An Introduction", Cultural Anthropology, Vol. 30 (2), p. 203-209: 206.

With the wide use of the concept Anthropocene, there could be significant changes in how people perceive nature and take the responsibility of their destructive impacts upon nature, and act accordingly. In this scope, Boyer (2016) dwells upon the huge influence of such concepts as "petrocultures" and "the Anthropocene" in reshaping how we think and talk about the world. He regards the notion of humanity as a geological force as implied in the Anthropocene as a new way of imagining our social existence. Likewise, he questions the use of "wind culture", "culture of renewables" in changing how we see the world and the activities in it.[23] To be more specific, he states that creation of such concepts is powerful in changing people's understanding of culture. For instance, if one specifies a culture depending on energy sources through the concept of petrocultures, he questions whether we can open up other ways of imagining the social existence. As an alternative to petrocultures, a wind culture or a culture of renewables is proposed accordingly.[24]

In a similar vein, one can view this relatively new term of the Anthropocene as a radical rupture in the capitalist line of growth and development; reminding that people are already suffering from the future effects of oil dependence.[25] In short, it could be stated that as a highly influential concept, the Anthropocene, if it is widely used and made more visible either via politics, arts, or the humanities, it could help people change the way how they perceive the Earth, the nature and take the responsibility of their actions accordingly. In this scope, the remarks made by Cymene Howe (2015) could show the power of the term Anthropocene. Whether it is named Anthropocene or something else, she states, the concept helps us think *ceneic-ly* backward or forward, or having us *be timely*. To be more specific, she states the timely turns of the Anthropocene has compelled us to think and talk on certain time pieces at various scales: a geological time teeming with temporal immediacies, crises or catastrophes.[26] She further suggests that with the Anthropocene we are learning -again- *how to tell time*. [27] This leads us to think about the time we live in, seeing the

[23] Boyer, D. 2016, *After Oil*, Petrocultures Research Group, University of Alberta, Canada, p.79:46.
[24] Ibid., p. 46.
[25] Ibid., p.63.
[26] Howe, C. 2015, "Timely", *Force and Power in the Anthropocene: Muse Words,* Denver, CO, p. 4:2.
[27] Howe, C. 2015, "Timely", *Force and Power in the Anthropocene: Muse Words,* Denver, CO, p. 4:2.

temporality at certain spaces. She also gives the instance of the great melting at the top of the world and the bottom as well, making us to think about the cool and the ancient time which is being washed away. Furthermore, she puts forward that, be it either a geological time or not, the term Anthropocene, has created new ways of thoughts on the 'cene', or the epoch.[28]

Even though the issue of energy has been late to be touched within anthropology, the third-generation anthropology's engagement of energy[29] or the new anthropology of energy could be classified as the one largely dwelling upon this Anthropocene, renewable energies, energopower or energopolitics. Before proceeding with this third generation of anthropology's engagement with energy, it would of use to touch on the former two generations of anthropology's contact with energy. Although I think that there can be no clear-cut distinction between these three generations of anthropology's engagement of energy, it would be of benefit to touch on the main tenets of each term.

The first generation could be defined by the works of Leslie White in the 1940s, who adopted an evolutionary theory and defined everything in the universe in terms of energy, asserting that cultural development depends directly on the energy used.[30] As for the second generation of anthropology's contact with energy, it could be attributed to Laura Nader in 1970s and 1980s, who elaborated on cultural and social impacts of energy development for native people, with a particular focus on nuclear power, uranium mining and oil extraction[31], and which somewhat overlap with the focus of today's anthropology of energy. And Boyer (2014) sees a sort of gap between the mid-1980s and the mid-2000s in anthropological research on energy, attributing this gap to the insistence of the industrialized world on the carbon and nuclear energy.[32] Thus, one could easily claim that with increasing visibility and recognition

[28] Ibid., p.1.
[29] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), 37:2.
[30] Ibid., p.2.
[31] Ibid., p.6.
[32] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), 37:9.

of the Anthropocene -which is very little comparing the urgency and alarming situation which the world is in- an increasing interest has started to be paid to energy, particularly the renewable and clean technologies.

As it is mentioned before, the new anthropology of energy, which could be classified as the anthropology's third generation engagement of energy mainly writes upon the contemporary forms of energy with a focus on alternative energy futures. [33] The intricate and well-embedded relations between the natural and the social with a special emphasis on energopower, energopolitics are thoroughly explained with a critical approach. And under all these dynamics lie the Anthropocene. What is more, as a common denominator, it would be of use to emphasize the energopower or energopolitics which are either overtly or covertly mentioned in the works of these relatively new energy anthropology.

2.2. Energopower and Energopolitics Intrude the Search for Renewables

Energopower and energopolitics are the terms which have been considerably used and shaped by the significant contributions and critical focus of my many from the anthropology of contemporary energy (including mainly Dominic Boyer (2014), Gökçe Günel (2012; 2014; 2016), Cymene Howe (2014), Douglas Rogers (2014), Catherina Alexander and Joshua O. Reno (2014), and so on). They have helped in understanding the delicate relations between power, nature, culture, and politics, and the interdependence and entanglement of biopolitics and energopolitics accordingly. Inspiring from the concept of "biopower" and "biopolitics" by Foucault, which are mostly related to the analytics of the political power in anthropology,[34] Boyer coined the term energopower in anthropology in 2014. In a similar fashion, energopower and energopolitics have somehow dominated the atmosphere in this context. It is certain that biopower and biopolitics, mainly relating to the management and control of human vitality, play a crucial role in understanding and analyzing modern political power. And the biopower proves quite influential in

[33] Boyer, D. 2011, "Energopolitics and the Anthropology of Energy", Anthropology News: Energy and Energopolitics, Vol. 52 (5), p. 5-7.
[34]Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.37:17.

showing the influence of political power today especially when it comes to the interventions of expertise and authority regarding the anthropocentric cases of security, health, and population. Yet, the Anthropocene challenges contemporary biopower since it requires to think beyond the limits of such anthropocentric (human-centric) models of intervention and remediation.[35] And because it requires to consider atmospheric changes, certain energy resources and infrastructures as well. Against this background, Boyer states that energopower and energopolitics have enabled the recognition that life conditions are increasingly and unstably related to particular infrastructures, magnitudes and usages of electricity and fuel.[36] Hence, I could claim that with the appearance of the Anthropocene and anti-anthropocentric turn -corresponding to non-human centric turn- in the humanities, expansion, redefinition and recasting of modern power and re-entanglement of the concept of the biopower has proved essential. In short, seeing energopower as a footnote to biopower, Boyer defines the term as follows: "Above all, energopower is a genealogy of biopower that rethinks political power through the twin analytics of electricity and fuel." [37]

Basing on the arguments and critical focus of the upcoming third-generation anthropology of energy, the terms energopower and energopolitics do not have stable and fixed meanings. But instead, these recently-coined terms manifest themselves with different diffuse implications under different contexts. For instance, dwelling largely on energy transitions and the local and global complexities of renewable energy, the wind power plants in Oaxaca, southern Mexico, Howe points out the resistance indigenous people showed against the state and para-state formations, -mostly being private companies- for the development of wind plants. She also meticulously emphasizes the practices where energic forces, here being the wind power plants, shape and trigger political power among the federal state,

[35] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), 37:18.
[36] Ibid. 18
[37] Ibid. 22.

experts, private companies, and local people.[38] In brief, she accurately analyzes the relation between politics, energy, power, and culture; in short, she provides the reinterpretation of political power via energic forces.

Another scholar of today's anthropology of energy elegantly dealing with energopolitics and energopower is Gökçe Günel (2016), an anthropologist who broadly analyzes the renewable energy project named Masdar City, which is a "futuristic" eco-city relying completely on renewable energies which is initiated in Abu Dhabi, the United Arab Emirates in collaboration with the MIT's Technology and Development Program.[39] Her remarkable observations and analyses at the Masdar City, bringing together many researchers, students, climate scientists from all around the world, offers a unique habitat to bear energopolitical and biopolitical relations. Her ethnographic fieldwork on the development of a clean and renewable energy sector at Abu Dhabi[40] points out the controversies and energopolitics deriving from the unfolding of the carbon capture and storage (CCS) policies. As a participant of CCS technology within Clean Development Mechanism (CDM) negotiations in Durban, South Africa at COP17, she primarily questions whether CCS could be evaluated within the scope of climate change mitigation or not, and points out the completely different stances between the environmentalists and oil companies.[41] On the one hand, challenges of CCS are explained to be site feasibility, high operational costs, future safety, and unresolved legal liability, negatively influencing the development of the renewable energy as a whole. On the other hand, it is proposed to be a promising climate change mitigation since it is alleged to decrease dependence on carbon and meaning more carbon credits for the developers of this technique.[42] And at the end of the afore-said negotiations, CCS is legitimized despite its controversies.

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[38] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca", Anthropological Quarterly Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p. 30: 5.
[39] Günel, G. 2016, "Inhabiting the Spaceship: the Connected Isolation of Masdar City" in Climates: Architecture and the Planetary Imaginary, edited by James Graham, Lars Müller Publishers, p. 361-371.
[40] Günel, G. 2012, "A Dark Art: Field Notes on Carbon Capture and Storage Policy Negotiations at COP17", Ephemera: Theory and Politics in Organization, Vol. 12 (1/2), p.33-41:33.
[41] Ibid., p. 41.
[42] Günel, G. 2012, "A Dark Art: Field Notes on Carbon Capture and Storage Policy Negotiations at COP17", Ephemera: Theory and Politics in Organization, Vol. 12 (1/2), p.33-41:35.

And the clear majority of the participants, despite the many problems of the CCS technique including its huge negative impact on the environment, prioritize the political power they would acquire from the negotiations. [43] Thus, it could be stated the penetration of the political power into the energy policies have showed the key role the energopolitics plays in forming the future energies.

Günel (2014) also emphasizes the energopolitical side of the "zero-carbon" city basing on the invention of "ergos", a new currency based on energy unit expenditure to be used first among the inhabitants of the city and later aspiring to be a universal currency. "Ergos" aims to form a balance of energy credits as a means of defining and regulating the inhabitants' pre-allocated energy budgets.[44] Whereas the proponents of this new currency claim that the "ergos" aims at decreasing energy consumption among the Masdar City residents and creating energy awareness and behavioral changes among the users, Günel points out the disciplinary and regulatory sides of the project.[45] Researchers themselves see the "Big Brother" side of the project, worrying that through individual monitoring and regulation it could turn into a "technocratic dictatorship."[46] This appears to be the most common and likely concern among the researchers at the Masdar City. Likewise, largely dwelling upon the interdependency and entanglement of energopolitics and biopolitics, she analyzes the role of the energopolitics as disciplinary biopolitics.[47] Energopolitics acts as a highly influential disciplinary biopolitics since energy ("ergos" in this sense) comes to be utilized as a surveillance, disciplinary tool first for the residents of the city and then aiming to reach the globe. In brief, I could assert that she rethinks and recasts the political power through energic power alike.

[43] Ibid., P. 38.
[44] Günel, G. 2014, "Ergos: A New Energy Currency", Anthropological Quarterly Special Collection: "Energopower and Biopower in Transition", Vol. 87 (2), p. 359-380: 359-360.
[45] Ibid., p. 375.
[46] Ibid., p. 361.
[47] Günel, G. 2014, "Ergos: A New Energy Currency", Anthropological Quarterly Special Collection: "Energopower and Biopower in Transition", Vol. 87 (2), p. 359-380: 365.

What is more, a socio-cultural anthropologist focusing mainly on political and economic anthropology, natural resources, and energy with a special focus on oil [48], Douglas Rogers (2014) shows us a different dimension of energopolitics and energopower from the Perm Region of the Russian Urals. Particularly focusing on 2000s of Russia, he sees the entanglement of state and corporate power as reminiscent of the "energopolitical regime".[49] Rogers states he analyzes just one aspect of energopolitics, which is the expansive and the expanding role of the giant energy corporations in transforming society and culture.[50] Talking about the subtle role of the Lukoil-Perm, the giant oil producing company in the Perm region, Rogers proposes that energopolitics offers extensive inquiries into the theories of biopolitics. Due to its degrading prestige in the 1990s, the Lukoil-Perm starts corporate social responsibility (CSR) projects for the better maintenance of relations between the company and the state and the local population. These projects ranging from big cultural festivals, crafts fairs to museum activities, each of which under the distinctive logo of the company, directly aims at social and cultural transformations, and shapes the regional politics of the region.[51] Establishing direct contact both with the regional state and the local people, the oil company then makes use of these local connections to ensure that it could easily carry out its real oil production activities.[52] Thus, it could be asserted that the oil company makes a perfect use of energopolitical regime by leading both regional politics and local people through energy.

Bringing similar insights into the energopolitics, Catherina Alexander and Joshua O. Reno (2014) mainly deal with the modern waste technology of England. Viewing energy-from-waste plants at the intersection of biopolitics and energy politics, they largely dwell upon the modern waste technologies, one of which being the Sheffield Energy Schema and the other being the Holsworthy Energy Scheme. The former one

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[48] Department of Anthropology, Yale University. Retrieved from http://anthropology.yale.edu/people/douglas-rogers

[49] Rogers, D. 2014, "Energopolitical Russia: Corporation, State and the Rise of Social and Cultural Projects", Anthropological Quarterly Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.431-452:432.

[50] Ibid., p. 434.

[51] Rogers, D. 2011, "Energopolitics and the Anthropology of Energy", Anthropology News: Energy and Energopolitics, Volume 52 (5), p, 5-7.

[52] Ibid., p.7.

relies mainly on incineration while the latter depends on anaerobic digestion. Even though both are the early examples of biopolitical waste technologies, they are now regarded as important solutions for decreasing England's dependence on fossil fuel and landfill. And both bring with themselves their own trajectories and particularities while the Sheffield example shows somewhat a success, the Holsworthy example becomes an example of failure. Even though technicians and activists try to show different truths about the alternative energy, it is the energopolitics that decides on the resultant technological legacies.[53] Showing both similarities and differences, both projects display the contested ideas of what is good for the public or the environment.[54] Here, the strength of the energopolitics could be said to arise from the fact that the state, the once holder of biopolitical projects, assigns the private operators with large scale projects of waste technologies. Similarly, the energopolitics becomes apparent with the discourses of "vast public good of carbon reduction" and the creation of significant social technologies for waste collection and power redistribution.[55]

Last but not least, Timothy Mitchell (2011), whom all the afore-mentioned anthropologists have referred, has remarkably made out the interplay and entanglement of energopolitics and energopower basing on the trajectories of first coal, then oil in the Middle East by the industrialized countries and giant private corporations.[56] Even though he never mentions the concepts of energopolitics or energopower in the whole book, what he conveys is the core of energopolitics and energopower. For the carbon-based energy is said to underlie the modern democracy, or non-democracy to my mind, and modern politics in the book. In this scope, Mitchell sees that modern mass politics was possible thanks to the developments of ways of living based on energy in a new scale. The exploitation of coal as the triggering force of the industrialization also led to democratic political

[53] Alexander, C.&Reno, J.O. 2014, "From Biopower to Energopolitics in England's Modern Waste Technology", Anthropological Quarterly Special Collection: "Energopower and Biopower in Transition", Vol. 87 (2), p.335-358:335.
[54] Ibid., p.351.
[55] Ibid., p. 353.
[56] Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*, New York: Verso, p.292.

claims of coal workers. The workers formed successful political demands thanks to the power of the new energy system based on coal. [57] However, with a transition from coal as the basic energy from to oil, all the scene changed. Due to the very nature of oil, -its flexibility, lightness, less labor necessity, and relatively easy distribution compared to coal- drastic changes happened in how the strikes of coal workers were perceived and responded.[58] Hence, the shift from coal to oil limited the workers' ability to strike or gain more rights, changing the mechanisms of mass politics and democracy. Therefore, it could be stated that it is not for the sake of democracy or in the name of democracy that the countries gave the coal workers certain rights or reached a sort of compromise. But instead, it was the very characteristics or the nature of energy as coal or oil that determined the flow or orientation of democracy or politics. Likewise, it could be asserted energy shaped the way and reoriented democracy or politics. Therefore, I believe it is of utmost importance and relevance to rethink and the recast the political power through the lens of energopower in this sense as well.

2.3. No More Separation of Human vs. Non-Human, Nature vs. Society

General inclination of human-centered position especially in modern culture has led to certain dichotomies apart from the above-mentioned Anthropocene. These dichotomies include human vis-à-vis non-humans, nature vs. culture, or social vs. technical. It is these tendencies and dualities that have led to the emergence of the very Anthropocene and always-already energopolitics and energopower.

Against the backdrop of the Anthropocene, "anti-anthropocentric" turn - meaning non-human-centric- has been adopted as a sort of solution for the human-made climate change problem mostly among the third-generation energy research in anthropology. Whether it be under the name of "nonhuman turn", "ontological" or "anti-anthropocentric", it clarifies the declining supremacy of human-centered thinking and action.[59] It refers to a time when the significance of human

[57] Ibid, p.292:12.
[58] Ibid., p.38.
[59] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.37:13.

understanding and agency loses its importance to the actancy of objects and materials.[60]

In a similar fashion, Boyer (2014) sees the positive consequences of this anti-anthropocentric "as its deep criticism of how humanity (and, in particular, northern humanity) through its modernist fantasies of command and control over something called "nature", generated new conditions of contingency and vulnerability for the planetary ecology."[61] Hence, I claim that with the triggering force of the Anthropocene and the anti-anthropocentric turn, nonhuman entities as entangled with human entities have come to the fore. Moreover, one can date the roots of anti-anthropocentric stance to Bruno Latour and Michell Callon.

Firstly, I think the way how Latour (2005) defines an actor is enlightening to explain the debasement of humans, or in other words, the entanglement of non-human entities with humans. In this scope, seeing the society not as something taken for granted or always-already fixed, but instead a collective teeming with associations that are traceable and retraceable repeatedly, Latour states that if action is, in advance, confined to what 'intentional' or 'meaningful' humans do, it would be difficult to know how a hammer, a cat, a list, or a mug could act.[62] Thus, he expands the scope of what humans have traditionally understood from things, objects, or non-human entities, thereby giving them the place they deserve to the utmost. Similarly, *any thing* that does change a state of affairs by making a difference is an actor, or an actant unless it has a figuration.[63] In this way, the role of actor is no more limited to humans, but non-human entities as well. Similarly, it is the things that could empower, influence, encourage, discourage afford and so on.[64] Hence, I believe the dynamics of the Anthropocene could be better understood with the coexistence and entanglement of humans with non-humans, supremacy of humans being set aside.

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[60] Ibid, p. 14.
[61] Ibid, p. 15.
[62] Latour, B. 2005, *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press Inc., New York, p. 301:71.
[63] Latour, B. 2005, *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press Inc., New York, p. 301:71.
[64] Ibid., p. 72.

Moreover, Latour and Callon (1981), focusing on how micro actors become macro actors (giving the instance of multinational companies), names actor as any element which makes other elements relied on itself and translates their will into a language of its own.[65] They also largely focus on the need not to give priority to any sort of association, be it either associations of men to men, iron to iron, neurons with neurons as well.[66] Overall, it could be stated that both scholars emphasizing the crucial importance of not giving any *a priori* precedence to any association or any actor, they emphasize the role of things, objects, or non-human entities as entangled and associated with humans. And these remarks are especially significant when it comes to the Anthropocene and the anti-anthropocentric turn mentioned above since they help debasement of humans' supremacy. In this direction, Anders Blok (2010) analyzes the crucial role of non-human entities in global climate problem with a special emphasis on pro-whaling activities in Japan, and how these non-human entities become social actors in helping understand the controversies over Japanese 'scientific' whales.[67] And their participation in global social life is unquestionable when they are connected to the Greenpeace activists, Japanese biologists, and international scientific-political conflicts. [68]

As it is mentioned in the earlier paragraphs, the general tendency towards human-centric position has led to many other dichotomies along with the one human *vis-à-vis* non-human entities. These include the dualities of nature vs. culture or social vis-à-vis technical. In this direction, basing on the allegory of Cave by Plato in the whole book, Latour (2004) meticulously debates about the divide between the nature and the social, between the scientific and social. On the one hand, there is the Philosopher, later to be Scientist, to free themselves from the tyranny of social, prisoners in the cave, public life, subjective feelings etc., which are regarded as

[65] Callon, M. & Latour, B. 1981, "Unscrewing the Big Leviathan: How Actors Macro-structure reality and How Sociologists Help Them to Do So" in K. Knorr et A. Cicourel (Eds.) *Advances in Social Theory and Methodology*, Routledge and Kegan Paul, Londres, p. 277-303: 286.
[66] Ibid., p. 292.
[67] Blok, A. 2010, *Divided Socio-Natures: Essays on the Co-construction of Science, Society, and the Global Environment*, Doctoral Dissertation, Department of Sociology, University of Copenhagen, p. 317:18, Retrieved from http://www.dasts.dk/wp-content/uploads/2010/09/Anders-Blok-2010.pdf
[68] Ibid., p.51.

hindrance for Science. On the other hand, the Scientist, -as rather an objective and a privileged one since he has rid of from the social world and all subjectivities- plays the intermediary between the cave and the external reality, thereby informing the ignorant mass about the reality.[69] Defining Science as "the politicization of sciences through epistemology to render ordinary political life impotent through the threat of incontestable nature"[70], Latour alleges that this duality or dichotomy mentioned in Greek philosophy has ever lasted, maybe in the fiercest forms in today's world. He also claims that it is only with the survival of the distinction between things "as they are" and the "representation that human beings make of them" that the Science could manage itself.[71] Here, Latour quite vividly exemplifies in the whole book the divide, the double rupture between the experts and lay people, between the social and scientific, or between the culture and the external reality, which have come to more prominence thanks to the modern world teeming with laboratories, calculative capacities, devices, charts, numbers etc. And again, it is due to the rupture between the social and the nature that the energy politics and energopower could intrude and permeate. In this scope, Latour is also highly merited by his contributions to overcome the sharp distinction between the 'inner core' and the 'social context' of science, especially with his models of science-society relations.[72]

Besides, Callon (1986) has extensively dealt with the duality of social vs. technical and the natural vs. the social. In this sense, emphasizing the need of free association, which necessitates the need to abandon all a priori distinctions between the natural and the social, Callon largely focuses on intricate associations, entanglements, disentanglements, displacements, interessement and translation during the process when three researchers try to create a strategy to protect the population of scallops

[69]Latour, B. 2004, *Politics of Nature: How to Bring the Sciences into Democracy*, Harvard University Press, p. 321:23.
[70] Ibid., p.23.
[71] Ibid., p.25.
[72] Blok, A. 2010, *Divided Socio-Natures: Essays on the Co-construction of Science, Society, and the Global Environment*, Doctoral Dissertation, Department of Sociology, University of Copenhagen, p. 317:18, Retrieved from http://www.dasts.dk/wp-content/uploads/2010/09/Anders-Blok-2010.pdf

in St. Brieuc Bay in France.[73] Mainly focusing on the sociology of translation in structuring power relations, Callon rightfully claims that the Society and the Nature are intertwined where all actors, be them either fishermen, scallops, researchers, or scientific colleagues, depend on a complex web of relations.[74] And the likely result of the research is always determined during action with various actors being entangled, transformed and retransformed or displaced. In Callon's case the actors consist of scallops, fishermen, three researchers and the scientific colleagues. He also touches on the privileged position of three researchers speaking in the name of masses. Researchers rely all their findings on a few diagrams and tables with numbers where scallops and fishermen are displaced to the conference room. They speak in the name of silent scallops, fishermen and base their research on rather a relatively short time they passed on the anchorage of scallops.[75]

In brief, he strikingly elaborates on how three researchers have seen the nature and social contexts, and how each actor has shaped and been shaped during this uncertain process. Therefore, not only the nature but also society should be accepted as uncertain and disputable since any actor entering scene has the capacity to transform and to be transformed during the action, and both are inextricably intertwined. Again, I wholeheartedly believe that this inextricability is especially significant when it comes to the Anthropocene, renewable energy, or climate change mitigation efforts since these require the unification of nature with society, and cultural with technical and vice versa. In other sayings, I think it is much proper to say that the nature from society or cultural from technical/scientific should never be separated "as they are" ontologically, and should not be over-determined or over-represented "as they are represented" epistemologically.

[73] Callon, M. 1986, "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay", in J. Law (Ed.), Power, action and belief: a new sociology of knowledge? London, Routledge, p. 196-223.
[74] Ibid., p.4.
[75] Ibid., p. 13.

2.4. The Neoliberal (s) at the Core of Renewables: An Example of Hydropower

With the relatively increasing visibility and recognition of the Anthropocene, the search for renewable energy has increased accordingly both global-wise and country-wise. And as it has been mentioned above, the politics, or energopolitics and energopower in our example, have always dominated the atmosphere. Turkey's look for renewables and probable solutions have also brought about similar consequences. Among these consequences, the neoliberal or neoliberals have influenced and become intrinsic part of Turkey's policies for renewable energy and climate change mitigation efforts. Thus, this part of the paper intends to focus on how the neoliberal transformations in Turkey have influenced and steered its search for renewables, especially with an emphasis on water or hydro energy, as a solution to the Anthropocene.

There is no agreement on the exact scope and range of Neoliberalism, neoliberal processes, or neoliberalism(s). Some have defined and interpreted it as a 'master concept' or a byword for an ideologically-induced form of globalization while some others have viewed the concept as a hybrid form of governmentality or a context-dependent regulatory practice. There also exist some others seeing it as a chaotic conception rather than a coherent abstraction.[76] And it has turned into a highly contested term which is indiscriminately pervasive, inconsistently defined and empirically imprecise.[77] That is why, it has come to be a living concept and a buzzword well inscribed and instilled in any phase of life. And as a term and a concept, it has been open-ended and ambiguous one which is always in a process of change, floating and instability. The concept was first proposed against the background and upon the failure of Keynesian policies in the world, mainly being the US and England. It first came out as the "freedom" in economy and market. Nevertheless, its scope and range has been enlarged to such as extent that economic, political, technocratic, bureaucratic or any phase of life has been intertwined with neoliberalisms. Similarly, Harvey sees the fundamental purpose of the neoliberal turn as to create "good

[76] Brenner, N. et al. 2009, "Variegated neoliberalization: geographies, modalities, pathways" in *Global Networks*, Blackwell Publishing Ltd&Global Networks Partnership, p.182-222:183.
[77] Ibid., p.184.

business climate" and to open fresh fields for capital accumulation disregarding the issues of employment or social well-being.[78] Under the light of what Harvey says, I could state that the neoliberal turn in Turkey has been identified with privatization, be it either in health, security, energy, finance, economy, or environmental issues and has served for the benefit of the private interest groups, transnational companies, or NGOs. Before proceeding with this, it would be useful to briefly touch on the background of the neoliberal turn in Turkey.

It was in 1980 that Turkey started its neoliberal reforms with the liberalization of commodity trade and flexibilization of its labor markets. [79] And the 1980s, identified with the structural market reforms by the then prime minister Turgut Özal, is defined as the first-generation economic liberalization while the current stage of neoliberal economic reforms commencing in 2001 could be named as the 'second-generation' marketization reforms. Although both reforms could be said to target at free market capitalism, marketization reforms of second generation have been more characterized by transnational movement of capital and global networks.[80] In a similar vein, the latter has been characterized with rapidly unleashed drastic economic reforms under the leadership of Kemal Derviş, who made the then Turkish government accept serious reforms not only in the economic sphere but also in the political realm.[81] Moreover, it has been the structural adjustment programs of the IMF and the World Bank that put into practice the neoliberal transformation of Turkey.[82] And with this transformation, the emphasis attached once to the nation-wide distribution of welfare is replaced by the importance paid to global private interest groups. And these global private interest groups have gathered under the

[78] Harvey, D. "Neoliberalism and the Restoration of Class Power", Anthropology, CUNY Graduate Center, p.43:10. Retrieved from: https://gsnas.files.wordpress.com/2007/10/harvey080604.pdf
[79] Cizre, Ü. & Yeldan, E. 2005, "The Turkish Encounter with Neo-liberalism: Economics and Politics in the 2000/2001 Crises" *in Review of International Political Economy*, 2005, Routledge, p. 387-408: 388.
[80] Ibid., 388.
[81] Kayaalp, E. 2014, "Remaking the Tobacco Market: The Emergence of Contract Farming and New Subjectivities", in *Remaking Politics, Markets and Citizens in Turkey: Governing Through Smoke,* Bloomsburry Academic, p.183-199:188.
[82] Gönen, Z. & Yonucu, D. 2011, "Legitimizing Violence and Segregation: Neoliberal Discourse on Crime and Criminalization of Urban Poor Populations in Turkey", in Bourke, A., Dafnos, T., & Kip, M. *Lumpencity: Discourses of Marginality/Marjinalizing Discourses,* Red Quill Books, p. 75-104: 75.

name of civil society made up of transnational companies, domestic companies collaborating with transnational actors and the emergent members of the global elite.[83] All in all, it could be stated that the state has somehow withdrawn from the public sphere and left it to the hands of the civil society, NGOs, various actors, or systems and intervened where necessary. In other words, as it is mentioned above, the state has facilitated the conditions for profitable capital accumulation. [84]

When it comes to the relation of neoliberal transformations with energy, renewable energy, or climate change mitigation efforts in particular, it could be said that these transformations and their long-lasting consequences have deeply influenced the renewable energy attempts in Turkey. This part of the paper intends to focus on how the neoliberal transformations and its hegemonic agenda have influenced the renewable energy, especially the hydropower in Turkey and the intricate relations between various actors and networks. In this regard, a few remarkable number of scholars including Sinan Erensü (2016), Mine İşlar (2012), Alp Yücel Kaya (2016) and Cemil Aksu (2016) and so on elaborate on the huge impact neoliberal transformations have had on hydropower or hydroelectric power plants in Turkey.

First of all, Erensü (2016) mainly writes about political ecology and economy, urban and rural studies, water, and energy structures with a particular focus on renewable energy and water/energy nexus, science and technology studies and so on.[85] His special emphasis to the hydroelectric power plants in Turkey and how the neoliberal(s) ha(s)ve influenced the relationship between nature and society should be noted out. Primarily focusing on the resistance of the nature to get neoliberalized, stabilized or privatized, Erensü attributes the rise of hydroelectric power plants in

[83] İslamoğlu, H. 2002, "Yeni Düzenlemeler ve Ekonomi Politik: IMF Kaynaklı Kurumsal Reformlar ve Tütün Yasası" [New Regulations and Political Economy: IMF-led Institutional Reforms and Tobacco Law], Birikim, Vol.158. Retrieved from http://www.birikimdergisi.com/birikim-yazi/4427/imf-kaynakli-kurumsal-reformlar-ve-tutun-yasasi#.WeYNslu0PIU

[84] Harvey, D. "Neoliberalism and the Restoration of Class Power", Program in Anthropology, CUNY Graduate Center, p.43:2. Retrieved from: https://gsnas.files.wordpress.com/2007/10/harvey080604.pdf

[85] Erensü, S. 2016, Northwestern University Sociology Department, Available at: https://oip.ku.edu.tr/sites/oip.ku.edu.tr/files/sinan_erensu_cv_-_nov_2016.pdf

Turkey to the Electricity Market Law numbered 4628 and dated 2001.[86] Similarly, privatization of water or hydro-energy in Turkey has experienced a unique opposition from local people, activists or environmentalists, and that opposition has been towards the development of small hydroelectric power plants or in other words, the run-of-river hydropower due to the intricate relations between nature and society.[87] Erensü also dwells upon *accumulation by dispossession,* proposed by David Harvey, as the very result of these privatizations of hydroelectric power plants or urban transformations or as the continuation of capitalism. He also sees the resurgence of capitalism through new terms such as entrepreneurship, new economy, innovation, sustainability, or green economy emerging with the neoliberal.[88] Moreover, this dispossession manifests itself not only through material means such as economic or agricultural but also by dispossessing the cultural belongings, social imaginary, and the very identity of people, which could not be compensated anyhow.[89] Finally, rightfully viewing rivers as perfect example of *commons*, which refers to resources, spaces or institutions owned and managed by the public very itself, Erensü proposes *commons* for self-governance which maintains the harmony between people and these resources or lands as opposed to state's bulkiness and private sector's aggressive behavior.[90]

Secondly, basing on an empirical evidence of three months, İşlar (2012) brings to light how the private interest is favored at the expense of devastating social and ecological impacts and how the water is grabbed or dispossessed from its owners. Additionally, as identified with the neoliberal, the involvement of transnational companies and

[86] Erensü, S. 2016, "Neoliberalleşmenin Doğası, Doğanın Neoliberalleşmesi: Su-Enerji Rabıtası Üzerinden Neoliberalizm ve Müphemlikleri" [Neoliberalization of Nature, Nature of Neoliberalization: Neoliberalism and Its Obscurities Through Water-Energy Nexus] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:45.
[87] Ibid, 52.
[88] Ibid., 54.
[89] Ibid., 58.
[90] Erensü, S. 2016, "Neoliberalleşmenin Doğası, Doğanın Neoliberalleşmesi: Su-Enerji Rabıtası Üzerinden Neoliberalizm ve Müphemlikleri" [Neoliberalization of Nature, Nature of Neoliberalization: Neoliberalism and Its Obscurities Through Water-Energy Nexus] In S. Erensü et al (eds*.) Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528: 59.

regulatory reforms makes the picture more diffuse and complex.[91] These reforms, as stated by Erensü as well, are attributed to the Electricity Market Law numbered 4628 which have paved the way for more privatization of hydropower through build-operate-transfer (BOT) and build-own-transfer (BOO) mechanisms. Similarly, water has been opened to the private sector allowing them to construct, operate and manage water structure including dams, water plants etc.[92] In a similar vein, another striking move opening water to the interests of private sector has been with the transfer of water use rights to private sector for 49 years, thereby hugely limiting the public use of water.[93]

Likewise, İşlar (2012) attaches utmost importance to the intricate relation between the state, finance sector and multinational companies where the borders of the public and the private get blurred. In this scope, to reinforce the role of the private sector in hydropower, she gives the example of public incentives and private credit incentives.[94] In this sense, after Turkey signed the United Nations Framework Convention on Climate Change (UNFCC) in 2004 and ratified the Kyoto Protocol in 2009, finance of hydropower projects has been sustained. And Turkey received the first-ever loan given by the Clean Technology Fund (CTF) which aimed to help increase privately owned and operated energy production from indigenous renewable energy sources.[95] Here, what I have found quite striking is the ambiguous environmental impact assessment (EIA) reports. For environmental impact assessment reports neglect the cumulative effect of these plants both on the nature and local people, and have manifested many discrepancies between the reports of independent organizations and those of the Ministry of Environment and Urbanization (MoEU). All in all, it could be stated that with the neoliberal era, the water or the hydropower has entered a tremendous transformation process where the state has, both legally, financially, and discursively, prepared the ground for the flourishment of the private

[91] İşlar, M. 2012, "Privatised Hydropower Development in Turkey: A Case of Water Grabbing?", *Water Alternatives* Vol. 5(2): 376-391.
[92] Ibid., p. 382.
[93] Ibid., p. 376.
[94] Ibid., p. 382.
[95] İşlar, M. 2012, "Privatised Hydropower Development in Turkey: A Case of Water Grabbing?", *Water Alternatives* Vol. 5(2): 376-391: 383.

interest groups where local people, the nature and their culture have fallen on deaf ears in Turkey.

From another perspective, Kaya (2016), mainly focusing on economics, economic history, political economy, rural history and property law,[96] dwells upon the urgent expropriation processes in neoliberal Turkey and offers a detailed conceptualization of "public", "private", "expropriation", "urgent expropriation", "public interest" and "privatization", explaining how their meanings and contexts have transformed with the neoliberal turn.[97] Kaya basically claims that the neoliberal transformation has reproduced the polarization between the capital and the labor, saying that "expropriation has come to refer to government's intervention in favor of the private and in line with the "public interest".[98] In other words, "public interest" in neoliberal rationality has been replaced by the hegemony of "private interests" or "individual interests", showing a radical shift of content in the term "public interest".[99] Under the light of these, reregulation of the title "nationalization" as "nationalization and privatization" in the 47th article of 3rd subtitle "Public Use" under the 3rd Part of the Constitution named "Social and Economic Rights and Duties" in 1999 should be made out.[100] And I think the afore-said urgent expropriation decisions could be better understood on the basis of these legal and conceptual changes.

Moreover, there is an increasing number of urgent expropriation decisions especially made in the last decade which significantly make out the neoliberal process both in general and within the context of electricity and hydroelectric power plants. For instance, despite 14 decisions of "urgent expropriations" between 1978 and 2000 by the Cabinet, this number reaches to 830 from 2000 up until 2014. Of these decisions

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[96] Kaya, A. Y., Ege University, Faculty of Economics and Administrative Sciences, available at: https://ege.academia.edu/alpyucelkaya

[97] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric power plants in Urgent Expropriations], In S. Erensü et al (eds.*) Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:67.

[98] Ibid., p.72.

[99] Ibid., p.75.

[100] ibid., p.76.

550 relates to energy investments while 527 of these belongs to electric energy.[101] To be more specific, the number of urgent expropriation decisions taken by the Cabinet and the EPDK in total corresponds to 1.801 while 1.507 of it concerns energy market. And the decisions of 212 on the construction of hydroelectric power plants far surpasses the other sectors.[102] In short, under the light of the numbers, one can clearly see the increasing rise of privatization in the energy market and in hydropower in specific. All these numbers serve the capital accumulation in favor of the private interest groups as opposed to the "public use" in theory.

Mainly focusing on hydroelectric power plants (HES) especially in the Black Sea region of Turkey from the scope of the neoliberal subjectivities, Aksu (2016) largely focuses on how the ecological movements against hydroelectric power plant developments could serve for the formation of new collectivity apart from traditional politics.[103] He attributes the relative success of anti-hydroelectric power plant movements to three factors including legal opposition, de facto protests, and formation of public opinion via social media.[104] What I have found crucially important is his analysis that these anti-hydroelectric power plant movements have initiated and showed success of the local resistance, where people struggle not to be neoliberal subjects and not to be disintegrated from their nature and culture. However, it is the marketization of anything that belongs to no one/everyone with neoliberalism that has limited the capacity of these anti-hydroelectric power plant movements. The neoliberal regime has opened what belongs to "no one" to "everyone" where any local "resource" is

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[101] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric Power plants in Urgent Expropriations], In S. Erensü et al (eds.*) Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:67.

[102] Ibid., p. 79.

[103] Aksu, C. 2016, "Derelerin Özgürlüğünden Yaşamın Özgürleştirilmesine: HES Karşıtı Kitle Hareketlerinin Politik Ufku Üzerine Bir Deneme" [From the Freedom of the Streams to Freedom of Life: An Essay on the Political Perspective of Anti-Hydroelectric Power Plant Movements] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:396.

[104] Aksu, C. 2016, "Derelerin Özgürlüğünden Yaşamın Özgürleştirilmesine: HES Karşıtı Kitle Hareketlerinin Politik Ufku Üzerine Bir Deneme" [From the Freedom of the Streams to Freedom of Life: An Essay on the Political Perspective of Anti-Hydroelectric Power Plant Movements] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:400.

viewed as the source of interest and again where all people, livings or anything and any relationship are encouraged to be resources.[105] In a similar fashion, all people are seen as "entrepreneurs" responsible for their own poverty or richness basing on the degree how they make use these resources or, for systemic problems as well. Moreover, things once viewed as intrinsic part of nature have started to be termed as a "job" with the neoliberal discourse and practices. These include herbal teas, herbal medicines, thermal tourism, or clean/alternative energy policies.[106] Thus, Aksu emphasizes the need to establish a new collective which could free itself from the "entrepreneurship" of the neoliberal which imposes the necessity of turning people, their abilities and environments into money and profit.[107]

Overall, it could be stated that Aksu perfectly exemplifies the subtle and influential capacity of the neoliberal in changing the perception towards nature, people themselves and their identities. And I believe unless the mentality which underlies the neoliberal turn rendering it more diffuse and intricate is changed, developments of hydroelectric power plants and the resulting loss of nature, culture and identities of people are very likely to last long.

I think the limitation of the neoliberal on social movements as in the case of anti-hydroelectric power plant developments and social solidarity could be summarized well with the following quotation of David Harvey:

> Internally, the neo-liberal state is hostile to (and in some instances overtly repressive of) all forms of social solidarity (such as the trade unions or other social movements that acquired considerable power in the social democratic state) that put restraints on capital accumulation. It withdraws from welfare provision and diminishes its role as far as possible in the arenas of health care, public education and social services that had been so central to the operations of the social democratic state. The social safety net is reduced to a bare minimum". [108]

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[105] Ibid., p. 404.
[106] Ibid., p. 404.
[107] Ibid., p.396.
[108] Harvey, D. "Neoliberalism and the Restoration of Class Power", Program in Anthropology, CUNY Graduate Center, p.43:11. Retrieved from https://gsnas.files.wordpress.com/2007/10/harvey080604.pdf

What Harvey states in general about the hostility of the neoliberal state to the social solidarity neatly applies to the failure (except a few partly successful ones) of movements against hydroelectric power plants in Turkey. It is due to the neoliberal craving for more capital among certain number of companies that local people, be it either in the Eastern Black Sea region or the Mediterranean region of Turkey, have found themselves desperate, being displaced, dispossessed and alienated from their own nature or society upon their opposition to capital accumulation.

CHAPTER 3

TURKEY IN THE ANTHROPOCENE

3.1. A Country Under and Behind the Impact of the Anthropocene

Humanity's desire for more growth, more capital and development, in short for more energy, has led to the onset of the Anthropocene.[109] Turkey has its own share and role for the appearance and the impact of the Anthropocene as many other developing or developed countries do. And as it was mentioned in the former chapters, the Anthropocene could manifest itself in many forms, be them either melting glaciers, rising temperatures, depleting natural resources, droughts, fierce storms, or extinction of certain animals etc. This part of the paper aims at touching on the contributions of Turkey to the emergence of Anthropocene with a focus on the country's increasing greenhouse gas (GHG) emissions and their relation to energy.

Earth's average temperature has seen an $0{,}85^{0}$C increase from 1880 to 2012, and 2014 being the warmest year on record. Moreover, due to climate change, climate system has undergone huge changes including rising sea and land temperatures, melting glaciers, rising sea levels and changing precipitation systems.[110] And the carbon dioxide concentration passed 440 ppm in 2014, showing more than 40% increase compared to pre-industrial period. And this rise is largely attributed to emissions deriving primarily from fossil fuels (coal, oil, and natural oil) and secondly from land use (deforestation, agriculture etc.).[111] And Turkey, as many other countries, has its share and important role in these escalating numbers as well. Even

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[109] A new geopolitical epoch in which humans had altered the planet. See also Krutzen, P.J.& Schwagerl, S. 2011, "Living in the Anthropocene: Toward a New Global Ethos", Yale Environment 360. Retrieved from http://e360.yale.edu/features/living_in_the_anthropocene_toward_a_new_global_ethos

[110] "Türkiye İçin Düşük Karbonlu Kalkınma Yolları ve Öncelikleri" [Suggestions and Priorities for a Low-Carbon Development in Turkey], 2015, by WWF Turkey and Sabancı Uni. Istanbul Policy Center, Bion Press, p. 71:13, Retrieved from: http://awsassets.wwftr.panda.org/downloads/20151007_turkiye_icin_duuk_karbonlu_kalknma_yollar_ve_oncelikleri_rapor.pdf

[111] Ibid., p.13.

though Turkey has less historical responsibility for increasing GHG emissions compared to highly developed countries such as the US, Australia, Japan, or the EU, it has followed an escalating trend in recent years as many other developing countries including China, India, Mexico and South Korea have done.[112] First, it should be underscored that whether it is regarded as a developed or a developing country, Turkey's share of greenhouse gas (GHG) emissions has ascended. For instance, as the most recent calculation of emissions of the country, TÜİK (Turkish Statistical Institute) declares that total greenhouse gas emissions as CO2 equivalent increased by 125% in 2014 compared to the emissions in 1990. Moreover, CO2 equivalent emissions per capita was 6.08 tonnes in 2014, while it was 3.77 tonnes for the year 1990.[113] And the Mediterranean Basin covering Turkey has been most vulnerable to the impacts of climate change. As an example, could be shown the temperature increases in the latest 42 years, recession of mountain glaciers up to 10 meters in recent 50-60 years, rising sea levels in the seas surrounding Turkey.[114]

Furthermore, the afore-said escalating GHG emissions have displayed a parallel increase with the country's need for more energy and economic growth. In this sense, numbers are striking. For instance, with 72.5 %, energy sector has been the leading sector causing the highest portion of emissions regarding the overall 2014 emissions. Industrial processes and product use follows this portion with a share of 13.4%.[115] In a similar fashion, from 2005 to 2015, the country's energy intensity has increased by 7.1%. What is more interesting is that Turkey was the only IEA (International Energy Agency) member country to see energy intensity rising whereas the IEA average

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[112] "Türkiye İçin Düşük Karbonlu Kalkınma Yolları ve Öncelikleri" [Suggestions and Priorities for a Low-Carbon Development in Turkey], 2015, by WWF Turkey and Sabancı Uni. Istanbul Policy Center, Bion Press, p. 71:17, Retrieved from http://awsassets.wwftr.panda.org/downloads/20151007_turkiye_icin_duuk_karbonlu_kalknma_yollar_ve_oncelikleri_rapor.pdf

[113] *Turkish Statistical Institute*, Press Release, (n.d.),Retrieved from: http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=21582

[114] "Türkiye İçin Düşük Karbonlu Kalkınma Yolları ve Öncelikleri" [Suggestions and Priorities for a Low-Carbon Development in Turkey], 2015, by WWF Turkey and Sabancı Uni. Istanbul Policy Center, Bion Press, p. 71:15, Available at: http://awsassets.wwftr.panda.org/downloads/20151007_turkiye_icin_duuk_karbonlu_kalknma_yollar_ve_oncelikleri_rapor.pdf

[115] *Turkish Statistical Institute*, (Press release), (n.d.), Retrieved from http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=21582

energy intensity was declining by 16.3% during the same period.[116] In a similar vein, due to Turkey's continued industrialization, increasing population growth and economic growth, its energy demand is set to experience the fastest growth among the IEA countries.[117] Under the light of these ever-increasing numbers, it could be stated that Turkey's main motive of economic growth has automatically brought about rapid growth in energy production and the consequent emissions.[118] Moreover, it could be alleged that this very process of more growth and increasing need for more energy has triggered more dependence on fossil fuels, mainly being coal.

Within this context, Turkey's dependence on fossil fuels mainly being coal should be specified for the better understanding of its increasing energy need and the resulting greenhouse gas emissions. For instance, Turkey holds the largest coal plant developments in the world apart from China and India. And Turkey imports most of the coal used in power generation since the country's lignite reserves are of low quality and cause high levels of pollution. Thus, energy production and use especially from coal-fired power generation stands as the highest source of air pollution in Turkey.[119] In this respect, most of the CO2 emissions from fuel combustion result from coal use, to be specific, it is 43% while the share of natural gas is 30.5%, oil 26.5%, and other 0.1%.[120] On the contrary, promotion of domestic energy resources such as hard coal and lignite stands as an important element for the main energy goals of Turkey for 2023. What is more striking is that, to decrease import dependence and to meet the increasing energy demand, all existing energy resources

[116] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p.223:47, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html
[117] Ibid., p.30.
[118] Şahin, Ü. 2016, "Warming a Frozen Policy: Challenges to Turkey's to Turkey's Climate Politics After Paris", Turkish Policy Quarterly, Available at: http://turkishpolicy.com/article/818/warming-a-frozen-policy-challenges-to-turkeys-climate-politics-after-paris
[119] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p.223:16, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html
[120] Ibid., p.33.

of coal and lignite are encouraged to be used completely on the way to 2023.[121] Additionally, even some experts warn that Turkey will lock-in its commitment to coal, consequently becoming more relied on fossil fuels if it encourages and keeps coal at the core of its energy policies and if the new coal-fired power plants in the pipeline are constructed. And same experts also warn that these could impede competitiveness and effectiveness of renewable energy technologies and investments as well.[122] Overall, it could be said that greenhouse emissions of Turkey have showed an unprecedented increase in recent years, and this trend seems to last in the future as well. Similarly, it would not be wrong to allege that under this increase lies mainly the dependence on fossil fuels and the country's main motive for more economic growth and thus for more energy use. Hence, it could be stated that its dependence on more fossil fuels, especially on coal, contradicts and jeopardizes its plans and technologies for more renewable energy as well.

3.2. On the Way to More Renewables

When it comes to Turkey's climate change mitigation and adaptation efforts during the Anthropocene, this part of the paper firstly briefly mentions relatively recent attempts made in the international arena as triggering force for more renewables. Secondly, it aims to touch on the legal framework and the increasing share of renewables in the country.

Initially, it could be stated that Turkey has showed a delay in signing the significantly important conventions or treaties identified with climate change adaptation or mitigation. These are namely the Kyoto Protocol and the UN Framework Convention on Climate Change (UNFCCC), both of which commit the countries to reduce greenhouse gas emissions. To be more specific, Turkey became a party to the UNFCCC

[121] Albayrak, B. 2017, "Berat Albayrak TBMM Plan ve Bütçe Komisyonunda Bakanlığın 2017 Yılı Bütçesine İlişkin Sunum Yaptı" [Presentation Delivered by Berat Albayrak -Turkey's Minister of Energy and Natural Resources- on the Ministry's 2017 Financial Year at TBMM Planning and Budget Commission], (n.d.), Ministry of Energy and Natural Resources, Retrieved from: http://www.enerji.gov.tr/tr-TR/Bakanlik-Haberleri/Bakan-Albayrak-TBMM-Plan-Ve-Butce-Komisyonunda-Bakanligin-2017-Yili-Butcesine-Iliskin-Sunum-Yapti

[122] Şahin, Ü. et al., 2016, Coal Report: Turkey's Coal Policies Related to Climate Change, Economy and Health, IPC Istanbul Policy Center, p.86:10.

only in 2004, (which was negotiated in 1992 and entered in force in 1994) and to the Kyoto Protocol in 2009, (which was first adopted in 1997 and entered in force in 2005).[123] Moreover, being an Annex I Party of the UNFCCC (which includes the industrialized/developed countries and countries with economies in transition)[124], Turkey has been exempted from setting concrete mitigation commitments because of its special circumstances and due to being an emerging country recognized by the Conference of the Parties (COP). Again, due to being Annex I party, Turkey has not been able to make use of Kyoto's flexibility mechanisms, including clean development mechanism (CDM), and the support from developed countries although it is a developing one.[125] Overall, it could be claimed that both Turkey's delay in signing the Kyoto Protocol and the UNFCCC, and its proposition of special circumstances when it comes to mitigation targets could show the refrain of Turkey from mitigating greenhouse gas emissions. Especially when it comes to its afore-mentioned escalating greenhouse gas emissions showing a rise of 125% in 2014 compared to those in 1990, these climate change mitigation or adaptation efforts pose utmost importance and urgency.

However, there exists an exemption here. It is because the Paris Agreement could be concerned as a sort of exception where Turkey has, for the first time, submitted its Intended Nationally Determined Contributions (INDC). In fact, the Paris Agreement differs from its predecessors such as the Kyoto Protocol since it opens a new course in the global climate change combat. In this regard, the agreement, entering into force on 4 November of 2016 with the ratification of 168 parties among 197 parties to the Convention, has for the first time brought all nations to combat climate change

[123] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p.223:30, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html

[124] Parties and Observers, 2017, *United Nations Framework Convention on Climate Change*, Retrieved from http://unfccc.int/parties_and_observers/items/2704.php

[125] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p. 223:30, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html

and to support developing countries as such.[126] It also sets the target of limiting global temperature rise with 2 degrees Celsius, and also aspires to keep this increase even at the 1.5 degree Celsius.[127] Its success could be said to derive from its endorsement of 100% renewable energy and delegitimizing fossil fuels while its main weakness could be said that the intended nationally determined contributions (INDC) of the countries are not satisfactory enough to limit the global temperatures at 2 degrees and are not legally binding.[128] Turkey signed the agreement yet it has not yet ratified it. In this sense ratification of the agreement by Turkey is viewed crucial for its inclusion into the new climate regime. In a similar vein, it is mostly recommended that Turkey should improve its intended nationally determined contributions (INDC), which is detailed below, as well.[129]

Secondly, if one looks at the legal framework and the targets of the country tackling climate change problem and renewables, Turkey does not have any other specific climate change legislation except the NCCAP (National Climate Change Action Plan) and the environmental law.[130] The first NCCAP was prepared in 2012 for the period 2011-2023 by the Ministry of Environment and the Urbanization, which identified road map defining the short, medium and long-term targets for combatting climate change.[131] Accordingly, Turkey, for the first time in 2015, submitted its INDC (Intended Nationally Determined Contributions) to the UNFCCC just before the Paris Climate Conference in 2015 as being up to 21% reduction in GHG emissions from the

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[126] "The Paris Agreement", 2017, *the United Nations Framework Convention on Climate Change*, Retrieved from http://unfccc.int/paris_agreement/items/9485.php

[127] Ibid.

[128] Paker, H.2016, *What is in a Signature? The Paris Agreement and Turkey's Position*, Hürriyet Daily News, Retrieved from: http://www.hurriyetdailynews.com/whats-in-a-signature-the-paris-agreement-and-turkeys-position.aspx?pageID=238&nID=98218&NewsCatID=396

[129] İklim Ağı [Network for Climate], 2016, "İklim Ağı'ndan Türkiye'ye Çağrı: Paris Anlaşması'nı Onaylayın" [Call from the Network for Climate to Turkey: Ratify the Paris Agreement], Retrieved from http://t24.com.tr/haber/iklim-agindan-turkiyeye-cagri-paris-anlasmasini-onaylayin,369534

[130]Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p. 223:41, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html

[131] Climate Change Action Plan for 2011-2023, 2012, Retrieved from http://www.csb.gov.tr/db/iklim/editordosya/IDEP2012_ENG.pdf

BAU (business-as-usual) level[132] expected for 2023.[133] This could be regarded as an important step for combatting climate change and for the encouragement of more renewables. Nevertheless, there exists significant criticism concerning this target. As a country aspiring to increase its use of coal for the future, Turkey is firstly criticized as the objectives and actions in the NCCAP are found not to be measurable, and the performance indicators to measure the objectives are seen either absent or lacking.[134] Furthermore, the very target of 21% reduction below the anticipated GHG emissions from BAU level by 2030 is found unrealistic. In this respect, some experts, and observers state that this target does not imply a reduction because the BAU level was unrealistically higher than plausible under the 5 percent generic growth rate. Also, because Turkey is not expected to reach the official BAU level even in 2030 since its actual growth rate is about 3.5%.[135]

As for the related authorities in this regard, the Ministry of Environment and Urbanization (MEU) comes out as responsible for conducting the afore-said negotiations and relations in the international arena regarding climate change mitigation or adaptation. Moreover, the Ministry of Energy and Natural Resources (MENR) and the General Directorate of Renewable Energy (GRDE) reporting to the ministry come to the fore as umbrella institutions in developing renewable energy resources of the country. The MENR prioritizes decreasing dependence on imports in energy, mainly aiming to meet the increasing demand for energy and to secure supply as well.[136] And meeting the energy needs through domestic resources and low

[132] A baseline case or a reference scenario which assumes that future development trends follow those of the past and no changes in policies will take place and which is often associated with high GHG emissions. See also: http://www.ipcc.ch/ipccreports/tar/wg3/index.php?idp=286

[133] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p. 223:14, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html

[134] Ibid., p.42.

[135] Şahin, Ü. 2016, "Warming a Frozen Policy: Challenges to Turkey's to Turkey's Climate Politics After Paris", *Turkish Policy Quarterly*, Retrieved from http://turkishpolicy.com/article/818/warming-a-frozen-policy-challenges-to-turkeys-climate-politics-after-paris

[136] Albayrak, B. 2017, "Berat Albayrak TBMM Plan ve Bütçe Komisyonunda Bakanlığın 2017 Yılı Bütçesine İlişkin Sunum Yaptı"[Presentation Delİvered by Berat Albayrak -Turkey's Minister of Energy and Natural Resources- on the Ministry's 2017 Financial Year at TBMM Planning and Budget Commission], Ministry of Energy and Natural Resources, Retrieved from

operating costs has been one of the main targets as well. To meet these objectives, it could be said that Turkey has also extended it share and search for renewables. Especially from 2009 to 2015, the country has experienced a rise in its renewable energy deployment. Under the light of the numbers, share of renewables estimated for 2015 could be summarized as follows: hydropower (5.8 Mtoe[137] or 4.4%), geothermal energy (4.8 Mtoe or 3.7%), biofuels and waste (3.3 Mtoe or 2.5%), wind power (1Mtoe or 0.8%) and the solar power (1 Mtoe or 0.7%).[138] Here, the hydropower stands out as having the highest share among the renewables.

Nevertheless, this current share of renewables could be said to some extent contradict with the country's potential. It is firstly because Turkey has a higher potential of renewable energy especially in solar, wind and geothermal compared to hydropower. Likewise, hydropower generation has been much volatile in recent years due to fluctuating precipitation rates. [139] Yet, it could be said that hydropower again stands out as being the most-used renewable resource for electricity production. While hydropower accounts for 25.8% of electricity production among renewables, wind power accounts for 4.4% and geothermal energy for 1.3% of total electricity production from renewables. This share falls to 0.6% for biofuels and waste, and to 0.2% for solar power.[140]

3.3. Rush to Hydropower

As it is mentioned in the former part, the share of hydropower stands out with 5.8 Mtoe or 4.4% among other renewables. And the future trend shows an increasing demand for more renewables, particularly for more deployment of hydroelectric power plants. Here, the rest of the paper aims to analyze the underlying ground for this increasing tendency to water or to hydroelectric power plants especially as of

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http://www.enerji.gov.tr/tr-TR/Bakanlik-Haberleri/Bakan-Albayrak-TBMM-Plan-Ve-Butce-Komisyonunda-Bakanligin-2017-Yili-Butcesine-Iliskin-Sunum-Yapti

[137] Mtoe: Million tonnes of oil-equivalent

[138] Energy Policies of IEA Countries, 2016 Review of Turkey, International Energy Agency (IEA) "Secure, Sustainable Together", p. 223:165, Retrieved from https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---turkey-2016-review.html

[139] Ibid., p.165.

[140] Ibid. p.166.

2000 as the main source of renewable energy in Turkey. Within this context, privatization, and marketization process, as the biggest impetus behind the escalating numbers of hydroelectric power plants in Turkey, could be primarily detailed.

As the underlying force of privatization could be seen the changing legal basis and framework related to hydroelectric power plants or water in general in Turkey. To be specific, the Electricity Market Law numbered 4628 and dated 2001 could be regarded as an important milestone behind the ascending hydroelectric power plant developments in the country.[141] This law was enacted upon the frustrations and economic loss in Build-operate-transfer (BOT) or Build-operate models and due to the impact of the economic crisis etc. And it mainly targeted at the full liberalization of the electricity market.[142] The EMRE (Energy Market Regulatory Authority) was established in tandem with this law, paving the way for current license mechanisms for electricity production.

Moreover, certain state organizations including DSİ (General Directorate of State Hydraulic Works) was reorganized so that private companies could make a better use of rivers and streams for electricity production.[143] Upon such drastic changes in related law and institutions, the number of hydroelectric power plants, be it either large scale or small scale, have soared in the country. The numbers between 2003 and 2015 are noteworthy enough to show the impact of such changes. For instance, installed capacity of hydroelectric power plants which was 12.000 MW in 2003 reached to 24.000 MW in 2015.[144] What is more, total number of hydroelectric power plants (including those in the construction or planning process) which was 537 in 2015 is expected to reach 1400 until 2023.[145] In this, the role of state, namely the DSİ (General Directorate of State Hydraulic Works), has dramatically decreased whereas the role of private companies has strengthened. For instance, as of early 2015, private

[141] Erensü S. et al (eds.) 2016, *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler*, [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:13.
[142] Ibid.
[143] Ibid.
[144] Ibid., p.12.
[145] Ibid., p.14.

companies have overseen 139 hydroelectric power plants under construction while that number has fallen to 4 when it comes to the DSİ.[146] And it has been especially small hydroelectric power plants, or run-of-the-river hydroelectric power plants that have showed a huge increase in recent years, leading to remarkable local opposition. In this sense, almost half of those hydroelectric power plants which have been licensed (914) as of April 2016, consist of small hydroelectric power plants which operate below the capacity of 10 MW, accounting for only 6.4% of total installed hydroelectric capacity.[147]

Similarly, another important change increasing the number of hydroelectric power plants comes with urgent expropriation process which becomes more evident especially after 2004. For instance, despite 14 decisions of "urgent expropriations" between 1978 and 2000 by the Cabinet, this number reaches to 830 from 2000 up until 2014. Among these decisions, 550 is about energy investments while 527 of these relates to electric energy.[148] Consequently, the total number of urgent expropriation decisions taken by the Cabinet and the EPDK (Energy Market Regulatory Authority) reaches 1.801 while 1.507 of it concerns energy market. And the decisions of 212 on the construction of hydroelectric power plants outnumber the other sectors.[149] Hence these numbers, could clearly show the recent rise of privatization both in hydroelectric power plants and in the energy market in general. Quite a remarkable number of scholars regard this dramatic increase especially in small hydroelectric power plants as *hydropower rush* within the context of neoliberal Turkey.[150] For the future as well, the share of hydropower among other renewables seems to be the highest one. It is expressed "tapping the full hydroelectric potential"

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[146]Erensü S. et al (eds.) 2016, *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler*, [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:15.

[147] Ibid., p.16.

[148] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric power plants in Urgent Expropriations], In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:67.

[149] Ibid., p.79.

[150] Erensü S. et al (eds.) 2016, *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler*, [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*], Istanbul: İletişim, p.528:14.

under Energy within "Plans and Policies to be Implemented for the INDC" of Turkey which was submitted for the first time in 30 September of 2015. However, for the other renewables, future increase in the capacity of the resource is limited to certain amount such as "increasing capacity of production of electricity from wind power to 16GW until 2030".[151] Overall, it could be alleged that hydropower plants, especially the run-of-the-river ones, have seen and will go on seeing the highest interest among other renewables. And the underlying ground for this interest has been prepared with the establishment of related laws and institutions in the neoliberal Turkey.

Last but not least, basing on the afore-said Turkey's increasing share of renewables and more search for it, it could be alleged that the country has made relatively important attempts on the way for a greener world especially in recent years. Even though the share and search of renewables has increased, the policies and attempts as such have followed such a process that the resulting contradictions, vulnerabilities entanglements, disentanglements, and relations among many multi-sited actors have questioned to what extent these renewable resources are renewable and sustainable. Or how these renewable and sustainable processes have turned into unrenewable or unsustainable ones, almost transforming into empty floating signifiers. Accordingly, the question whether all these attempts and efforts have served for a renewable and a sustainable future or a more development and economic growth should be answered. What is more, during the search for more renewables and clean resources, another question is what happened to the inextricably intertwined relations between people and the nature, or between nature and the culture. Another similar question is how the *a priori* divide between the lay people and the experts, between the technical and the social has survived. The following part of the paper intends to answer these questions with a focus on Darıbükü village (a village consisting almost merely of old people in Sütçüler town of Isparta city) where a construction of a dam and hydroelectric power plant and the underlying urgent expropriation decisions covered the third of the village under

[151]Intended Nationally Determined Contributions (INDC) of the Republic of Turkey, p.5:3. Retrieved fromhttp://www4.unfccc.int/submissions/INDC/Published%20Documents/Turkey/1/The_INDC_of_TURKEY_v.15.19.30.pdf

water leading to many other long-lasting impacts both on the nature, culture and the social life. Accordingly, the resulting trajectories which include many actors, entanglements and disentanglements, transformations, and retransformations, be it either between human or non-human entities, between the social or natural, and lay people or experts are also emphasized in this scope. In short, the rest of the paper aims to analyze these questions and issues among others under the light of my multi-sited ethnography which lasted three months.

CHAPTER 4

ENERGOPOLITICS AND ENERGOPOWER AS FACILITATORS IN THE DEMISE OF THE VILLAGE DARIBÜKÜ

4.1. Darıbükü: A Hidden and Isolated Village in Greens and Blues

It takes about two hours to reach Darıbükü[152] village of Sütçüler town from the downtown Isparta. When I left the downtown with Mr. Uysal, the accompanying villager aged 56 and who has taken legal action against the dam and hydroelectric power plant, I saw a huge osteopathic hospital on the right side of the road and thinking about the rare existence and utmost importance of such hospitals in Turkey, I asked Mr. Uysal more about it. He said this hospital is here due to unique climate and nature of Isparta. A patient who could recover from bone disease in a month in the eastern part of Turkey can recover here in fifteen days thanks to the climate.

The asphalt road changed into a rougher one as we got closer to the villages of Sütçüler town of Isparta city. One by one we passed villages which are partially close to each other. The steep road got steeper and rougher when we got closer to Darıbükü village, which is far away from the other villages of Sütçüler town. When I asked why it was so rough, Mr. Uysal, as a villager of Darıbükü knowing the environment very well, said that "it became more difficult to reach our village upon the construction of damned dam and hydroelectric power plant in the village." Perplexed by the rage and resentment in his eyes, I kept on asking more about the village and the surrounding. The density of big trees on both sides of the road attracted me. Mr. Uysal said those plane trees with five leaves, mostly peculiar to the region, date back to 150-200 years ago, and followed:

> These trees like water very much and being self-sustained, they protect the nature. Considerable number of them are gone now either due to mining or hydroelectric power plant activities. Also, due to the marble quarries in the region, another important tree, hundred hectares of junipers were cut down. Junipers are fragrant trees whose seeds and fruits are used in medicine and

[152] Yoruk-Turkmen village of Sütçüler town in Isparta city of Turkey with inhabitants aged about 65 and with population of 111 as of 2016. See also in Turkish: http://www.nufusune.com/15960-isparta-sutculer-daribuku-koy-nufusu

> for other commercial purposes such as producing precious prayer beads. These trees are rather difficult to grow in other regions. Also, birds come and feed from the fruits of these trees, which in turn contributes to sprouting and growth of trees. Accordingly, bird poop contributes to the growth of these trees. And I ask to myself why all these have happened in a decade or so, and not before. Were the former authorities fool not to exploit these trees or other precious parts of nature?

With such insights, he somehow summarized the self-sufficiency of nature which is destroyed by the intervention of humans. Seeing in his eyes the need to talk more about this disproportionate intervention in the environment, I kept asking about the changes in the environment and the region. He responded that if one is stuck in this region and has nothing to eat, the environment would offer them enough to survive. Later, he added that one can find fish in the stream, lots of edible herbs or vegetables on the streamside. I also learned that his father and grandfather used to be millers before death, and unlike the recently-built dam and hydroelectric power plant, the water mills were in perfect harmony with the water and the environment.

Hearing the relaxing music of the water combined with bird chirping and breeze, I asked him whether there still exists any fish in the stream. Going to his childhood memories Mr. Uysal said:

> I used to catch fish in the stream during my secondary school years. Mom would cook it, and I haven't found that taste again for years. It was unimportant that you either catch a fish or not. You would look at the water, you see and feel the water, then start to wait for a fish to come and see its dancing in water. That excitement was enough for me to forget the world and to relax. Yet, you cannot find those fish now.

Afterwards, he added that this road was opened with dynamite -devastating the life of water and fish as well. And wild hunting also led a decrease in fish, he expressed. Again, impressed by the beauty and bounty of the surrounding on the one hand and by the devastating impact and intervention of humans on the other hand, I started to listen to him in more wonder and sadness at the same time. As we moved further, we saw an accumulation of dirt on the increasingly getting thinner water. Before my question, he said this is due to the debris of the nearby marble quarry.

I had no idea that something more devastating and frustrating was waiting for me. I clearly saw the dividedness of Darıbükü village when we reached the body of the dam and the hydroelectric power plant.[153] On the one side was the old village, as they call it, almost third of which was completely under water. On the other side was the new village, as they call it, where new uniform houses were built. Mr. Uysal was now talking about not the village *but the villages*. The dividedness of the village was crystal clear at first sight. On the one side, there were a few remaining houses of the 'old village' third of which was now under water. On the other side, there was 'the new village' made up of several uniform buildings. It was hard to believe that the school, the mosque, community clinic, bridge and the government office are now under water. There was nothing left of their school, their mosque, or their bridge except a piece of metal floating on water. I had before heard about the news about the village and the misery they have undergone. Yet, it was only when I saw that view and the loss and frustration in Uysal's eyes and voice that I understood with all my heart that it was not merely the houses or the mosque that was missing but the past, present and the future of these very people. It was the memories, culture, and any sense of belonging to their own village, from then on 'the old village'. When Mr. Uysal pointed at the cemetery, I realized that the graves are also about to be submerged, as the figure 4.1. shows. He said in hate and resentment: "We understand they do not respect us, the living. At least they can respect the dead!"

[153] Kasımlar Dam and Hydroelectric Power Plant (HPP) built by Gülsan Construction Industry Tourism Transportation and Trade Co. Inc. under the subsidiary of TAÇYILDIZ Energy Industry Trade Co. Inc, and being among the run-of-river hydroelectric power plants with an installed capacity of 25 Mwm and above. See the related EIA report for more information.

Figure 4.1. Graves about to be covered with water upon the construction in the village.

What he said about the bridge was also striking. The bridge used to be the only passage to reach the vast majority of farm lands. With bridge flooded, villagers lost their touch at most of the farm lands, and one cannot reach the lands on one side of the dam now. There was something more striking in his sayings. The energy company was even making the calculations whether building a new bridge or expropriation of even those -now unreachable- lands would be cost efficient. And he uttered in disappointment: “Access to lands on one side is not available now. They say they will build a new bridge, but there is no action for long.” Mr. Uysal looked deep into the dam and the place of his home now inundated, and sighed:

> My home was right there, my father had planted tens of fruit trees so that birds and other animals could make use of it. Now, they are all gone. There were many more of them. There were larger and age-old trees. But they cut them all down. The larger ones were carried with a crane. When they found trees too big to cut and carry, they left them under water.

Upon this, I started to wonder more about what other people were thinking and feeling about all these, and was looking forward to seeing 'the new village' that was presented as a survival solution for those villagers whose homes submerged.

We left the dam and the hydroelectric power plant, moving towards 'the new village.' On the way, Uysal showed me the new mosque, the community clinic, and the government office under construction. He said these have been under construction for almost a year and it is only the rough work that has been completed. The three buildings were almost the same, Mr. Uysal criticized the mosque's being threefold like an apartment and stated: "I have never seen an apartment-mosque like this in my lifetime." Afterwards, we walked toward the new houses and here stars another startling misery which deepens and aggravates in the experiences of each villager who has been heavily influenced by the dam and the hydroelectric power plant.

4.2. Mukhtar as a Collaborator of Corporate Power

Basing on in-depth interviews, this part primarily intends to dwell on the entanglement of state power and corporate power through and over energy which shows itself in the role played by the village mukhtar in collaborating with the energy company, which ultimately contributes to the reinforcement of energopolitics and energopower. Here, it should also be noted that the mukhtar emerges as the representative of the state within the network of complex relations which have overall governed and dominated the whole transformative process in the village, which is further detailed in the upcoming parts. Before these, it would be of use to touch on the basis of these recently-coined two terms energopolitics and energopower which mostly dominate the atmosphere in the Anthropocene.

Viewing liberalism as a practice and critique of government, Foucault in "The Birth of Biopolitics", parallels the ascend of liberalism with that of biopolitical technologies of governance. He also sees the roots of "biopolitics" in American neoliberalism which strives to extend the rationality of the market, the schemes of analysis it presents and the decision-making criteria it proposes for areas that are not only or not primarily economic. These include the examples of family and birth policy or penal

policy etc.[154] Within this scope, the birth of biopolitics relates to the need to study the way in which specific problems of life and population have been raised within a technology of government.[155] It is at this point that biopolitics as Foucault put it, has come to refer to ways and mechanisms or techniques by which human life processes are managed under regimes of authority over knowledge, power and the processes of subjectivation. Accordingly, biopower could be described as techniques and technologies which take the place of sovereign power and govern human social and biological processes.[156] What is more, when that management and governance happens through and over energy or energy means, it could be said that, as a genealogy of biopower, energopower takes the lead.

It is certain that biopower and biopolitics, mainly relating to the management and control of human vitality, play a crucial role in understanding and analyzing modern political power. Nevertheless, apart from its necessity and importance, biopolitics may not be satisfactory enough to comprehend the modality of modern power which has largely focused on transformational power of energy.[157] In this sense, Cymene Howe referring to Foucault, also says that the biopower originated as a way to enforce power over and through "basic biological features of the human species" and the anthropogenic era requires a leap to a greater dimension of engagement.[158] That is why, it could be said that energopower or energopolitics, heavily touched by anthropology's third-generation engagement of energy, have emerged to contribute to a better understanding of greater and more complex entanglements of energy in the Anthropocene.

Thus, having inspired from this very concept of biopower and biopolitics, Boyer defines energopower as "a genealogy of biopower that rethinks political power

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[154] Foucault, M., 1997, "The Birth of Biopolitics" in P. Rabinow (Ed.) *Ethics: Subjectivity and Truth*, Vol.1, the New Press, p.73-79: 79.
[155] Ibid., p. 79.
[156] Biopolitics: An Overview in the Anthropology of Biopolitics, (n.d.), Retrieved from https://anthrobiopolitics.wordpress.com/2013/01/21/biopolitics-an-overview/
[157] Boyer, D. 2011, "Energopolitics and the Anthropology of Energy", Anthropology News: Energy and Energopolitics, Vol. 52 (5), p. 5-7.
[158] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p. 30:24.

through the twin analytics of electricity and fuel."[159] In a similar fashion, energopolitics could be said to relate to the ways in which energic forces direct and compel political power in certain directions.[160] Thus, it could be alleged that as sort of a specification of biopower, energopower and accordingly energopolitics helps rethink, reinterpret and reimagine the modern political power via energy, in my case, renewable energy of hydropower in Darıbükü village and in general in Turkey. In other words, it could be claimed that energopolitics and energopower have dominated and permeated the atmosphere in Darıbükü village through different means, mechanisms and complex network of relations which, in turn, have governed both the population and the water. In this context, it could be asserted that energopower has showed itself both before, during and after the construction of dam and hydroelectric power plant as a renewable energy through various means and agencies in the village. Among these means and trajectories, firstly, the entanglement of state and corporate power in the neoliberal context as reminiscent of energopower and energopolitics could be focused.

It could be said that the mukhtar, as the sole state actor in the village has acted as an important facilitator and even a partner of the energy company which is in charge of dam and hydroelectric power plant. He has been the main mediator between the company and villagers by helping the company in persuading people to evacuate their homes and give consent to all regulatory and disciplinary processes before, during and after the construction of the dam and hydropower plant. In this way, he has largely contributed to the initiation and facilitation of the very energopolitical dominance in the village. The following sayings of Mr. Uysal is remarkable to summarize this crucial role played by the mukhtar:

> It was only me who opposed to the expropriation process of our houses. There were two other people with me in opposition, yet they were threatened and dissuaded by the mukhtar. He put pressure on people saying that the state could mercy you but not the company. If you do not agree upon expropriation process, the company would harm not only you but also your children. They would destroy your family. So, mukhtar acted as the partner of the company

[159] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.37:22.
[160] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p. 30:28.

> officials. He is both my neighbor and relative. Our houses were almost of the same square meters, yet he was paid 55 thousand TL as an expropriation price while I had nothing. Besides, all recently-built houses are of 50 m2 yet four of them are of 70 m2. And nobody knows on what criteria the houses were distributed. Yet we know that one of these 70 m2 houses belongs to mukhtar's uncle. What is more interesting, the distribution was carried out by the mukhtar himself. Nobody has the right to choose or to oppose or to know the related criteria of distribution. And there are many special implementations for mukhtar's home including extra place for barn and outhouse, and his home stands out among the other uniform houses.

The mukhtar acquires a privileged position thanks to his being a mediator in persuading people to agree evacuating houses and what he gets, in turn, is a larger house, extra space and even extra money as some other villagers also allege. Thus, as Douglas Rogers states, it could be claimed that, one facet of "energopolitical regime" has derived from the resulting field of state and corporate power.[161]

Similarly, a villager, aged 72 and who used to be a tinsmith before his workplace submerged, said that the mukhtar had needed help before the construction of the dam and the hydropower plant. And he added that, upon the arrival of the company, mukhtar's position has changed, he bought a brand-new tractor, holding two wedding ceremonies for his children. Moreover, another villager aged 56 and the wife of a watchman at the dam, said that the mukhtar acted in accordance with the attorney of the company and came to our old home saying they would compensate upon expropriation of the yard, the hayloft and fruit trees. She added, in this way, the mukhtar and the attorney persuaded them to sign the paper. Then she sighed and said they did not pay back for any of these but the house. Another woman, aged almost 60 and seemed too anxious and upset about the loss of her belongings, made similar remarks about the mukhtar. Reiterating that he had used to be in dire need of help before, she said the mukhtar is not the old mukhtar, alleging he does not care about them anymore. And she expressed that he should do his job and care about his village and people inside it. What is more, the following sayings of Mr. Uysal could specify the mukhtar's privileged position upon his cooperation with the company:

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[161] Rogers, D. 2014, "Energopolitical Russia: Corporation, State and the Rise of Social and Cultural Projects", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p.431-452:431.

> 25 families wholly left the village migrating to another city. Another 25 families who had not the chance of migrating or living with their children, had to move to the new houses. Each and every one of their houses and all other lands were expropriated. What is more, new uniform houses were built on the lands of mukhtar and his uncle whereby they have been the only ones benefiting from this expropriation process. These are the only lands that increased in value since the new houses were built on their lands on the other side of the village. They could still make use of their lands as a result.

As could be seen in the sayings of Mr. Uysal, mukhtar has largely benefited from his cooperation with the company whereas the villagers have been dispossessed of their own lands and homes. Some had to migrate while some others had to move to new uniform houses of 50 square meters. Hence, basing on this uneven distribution of houses or lands by the mukhtar and the company for renewable energy development, it could be inferred that the ways in which renewable energy -hydro power in my case- is produced and used could highlight the uneven ways in which the benefits of renewable energy development are distributed.[162]

In a similar vein, as one of my interviewees, a female activist aged between 40-45 and the president of a foundation in Turkey, put forward, the state has not thoroughly withdrawn from the scene in neoliberal Turkey. But instead, it has changed a shape, being the biggest facilitator for the market or the private interest groups by some way or another. For the village as well, the state has not withdrawn but instead co-constituted with the energy company in a network of relations, one of which being formed with the contributions of the mukhtar. In this sense, mukhtar's role within this network contributes to the neoliberal atmosphere in Turkey as well. It is because the main goal of the neoliberal state is to establish a "good business climate" and accordingly to improve the means for capital accumulation whatever the consequences are for social well-being or employment.[163]

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[162] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca*", Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p. 30: 8-9.
[163] Harvey, D. "Neoliberalism and the Restoration of Class Power", Program in Anthropology, CUNY Graduate Center, p.43:10. Retrieved from https://gsnas.files.wordpress.com/2007/10/harvey080604.pdf

4.3. Villagers at the Mercy of the Energy Company

"Are you an officer of the state or the dam?"

The afore-said short sentence was uttered by Mr. Uysal regarding blurring roles of the state and the energy company. Upon deforestation, especially of the age-old plane trees in the "old village", Mr. Uysal appeals to many public offices including the Ministry of Forestry and Water Affairs and the Ministry of Finance expressing his resistance for deforestation. He was responded that they would make reforestation. As for what he heard when he asked about the escalating water level, it was: "We are doing what the dam officials say, we do not know." Upon this, Mr. Uysal asked whether they are officers of the state or the dam. And looking at me, Mr. Uysal said all institutions act in accordance with the words of dam officials. He also added that none of the institutions including Energy Market Regulatory Authority (EMRA), the State Hydraulic Works (DSİ), the governorate and the district governorate, have been able to do anything about the injustice made to them. When asked why, he added, they hold the company responsible for all this process. The last point made out by him is remarkable to explain the controversy and the rationale behind his resistance: "I used to assume that this process is being performed by the state. Yet, it was only when I realized that it was a private interest within the state that I started my struggle and took legal action."

Relying on experiences of both Mr. Uysal and other villagers accompanied by participant observation, this part of the paper mainly aims at focusing on the expansive role of the energy company in transforming the village, people, water, and their future, which forms another aspect of energopower or energopolitics. Within this scope, power shifts from the state to company and the resulting confusion and controversies due to blurring roles between the two could be highlighted as another facet of energopower where the energy company has governed again through and over hydropower. And this eventually points out the political power that is rethought through the twin analytics of electricity and fuel.[164]

[164] Boyer, D. 2014, "Energopower: An Introduction", Introduction to *Anthropological Quarterly* Special Collection: "Energopower and Biopower in Transition", Vol.87 (2), p.37:22.

In this direction, comments from other villagers could also highlight these power shifts and network formed between the state and corporate power. For instance, the villager, aged 72 and who used to be a tinsmith before his workplace submerged, angrily said: "What is it to me a company coming from İstanbul would earn money here, in my territory!". And he added their problem is with the energy company, it accounts for of all this trouble and mercilessness. In a similar vein, even though it says in the related Environment Impact Assessment (EIA) report that "all expropriation processes are to be conducted by the EMRA"[165], the roles of the state or the company get blurred. For example, despite this expression in the EIA report, it has not been the EMRA that conducted expropriation process. But instead, as Mr. Uysal claimed, another company was outsourced for expropriations which in turn further complicated the process since an employee of this company introduced himself as an attorney and persuaded villagers to sign the related papers basing on his quasi expertise. Hence, thanks to this collaboration between the state and the energy company, it could be alleged that people held the company as the sole responsible one as it has been mainly the company that has taken the lead in this process.

Moreover, it is evident that the shift of *scale* in publics (a shift in villagers' views holding the state as the sole authority and responsible one to those now seeing the private interest as the main addressee) has made it apparent that the biopolitical projects of the state, once performed through comprehensive infrastructural projects for the goodness of the population, now shift to private groups.[166] In other sayings, the state, now entitles the private company with both opportunities and responsibilities. And this is enhanced with the sway of neoliberal implementations as an implication of energopower or vice versa. Viewing neoliberalism as market-conforming state crafting, Wacquant (2012) also explains the core of the neoliberalism as *an articulation of state, market and citizenship* that uses the first to

[165] See the related Environment Impact Assessment (EIA) report, p.24.
[166] Alexander, C.&Reno, J.O. 2014, "From Biopower to Energopolitics in England's Modern Waste Technology", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol. 87 (2), p.335-358:353.

impose the stamp of the second on the third.[167] In my research example as well, the state has intervened when needed via re-regulations or approvals, and the private interest sometimes led the process, and transformed, dominated, or governed people via energic forces. In other sayings, both the state and the company have sustained their lives through one another. In short, these two have formed a relation through which each, acting in collaboration with one another, transformed the village.

At this point, following remarks made out by Mr. Uysal are enlightening to show how the company started to manage the entire process:

> I participated in the company's public availability session. Company officials talked so gently and promised so much that each participant believed in them. They promised to do anything for the public's good creating jobs, improving their lives with new houses, roads and producing more development and growth. They said they would not harm the nature, the forest and would collect their debris. They also promised we would be paid all the money for each good that is expropriated. Yet, they neither respected people's lives, nor the nature or animals let alone keep their promises. They even exploited the streambed for meeting their needs of excavation. And they left their debris into the water. They first said that the mosque would not be submerged. One day we saw the mosque under water and afterwards the community clinic. They had said body of dam would not be more than 80 meters, then with an amendment on the project, they changed it into 115 meters.

In short, what company officials alleged to be sheer public's good has turned into private's good with power over knowledge and energy. To put it another way, as Alexander and Reno (2014) figure out, these contested views of public and private benefit and the relationship between the two have served well for the reinforcement of the energopolitical side of the process.[168] Additionally, by making promises such as improving life conditions, creating new jobs and opportunities, the company did its best to make people give consent all urgent expropriation process within the familiar biopolitical frameworks during the energopolicial shift.[169]

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[167] Wacquant, L. 2012, "Three Steps to a historical anthropology of actually existing neoliberalism", *Social Anthropology* 20,1, p. 66-79:71.

[168]Alexander, C.&Reno, J.O. 2014, "From Biopower to Energopolitics in England's Modern Waste Technology", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol. 87 (2), p.335-358:338.

[169] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p. 30:23.

Moreover, expanding role of the company in transforming the village, people and their culture could be overtly seen in the acts of a quasi-attorney who plays a crucial role in persuading people to agree the urgent expropriation process. As Mr. Uysal said, the energy company assigned another firm with performing the expropriation process where a company official introduces himself as an attorney. In this way he added, the quasi-attorney receives a general proxy from some villagers and conducts all proceedings basing on this general proxy. What is more striking is that the quasi-attorney persuades people by saying that this proxy general is necessary for the construction of an alternative road above the old village. Mr. Uysal also added that villagers realizing the *de facto* role of the general proxy cancelled it with their own money. Some of the signees have been old illiterate people whose signatures show a continuous change in each paper. In this way, certain number of villagers have been manipulated by a company official under the title of an attorney, and under the name of building a new road they have been consented to leave their homes, livelihoods, and culture. Moreover, many villagers could be said to have been disciplined via power over knowledge and energy. In this sense, it was quite both surprising and meaningful to hear upon my question "Are you pleased with this?" from each one of my respondents that "We are not, but there is nothing to do!" This hopelessness has manifested itself in other sayings as well such as "We are in misery, yet we have to be glad about this." or "We are trying." They seemed anxious, hopeless, intimidated and some even full of hatred and rage. But what they have in common was docility in the end. Especially the answer from a villager, aged about ninety and found difficult to walk, was enough to explain their suppressed anger:

> Me: Are you happy in your new home?
> Villager: How come to be glad! You freeze in winter here and swelter in summer.
> Me: Have you ever tried to oppose?
> Villager: Would anything change? No!
> Me: Maybe there could be a chance.
> Villager: There is no chance.

Basing on the afore-said quotations and my observations in the village, it could be alleged that disciplining power of energopolitics entangled sometimes with

biopolitics makes itself evident over the social, cultural, and energy-wise governance of the population. This shows itself either in frustration, learned helplessness, hopelessness, or anxiety in the sayings and eyes of the villagers. And as opposed to some resistance examples shown by local people towards energy transition such as wind plants in Oaxaca, Mexico and the resulting environmental degradation as analyzed by Howe (2014)[170], almost all villagers except Mr. Uysal in my research have accepted the power exerted upon themselves. Either due to being illiterate, old, alone, or hopeless, they have not been able to resist the transformation. Additionally, as an extension of what once Foucault suggested, it is not only the human body that has now entered machinery of power that explores it, breaks it down, and rearranges it,[171] but also water, their livelihoods, culture, past and future that have been explored, broke down and rearranged via energic forces or in brief, via energopolitics.

All in all, it has been the network formed with the state, energy company and resulting relations that have governed the whole process of hydroelectric power plant development in the village. Sometimes it has manifested itself with the energy company taking the whole responsibility while some others with the facilitating role of state via its re-regulations, approvals, or partial withdrawals. However, it could be claimed that it has been this network, this complexity, blurring roles, or power shifts between the two that have led to an accomplishment of the hydroelectric power plant development in the end.

4.4. Urgent Expropriation Decisions: A Safe Harbor for Energopower to Anchor

This part of the paper mainly aims at explaining how urgent expropriation decisions on hydropower development have served for the legal basis. To put it differently, urgent expropriation decisions have laid the ground for overt and covert intrusion of energopower or energopolitics both the village in specific and Turkey in general. It

[170] Howe, C. 2014, "Anthropocenic Ecoauthority: The Winds of Oaxaca", *Anthropological Quarterly Special Collection*: "Energopower and Biopower in Transition", Vol.87 (2), p. 30:3.
[171] Foucault, M., 1984, "Docile Bodies" in P. Rabinow (Ed.), *the Foucault Reader,* Pantheon Books, New York p.179-187:180.

could also be stated that, if it were not these decisions, people would not have left their homes and everything.

The whole transformative process of hydroelectric power plant development carried out with the motive of increasing renewable energy in Darıbükü village and many other places in the country as well is initiated by and legally based on the urgent expropriations which date back to the Acquisition Act numbered 6830 and dated 1956. Yet, with an amendment, this act turns into Expropriation Act numbered 2942 and dated 1983 where urgent expropriation has maintained its presence.[172] For an urgent expropriation decision to be taken, a state of emergency designated by cabinet decree is required. However, between 1978-2007, the Cabinet took 9 different decisions entitling public institutions (including BOTAŞ-Petroleum Pipeline Corporation etc.), independent institutions such as EMRA or firms in the process of privatization (TEDAŞ-Turkish Electricity Distribution Corporation, TEİAŞ-Turkish Electricity Transmission Corporation etc.) with the authority of taking urgent expropriation decisions.[173] Under the light of such delegation, one could see an escalating trend in urgent expropriation decisions as of 2000. For instance, despite 14 decisions of "urgent expropriations" between 1978 and 2000 by the Cabinet, this number reaches to 830 from 2000 up until 2014. Of these decisions 550 relates to energy investments while 527 of these belongs to electric energy.[174] To be more specific, the number of urgent expropriation decisions taken by the Cabinet and the EPDK in total corresponds to 1.801 while 1.507 of it concerns energy market. And the decisions of 212 on the construction of hydropower plants far surpasses the other sectors.[175] In short, basing on these numbers, one can clearly see the increasing rise

[172] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric power plants in Urgent Expropriations], In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:67.
[173] Ibid., p.78.
[174] Ibid., p.67.
[175] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric power plants in Urgent Expropriations], In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:79.

of privatization in the energy market and in hydropower in specific thanks to these urgent expropriation decisions.

Additionally, as one of my interviewees -a female activist aged between 40-45, and the president of a foundation in Turkey- suggested, these urgent expropriation decisions have got much fiercer and urgent with the enactment of the Article 80 of the Act 6745, an act which is about the encouragement of investments and amendments on certain laws or decree laws.[176] Seen as "burdenless investment" among political elites, this article she said, has enabled the Cabinet to allow any investment which is found strategically important. She also added that, with this article, auditing mechanisms, environmental impact assessments, public works permits, corporate tax or licenses -which are already ill-implemented or abused in the country- would be excluded for the sake of further investments. She also suggested that this would be sheer raid of the nature and the future by private interests with the facilitating role of the state.

Additionally, concerning these urgent expropriation decisions especially in the context of energy, Kaya (2016) offers a detailed conceptualization of "public", "private", "expropriation", "urgent expropriation", "public interest" and "privatization", explaining how their meanings and contexts have transformed with the neoliberal turn.[177] Kaya mainly claims that the neoliberal transformation has reproduced the polarization between the capital and the labor, saying that "expropriation has come to refer to government's intervention in favor of the private and in line with the "public interest."[178] In other sayings, "public interest" in

[176] The Act numbered 6745 and dated 2016, *Official Gazette*, Retrieved from http://www.resmigazete.gov.tr/eskiler/2016/09/20160907-1.htm

[177] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric Power Plants in Urgent Expropriations], In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:67.

[178] Kaya, A.Y., 2016, "Sermaye-Emek Kutuplaşmasının Yeniden Üretimi: Acele Kamulaştırma Kararlarında HES'ler" [Reproduction of Capital-Labor Polarization: Hydroelectric Power Plants in Urgent Expropriations], In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:72.

neoliberal rationality has been replaced by the hegemony of “private interests” or “individual interests”, showing a radical shift of content in the term “public interest”. And it could be claimed that the urgent expropriation processes exemplify this radical concept shift in public interest or public good. This has, in turn, strengthened the power of private groups where the public interest has very often fallen to deaf ears.

Darıbükü village is not an exception in this sense but instead, a perfect exemplary where the fiercest form of urgent expropriation decisions has been implemented. In this direction, all my interviewees have found these urgent expropriation decisions unacceptable in Turkey, especially those regarding hydroelectric power plants as devastating intervention into people’s lives and livelihoods. Here, what Mr. Uysal said should be noted out. Saying that they had heard everything secondhand, Uysal explained, before the construction, they had no notification or document informing about dam and the hydroelectric power plant. The only thing they knew was that a dam would be built, and their homes would be expropriated. He also expressed that they knew expropriation decisions could be made under such circumstances including an outbreak of a war or a natural disaster where country’s interests are in peril, and where they would wholeheartedly abide by with no resistance. Yet, he added, there is not such urgency, his home and all belongings should not be expropriated for the benefit of a company. Here, as Uysal states and as far as I observed in the village, the villagers are not disturbed by the state’s intervention in urgent circumstances such as war or a disaster. Nevertheless, they are much disturbed by the company’s disproportionate intervention as a result of which all of their houses, yards or orchards and belongings are gone. This exemplifies the result of the above-mentioned radical shift in “public interest” which, as opposed to its word meaning, has come to refer to private or individual interests in neoliberal Turkey. In this sense, an explanation made by one of my respondents, a lawyer who has devoted himself to legal cases against the inconvenient hydroelectric power plants especially in the Black Sea region of Turkey, is about the illegitimacy of expropriation decisions in any form. He said the following regarding (urgent) expropriation processes:

> Expropriation could not be legitimate in any form. It is nothing but the seizure of people's nature and their livelihoods by the state. Neither form of expropriation could be accepted. Even if it accords with legal procedures, I do not view any expropriation legitimate unless there is consent. As for the urgent expropriation, it is nothing but an arrangement which provides firms with the authority of expropriation. The state used to resort to this as a public investment but now it is done for private investments. I find this system which takes from the poor and gives to the rich unacceptable at all.

This exemplifies the afore-said shift of public interest into private interest with the implementation of urgent expropriation decisions, which stand as substantial intervention into people livelihoods. The lawyer informant also emphasized the importance of the consent of people, and opposed not only to urgent expropriation decisions but also any form of expropriations.

In a similar fashion, a journalist in his forties and elaborating on environmental problems, made similar remarks about the urgent expropriation process in energy projects. Considering them as the legitimized forms of violations on human rights and property rights, he said that the urgency of these decisions on energy projects are not to the favor of the public. He added even though the Counsel of State makes annulment decisions, these projects come into life, which constitutes one of the biggest human rights violations. Moreover, he suggested, these are conducted with the collaboration of the state and the corporations.

Each of these points, especially the point suggested by the lawyer, "receiving from the poor and giving to the rich" highlights the fact that *accumulation by dispossession* is at work during implementation of these urgent expropriation processes. Proposed by Harvey, *accumulation by dispossession* refers to the continuation and proliferation of accumulation practices that Marx had regarded as "primitive" or "original" during the ascent of capitalism. This could take manifest itself in many forms including commodification or privatization of land, conversion of property rights into exclusive private property rights, commodification of labor power, and appropriation of assets

including natural resources etc.[179] In Darıbükü example as well, through urgent expropriations as the entanglement of commodification, *de facto* privatization and appropriation, people have been dispossessed form their own homes, lands and nature only to see accumulation at the hands of a few privileged group of people. In other words, the wholesale commodification of nature has led to the increase in depletion of the global environmental commons such as land, air, water and to accelerating habitat degradations that prevent anything but capital-intensive modes of production.[180]

[179] Harvey, D. "Neoliberalism and the Restoration of Class Power", Program in Anthropology, CUNY Graduate Center, p.43:21. Retrieved from https://gsnas.files.wordpress.com/2007/10/harvey080604.pdf
[180] Ibid., p.22.

CHAPTER 5

ENVIRONMENTAL IMPACT ASSESSMENTS (EIAS): AN EXAMPLE OF INFIDELITY TO ONE'S *RAISON D'ÊTRE*

5.1. A Quick Glance at Environmental Impact Assessments (EIAs)

"You, the graduate of Translation and Interpreting Studies, working on Cultural Studies and dealing with climate change mitigation and renewable energy efforts, what is the relation?"

These statements belong to an academician in one of the universities of Turkey with whom I have done my best to interview her during an event, and stand as the most frustrating part of my research. When I attempted to ask few brief questions, she stopped me and, to my surprise, started passionately defending the Environmental Impact Assessment -EIA reports- (ÇED in Turkish) which stand as a highly controversial issue in Turkey as almost all my interviewees have also suggested. Looking down on me, she said that these reports perform well and are not responsible for assessing cumulative impact on the environment. During the lunch, representatives of several companies on waste management came by her and requested her help in conducting certain tests for their firms. Once unwelcoming face suddenly turned into a friendly one, and she said she would be glad to prepare the tests and reports at the university. She has been the only one among my interviewees in favor of these reports. And this has been recorded in my mind as an unforgettable memory for my fieldwork.

Discouraged by this experience, I have found myself engulfed in searching for people of specialization on climate change mitigation, renewable energy, or hydropower as a renewable energy, expressing how I am serious and excited about the research. What is more, this very beginning of my failed attempt to analyze the role and efficiency of EIA reports in hydroelectric power plant developments in Turkey has kept me alert motivating me to do more. Thus, during my multi-sited ethnography, I further focused on these reports and the accompanying relations.

In this direction, this part of the chapter focuses on the EIAs in general and the shortcomings in their implementation. This is followed by special emphasis on the actancy of water before it transforms into a commodity in the second part. And the third part of the same chapter dwells upon how water and *cultura animi* turn into numbers and terms through economic representations and technical knowledge within the EIA report. As for the last part, it particularly stresses the depoliticization process becoming apparent with intensification of distinctions between the social and technical, and between experts and lay people.

To begin with, it is important to touch on the Environment Impact Assessment reports in general, hereinafter the EIAs. The very initiation of these reports could tell a lot about whether they started for environmental concerns or not. The EIAs could be said to appear in the wake of opposition and resistance movements in many developing countries against the construction of large-scale dams which were financed by the World Bank in 1990s. Faced with problems in financial returns of big dam projects from developing countries due to these resistance movements, the World Bank started a series of environmentalist measures to retrieve its image worldwide. Among these environmentalist attempts, EIAs came to the fore.[181] Nevertheless, there are also some regarding the emergence of EIAs as one of the most important examples to balance the relationship between development and environment upon the growing interest and awareness toward environmental degradation since the Second World War.[182]

In Turkey as well, as one of my informants (an academician on climate change and environmental policy) emphasized, environmental implementations including EIAs do not have environmentalist concerns, but originate from the very requirements of

[181] Erensü, S.2016, "Neoliberalleşmenin Doğası, Doğanın Neoliberalleşmesi: Su-Enerji Rabıtası Üzerinden Neoliberalizm ve Müphemlikleri" [Neoliberalization of Nature, Nature of Neoliberalization: Neoliberalism and Its Obscurities Through Water-Energy Nexus] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:50.

[182] Tekayak, D.2014, "An Overview of Environmental Impact Assessment in Turkey: Issues and Recommendations", *Ankara Avrupa Çalışmaları Dergisi* (*Ankara Journal for European Studies*) Vol.13, No:2 p. 133-151: 134.

being entangled with the global capitalist system. For many others as well, Turkey adopted both the Environmental law and the EIA due to the requirement of full-compliance with the EU's EIA Directive.[183] Furthermore, although similar opposition movements mentioned above have not gone in parallel with those in Turkey, and which rather exacerbated in the country with the second-generation neoliberal turn, the implementation of EIAs in the country corresponds to 1990s. The EIA was first mentioned in the country's first environmental legislation, Environment Code No. 2872 which was enacted in 1983 [184]. However, it was in 1993 that the EIA By-law was first initiated in Turkey with the aim of deciding which investments that are likely to impact the environment need auditing mechanism and which do not.[185] And the EIA By-law entitles the Ministry of Environment and Urbanization with the right to approve or not the ultimate EIA report prepared by institutions authorized by the same ministry.[186] Likewise, one can see seventeen amendments on this EIA By-law, be it either small or large-scale[187], which could themselves give an idea about how these changes have influenced the way how EIAs have configured the economic action, details of which are given below.

There exist many shortcomings in the implementation of EIA By-law in the country, and most of them could be attributed to the precedence given to economic development and growth over environmental protection and concerns.[188] Basing on my in-depth interviews with multiple actors at different sites, I could claim that what

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[183] Ibid., 139.

[184] Tekayak, D.2014, "An Overview of Environmental Impact Assessment in Turkey: Issues and Recommendations", *Ankara Avrupa Çalışmaları Dergisi* (*Ankara Journal for European Studies*) Vol.13, No:2 p. 133-151: 140.

[185] Erensü et al. 2016, "Giriş: Yeğin Sular Daim Engin Akar" [Introduction: Water with no Boundaries] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:13.

[186] EIA By-law, 2014, November 25, *Official Gazette,* Retrieved from http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.20235&MevzuatIliski=0&sourceXmlSearch=%C3%87evresel%20Etki

[187] Erensü et al. 2016, "Giriş: Yeğin Sular Daim Engin Akar" [Introduction: Water with no Boundaries] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:13

[188] Tekayak, D.2014, "An Overview of Environmental Impact Assessment in Turkey: Issues and Recommendations", *Ankara Avrupa Çalışmaları Dergisi* (*Ankara Journal for European Studies*) Vol.13, No:2 p. 133-151: 144.

EIAs create is a reality which is external to society and culture. Or in practice, it could be alleged that they create a reality which is thoroughly opposed to what they epistemologically claim as their raison d'être, namely being assessment of environment impact. For example, one of them, an academician on climate change and environmental policy at one of the universities of Turkey, said that the political elites reject *de facto* implementation of EIAs in the country since nearly all reports are found positive by related authorities. It is also because the elites regard these reports as obstacles before investments alleging that such investments do not harm environment. He also added that these reports came to prominence as of 1990s merely as a requirement of the then main global tendency including the establishment of the Ministry of Environment and Rio Summit in 1992 which all started when the World Bank initiated environmentalist measures to improve it deteriorating image worldwide. The Ministry of Environment and Urbanization in the country views all environmental regulations including EIAs as big obstacles before economic growth and development, he claimed. He also alleged that he has never seen any EIA report being disapproved; all EIAs are put into practice in the country by some way or another.

Bringing harsher criticism to implementation of these reports, an activist aged between 40-45, and the president of a foundation in Turkey writing mainly on water, said EIAs have no role in protecting the nature or the environment at all. Emphasizing the facilitating role of the state in neoliberal Turkey, what she suggested is as follows:

> The restriction and limitations of EIAs legislation is clear. For instance, the related ministry, basing on the EIA By-law, does not consider the cumulative impact of all hydroelectric power plants in a single stream. But instead, it makes an individual impact assessment of hydroelectric power plants separately in a stream. Yet, it should consider other plants' environmental impacts on the same stream as well. This shortcoming eventually leads to increase of hydroelectric power plants as up to 15 in a single stream or river, which means an end for it. But, the cumulative impact has to be measured and the report should take into account the basin as a whole. Yet, the EIA By-law does not necessitate it. What is more, one cannot see any word of culture, people, their livelihoods and so on in EIAs. All are reduced to natural assets.

These sayings bring into question how efficient and effective the reports are in practice. Thus, one may not expect improvements on the efficiency of reports unless the legal basis is improved, which is subject to many changes itself. Similarly, another informant of mine, a journalist in his forties and elaborating on environmental problems, saw the EIAs as nothing but copy-paste formula. The example he gave was catastrophic. He said that results of a project in Black Sea region of Turkey was confused with those of a project in Mediterranean region of the country. So, the EIA report read that "waste water of the project Köprüçay basin[189], which is situated in the Mediterranean region of Turkey is to be discharged into Turnasuyu, a coastal city in Ordu province in Black Sea region of the country." This, along with other examples, clearly indicate how the EIAs could perform to the very opposition of their raison d'être, which, on paper, is to assess the environment impact of certain projects or investments while, in reality, it is to establish a ground for further investments since almost all are found positive and thus approved.

5.2. Water Before Turning into Commodity

"We miss the grand stream ("goca çay" in their sayings in Turkish) so much. We used to pass all day by the water and do anything there."

These statements belong to a woman aged about 75 and who finds too difficult to climb up the stairs of the recently-built new houses in Darıbükü village. She also added that they used to grow many types of fruits, vegetables, and their all economy ("idara" in her sayings in Turkish) and life depended on water. She sighed and said: "We have to live within these four walls now." Basing on these and other similar remarks below, this part of the paper dwells on water as an influential non-human entity bringing its own network of relations in the village. In other words, it mainly focuses on the nature of water before its commodification upon the construction of dam and the hydroelectric power plant.

[189] Köprüçay, ancient Eurymedon (Ancient Greek: Εὐρυμέδων) is a river that is situated in Antalya Province, Turkey, and empties into the Mediterranean. Retrieved from https://en.wikipedia.org/wiki/K%C3%B6pr%C3%BC%C3%A7ay_River

Firstly, Latour's invaluable contributions to non-human entities as full-grown actors with Actor Network Theory (ANT) could be noted out. For Latour (2005), *any thing* that does change a state of affairs by making a difference is an actor, or an actant unless it has a figuration.[190] In this way, the scope of actor includes both human and non-human entities. Likewise, Latour says that if action is priorly restricted with what 'intentional' or 'meaningful' humans do, it would not be easy to know how a hammer, a cat, a mug, or a list could act.[191] Hence, he widens the scope of what humans have generally understood from things, objects, or non-human entities, thereby granting them with the right they deserve utmost.

In the same vein, largely focusing on the relationship between oil and democracy and the intricate ties between modern democracy and carbon energy in the early twentieth century of the Middle East,[192] Mitchell (2011) also makes out the influential actancy of both coal and oil by emphasizing the different trajectories and contingencies each offers as non-human entity. He proposes to follow the carbon itself, or the oil to understand the vulnerabilities, connections and relations arising out of flows of energy.[193] In this sense, difference between the nature of oil and coal orients the then historical trajectory of democracy and politics in the Middle East. For instance, exploitation of coal as the triggering force of industrialization results in democratic political claims of coal workers. Coal workers form successful political demands thanks to the power of the new energy system based on coal.[194] However, with a transition from coal to oil as the basic energy means, things entirely change. Due to the very nature of oil, -its flexibility, lightness, less labor necessity, and relatively easy distribution compared to coal- drastic changes happen in how the strikes of coal workers are perceived and responded.[195] In this way, transition from coal to oil as another energy means restricts workers' ability to organize, demand rights or go on strike, which in turn influences the course of democratic rights and

[190] Latour, B. 2005, *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press Inc., New York, p. 301:71.
[191] Ibid., p. 71.
[192] Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*", New York: Verso, p.292:5.
[193] Ibid., p. 6.
[194] Ibid., p. 12.
[195] Ibid., p.38.

mass politics. Thus, it could be claimed that it has not been income from coal or oil that has dominated the then scene, but instead, the way how this carbon energy is distributed, organized, and brings its own network of relations. Likewise, one could allege that it was not for the sake of democracy or in the name of democracy that the industrialized countries gave the coal workers certain rights or reached a sort of compromise. But instead, it was the very characteristics or the nature of energy as coal or oil that, to a large extent, determined the flow or orientation of democracy or politics.

Overall, it could be claimed that both coal and oil have been important actors establishing and maintaining certain ties and relations. Resembling these two examples to some extent, water in my research example, has been an influential actant in a different sense which established and modified a series of relations among other actants in Darıbükü village only to be interrupted upon its transformation into a commodity with hydroelectric power plant.

To begin with, it has been the Köprüçay river[196] that had caused Yoruk-Turkmen people to choose that region to settle. Further relations established upon water, leading to the formation of a village, also reinforce this leading role and agency of water. This is enhanced with sayings of my informants including a journalist in his forties and who elaborates on environmental problems of the country. He said that water has been the determining force behind the wholeness, oneness of nature, people, and culture throughout the Anatolian region for centuries. He also added that thanks to water, the whole Anatolia teems with vast amounts and varieties of unique species of foods ranging from olive to almond, from wheat to figs. For Darıbükü village as well, the sayings of Mr. Uysal are of utmost importance in this direction. He said that if one is stuck in this region and has nothing to eat, the environment would offer them enough to survive. He added that one can find fish in the stream, lots of

[196] Köprüçay, ancient Eurymedon (Ancient Greek: Εὐρυμέδων) is a river that is situated in Antalya Province, Turkey, and empties into the Mediterranean. Retrieved from https://en.wikipedia.org/wiki/K%C3%B6pr%C3%BC%C3%A7ay_River

edible herbs or vegetables on the streamside. Thus, it was first water that led people to come together and establish a network of relations between them and the nature.

Moreover, remarks by a woman, aged 65 and having several health problems like diabetes and dry cough which have worsened upon her arrival to the *new village*, could highlight actancy of water in its nature. She said that "We used to wash our rugs by hand in the stream. We used to chat and do laundry with ashes[197] by the stream. Water was enough to maintain our lives." Moreover, the following sayings by Mr. Uysal could be made out in the same scope:

> Our yard was of 150 square meters. Maybe it was not that large, yet it was enough for my mom to engage herself, to feel good and enjoy. She used to plant potato and beans on one half and tomato and green pepper on the other half of the yard. Maybe these were not enough to maintain her needs, yet it was the joy, happiness and the feeling which kept her alive. She would seed, irrigate, and wait in excitement the time when seeds were to sprout and grow. She used to compare her vegetables and fruits with those of neighbors. Now dispossessed of water, she feels depressed, most often having nightmares at nights.

As could be understood by these expressions, it has been water that has established and directed culture and relations between villagers and the nature. In other words, water, as an influential non-human actant, has made other elements relied on itself and translated their will into a language of its own.[198] Likewise, water used to be the most important source of livelihood in the village up until the construction of dam and plant. Nearly all villagers had yards where they could grow their own vegetables, fruits and trees thereby meeting most of their needs. They produced these fruits and vegetables via traditional means not having a recourse to fertilizers or pesticides. Additionally, as the same woman whose health worsened upon their arrival to the *new village* said, especially berry, mulberry and age-old walnut trees, were of high quality and taste. They used to make mulberry molasses which are natural healing sources of high quality. Moreover, as the wife of the watchman stated and showed

[197] The ashes from wood heaters are quite effective cleaning materials which have no harm on nature as opposed to laundry detergents.

[198] Callon, M. & Latour, B. 1981, "Unscrewing the Big Leviathan: How Actors Macro-structure reality and How Sociologists Help Them to Do So" in K. Knorr et A. Cicourel (Eds.) *Advances in Social Theory and Methodology*, Routledge and Kegan Paul, Londres, p. 277-303:286.

me some of them, they used to grow many types of herbs such as thyme (with wide-ranging species), lemon balms, bee balms and so on. Women also used to grow and dry such herbs and sell them to spice stores. Overall, the village in the region had been an important hub for many species of plants some of which are now called endemic while the rest also play crucial role in people's lives. Hence, the village used to be almost self-sufficient thanks to the water in its nature. Nevertheless, when the water turns into an accountable, visible, and objectified good, in short, a commodity, the situation thoroughly changes.

5.3. Transformation of *Cultura Animi* into Numbers

As an implication of oil-based economy and democracy in the mid-twentieth century, there had been a shift from "economy as a process" into "economy as a thing" in the same century. The former one related to proper management of people and resources whereas the latter one centered upon proper circulation of money with economic knowledge. [199] Likewise, under this lied the battle in the early decades of the same century whether to start economics from natural resources and flows of energy or to organize that discipline around the study of prices and flows of money, the latter being the winner.[200] In this sense, due to the abundance and the low-cost of oil, the then economists were able to disregard earlier concerns over the exhaustion of natural resources, and thus instead represent material life as a system of monetary circulation which could expand without any physical limits.[201] Dating back to this, economics via technical representations, expert knowledge and calculations have come to play a leading role in transforming the nature and energy resources, be it either oil or renewables.

To be more precise, as suggested by Callon, scientific methods, theories, models are not descriptive but rather performative, actively involved in the constitution of the

[199] Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*, New York: Verso, p. 292:124.
[200] Ibid., p.131.
[201] Ibid., p.234.

reality that they describe.[202] In this regard, the calculative capacity and performativity of economics, statistics, tools, charts, algorithms and so on play a crucial role in constructing the reality they describe. For instance, through such *performation* once invisible and slippery fish with no property rights in Norway are transformed into accountable, identifiable fish having rights.[203] In my research example as well, the EIAs, with their calculative and performative capacity, have transformed once ungraspable, unaccountable water into hydropower which is now identifiable and accountable. The whole process has comprised a complex process where documentations, calculations, methodologies by experts, transformed water into an objectified thing, a commodity.

Within this scope, Callon makes out three main features as common denominators of the overall logic of "the market economy" and "neoliberalism" in anthropological models of most performative programs of economics. These firstly include disentanglement (re-entanglement) of things and humans; secondly centrality of individual human agencies; and thirdly the unequal distribution of calculative tools and capacities of agencies.[204] Among these three features, my research also unveiled a series of disentanglements or re-entanglements in the village as an implication of "economy as a thing." And in my multi-sited ethnography, it has been EIAs that led to these disentanglements or re-entanglements as detailed below and in the upcoming sub-chapters.

As pointed out by Callon, disentanglements lead to a world where entities are transformed into things and then goods that can circulate and which result in a deep divide between these reified things and human agencies that produce, exchange and consume them.[205] Here, it could be stated that a series of disentanglements have appeared both in the village and in Turkey when it came to developing "renewable" and "sustainable" hydroelectricity, where a deep divide strengthened between

[202] Callon, M. 2006, "What does it mean to say that economics is performative?" *CSI Working Papers Series*, p.58:10.
[203] Ibid., p.34.
[204] Ibid., p. 35.
[205] Ibid., p.42.

objectified goods and human or non-human entities. Among these disentanglements, the one water has undergone comes to the fore in this sense. Water, as an intrinsic part of nature and society, has been disentangled from the Köprüçay river[206], almost becoming a stranger to villagers who had been very part of it before. It has been reduced to megawatts, charts, or calculations, thus a commodity that could be exploited by the energy company to the utmost. In a similar fashion, villagers have been dissociated from their lands, water, homes, yards, environments only to be re-entangled into new uniform buildings of 50 or 70 square meters in 'the new village' where they have felt rather uncomfortable and upset. This, in turn, broke up people, some migrating to other cities while others having had to transfer to new standard houses since they do not have any other option. In this way, the EIAs, as socio-technical *agencements*[207], could be said to have caused the biggest disentanglement in the village.

Furthermore, as emphasized by Callon (1986), three researchers in St. Brieuc Bay in France acquire a privileged position of speaking in the name of masses where all actors, be them either fishermen, scallops, researchers, or scientific colleagues depend on a complex web of relations.[208] Researchers rely all their findings on a few diagrams and tables with numbers where scallops and fishermen are displaced to a conference room. They speak in the name of silent scallops, fishermen and base their research on rather a relatively short time they passed on the anchorage of scallops.[209] In other words, what once belonged to nature and to the social are now reduced to accountable numbers, which are external to the former two. For nature is unable to speak for itself and it can speak only with the help of tools of calculation and

[206] Köprüçay, ancient Eurymedon (Ancient Greek: Εὐρυμέδων) is a river that is situated in Antalya Province, Turkey, and empties into the Mediterranean. Retrieved from https://en.wikipedia.org/wiki/K%C3%B6pr%C3%BC%C3%A7ay_River

[207] Socio-technical agencements, as highly influential economic actors conceptualized by Callon, refer to collectives of human beings, technical devices, algorithms, tools and so on. See also: Hardie, I.& MacKenzie, D.2006, "Assembling an Economic Actor: The Agencement of a Hedge Fund", presented at the workshop "New Actors in a Financialized Economy and Implications for Varieties of Capitalism", p.49:1. Retrieved from http://www.sps.ed.ac.uk/__data/assets/pdf_file/0014/3416/AssemblinganEconomicActor.pdf

[208] Callon, M. 1986, "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay", in J. Law (Ed.), Power, action and belief: a new sociology of knowledge? London, Routledge, p.196-223:13.

[209] Ibid., p.14.

devices.[210] In this context, many examples in my research, as shown below, are precise enough to show disentanglements and this shift of *cultura animi* into numbers *vis â vis* silent water, trees, plants, homes, and silent people.

5.3.1. Water Turning into a Commodity

The water, as transformed and commodified into hydropower, was disentangled from its nature being subject to rather performative calculations *per se*. For instance, the EIA, for a better exploitation of water under the name of renewable energy, has limited *can suyu*[211], -which has no English equivalent and could be literally translated as "the amount of water to be left in a streambed necessary for the natural life to maintain itself" [212]- as up to 10%. That number was first added with an amendment on the By-Law in 2009 regulating Water Use Right Agreements by the General Directorate of State Hydraulic Works. This amendment brought forth the following sentence: "Water to be left to river mouth necessary for the maintenance of natural life shall meet minimum 10% of the average current of the latest decade of the projected area".[213] This change has consequently reified what was once fluid, unstable and unaccountable, and turned it into concrete numbers and amounts. Moreover, that rate of 10% that is left in a streambed after construction of hydroelectric power plant is found by both most of my informants and related experts rather insufficient for the nature and the livings to survive and maintain their lives.

Before proceeding with this, it would be of use to briefly dwell upon the term *can suyu* since it denotes and connotes multilateral meanings. According to the Turkish Language Association, it originally denotes "a little amount of the first water given to newly-planted seedlings." The term connotes another meaning which is "the water

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[210] Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*, New York: Verso, p. 292:233.

[211] "The amount of water to be left in a streambed necessary for the natural life to maintain itself". For further detail, see the related Environmental Impact Assessment (EIA) report, p. 367:313.

[212] See the related Environment Impact Assessment (EIA) report, p.367:313.

[213] By-law on Amendment in Water Use Right Agreements, 2009, August, *Official Gazette,* Retrieved from http://www.resmigazete.gov.tr/main.aspx?home=http://www.resmigazete.gov.tr/eskiler/2009/08/20090818.htm&main=http://www.resmigazete.gov.tr/eskiler/2009/08/20090818.htm

that is given to someone about to die".[214] The EIA report states *can suyu* as the "amount of water to be left in a streambed necessary for the natural life to maintain itself." However, it would not be wrong to allege that the latter meaning, water given to someone about to die, is much probable since water left in streambed under the name of *can suyu* is the water given to a stream or life which is about to die after the construction. What is more, despite the statement in the report for *can suyu* as "the amount of water necessary for the natural life to maintain itself" [215], the amount of that water may not be designated with such ease and certainty. Since such fixity and *a priori* decision may not comply with something like water which is fluid, fluctuating, unstable, unaccountable, shapeless and which exists in a complex web of relations with many other actors.

In this respect, one of my interviewees, the female activist aged between 40-45, and the president of a foundation in Turkey writing mainly on water and the right to water, stated that the ratio of 10% *can suyu* has no scientific ground and truth. She also touched on the disproportionate intervention of the EIA with its calculating capacity into nature, water in specific. Questioning who made up that rate of 10% as "*can suyu*", she said that one cannot determine the amount of water required for a stream to flow and to live. She added that each stream or river should be evaluated individually since they are unique and dependent on the amount of precipitation they receive, some showing unpredictable huge seasonal changes. She also stated the EIA reports do not take into consideration the very nature of stream or water but instead impose the standard of 10%. In short, as my informant suggested, reduction of water, which is rather fluid, fluctuating, unstable and unstandardized non-human entity, to the standard of 10% would mean nothing but the water given to a dying person as mentioned above.

Moreover, the same EIA had a recourse to numbers again by providing the energy company with the right to exploit that silent water for 49 years (in some cases 49+49

[214] See also the Turkish Language Association, Retrieved from http://www.tdk.gov.tr/index.php?option=com_bts&view=bts&kategori1=veritbn&kelimesec=60030
[215] See the related Environment Impact Assessment (EIA) report, p.367:313.

years) in congruence with the Water Use Right Agreements. And this was ensured with an amendment on the Turkish Electricity Market Act in 2001.[216] In other words, the EIA transformed the right to water which naturally belonged to stream, villagers, animals, tress and to natural and social world into numbers again. These numbers of 49+49 would mean devastation of rivers, water, and all livings during that time but neither of which is mentioned in the numbers or in the whole report. As one of my informants made out, such implementations would mean an end for rivers, decreasing the flow rate of rivers or streams. It is nothing but giving all water rights to private interests for such a long time. This, in turn, leads to ultimate disentanglement of water from its riverbed and nature only to be re-entangled in a rather different form, which serves for private benefits as a commodity. What is more, the EIA report ultimately commodifies and reifies the water and all its complex network of relations in the village as "among the run-of-river hydropower plants with an installed capacity of 25 Mwm and above"[217], which is now accountable and visible, yet which is external and even antagonistic to public and the social.

5.3.2. Homes, People, Plants, Trees Reducing into Numbers, and Standards

EIAs have also transformed once diverse homes into strictly defined buildings. As almost all villagers stated, they were rather disturbed by the transformation of their homes, barns, haylofts, yards, or outbuildings into solely 50 or 70 square meters of buildings. In this sense, Mr. Uysal suggested that "We used to have large hearths ("ocaklık" in their saying in Turkish) for cooking in the old homes, and we miss that taste of food now. You cannot take that taste from cooktop ovens now." Thus, old homes meant a lot for them. Likewise, transformation of a single yard -which plays a highly crucial role in villagers' lives- into numbers, corresponded to a metamorphosis of all fruits, herbs, trees, animals, oxygen, villagers' comfort, joy, and economy into a strictly calculated building of 50 square meters. In short, it has been the transformation and re-entanglement of their past, present and future into 50 square meters building.

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[216]İşlar, M. 2012, "Privatized Hydropower Development in Turkey: A Case of Water Grabbing?", *Water Alternatives* Vol. 5(2): 376-391:376.

[217] See the related Environment Impact Assessment (EIA) report, p.367: Early Charts on General Project Definition.

Inhabitants of the village could also be said to turn into numbers, being dissociated from homes and lands. Since there were only about 111 old people aged about 70 before the construction of dam and hydroelectric power plant, villagers said that they were easily ignored during the whole process. However, what these numbers miss out -past and culture of Yoruk-Turkmen people- is not mentioned in the EIA either.

Besides, reduction of endemic plants into the number of 10 in the project area by biologists and other experts and no mention of other important plants in the report could be seen as another oblivion to the cultural and the social. For instance, all endemic plants are defined in the Turkish EIA report in Latin terms such as *Delphinium fissum, Iberis cariga, Aethionema subulatum*[218] and so on which correspond to *özge hezaren*, *kayabeğendi* and *öz kayagülü* respectively in public use in Turkish. Moreover, almost all female informants[219] complained about the decrease or extinction of certain plants than those defined as endemic by the experts and related authorities. Likewise, it has not been only plants that were physically destroyed but also their sayings in public language like *oğul otu, eşek kekiği, öz kayagülü* etc. which have most probably their own stories unique to that culture. For instance, the woman in her sixties who looked so depressed and confused, mentioned about many species of thyme (kekik) including *dağ kekiği, eşek kekiği, nane kekiği* in Turkish, each of which is about to fade away in the village. She added that these plants used to constitute one of their main livelihoods and they enjoyed a lot collecting and drying them. Nevertheless, plants that are endemic and needs protection were reduced to the number of 10 while those plants such as *oğul otu* (bee balm) and many species of thyme that constitute one of the most important livelihoods in the village are left to extinction as well. Hence, these numbers and terms could be viewed as largely external or even antagonistic to what is experienced and prioritized among the cultural and social. In other sayings, these very numbers and terms have disentangled many silent plants (except "endemic" ones) and re-entangled even those endemic ones in terms and numbers which are alien to villagers and the nature though.

[218] See the related Environment Impact Assessment (EIA) report, p.367:109
[219] Mostly female informants because as I learned and observed in the village, it is mostly women that engage in plantation.

Additionally, similar reification applies to trees and forested lands which could be easily deforested once necessary technics are applied and permissions are taken with the EIA report. Defining forested lands as 902060 m^2 and forestless lands 248642 m^2 in the projected area for the whole Isparta city[220], the EIA report reduces all oxygen, animals, plants, microorganisms, rain clouds and carbon sinks within forested lands into rather strictly-defined numbers and terms, which could be easily ignored compared to the former unaccountable ones.

5.3.3. Public Participation Meeting in a Single Figure

Villagers' involvement in the whole transformative process is also reduced into a single photograph with an expression that "the public has been informed in detail and so on."[221] With public participation meetings ("ÇED Sürecine Halkın Katılımı Toplantısı" as stated in the EIA report in Turkish), villagers' involvement is also reified. The figure 5.1. below shows somewhat interest among people in Kasımlar town listening and some eve taking notes. However, this reduction or reification with a single photograph could help disguise what happens in practice. For instance, Mr. Uysal said that these public participation meetings have served for anything but informing them in the village. Open announcement was not made and just a few villagers went Kasımlar town to participate in the meeting, he added. Uysal also emphasized that they kept almost none of the promises made in the meeting. And he followed:

> They promised not to harm the nature and the environment yet, they left their debris into water, cut all the trees. All villagers have been subject to unbearable amounts of dust and noise. They promised in the meeting that humidification would be periodically conducted during the construction process. Yet, what they did in practice was to humidify merely the surrounding where they operated. So, villagers have had to bear such a torture.

[220] See the related Environment Impact Assessment (EIA) report, p.367:94.
[221] Ibid., p.94.

Figure 5.1. A photograph taken from the EIA report showing public participation meeting in a coffeehouse in the town Kasımlar of the city Isparta.

He also alleged that the energy company assured villagers that the whole process would be performed in congruence with scientific and technical calculations and all losses are met. In this way, the company could be said to make a perfect use of technical knowledge, to which villagers are distant. Additionally, the meeting is reduced into a single figure and expressed with a few sentences as follows in the report: "During the meeting, villagers' questions were answered, they were informed in detail and the project owner assured that people would not be injured…"[222] Hence, considering the difference between how public participation meetings were held in the village and how they were introduced in the EIA report with a single figure could tell a lot about how that figure could facilitate the management of the whole process. In other words, that single figure found the ground to speak for silent villagers and the silent village.

[222] See the related Environment Impact Assessment (EIA) report, p.367:352.

5.3.4. Culture and Health in Concrete Numbers

Culture as a term itself has been materialized and reduced to "cultural assets" via charts, which is easier to be governed. For instance, as the Table 5.1 shows, *cultura animi* has been transferred to a chart comprising a few assets in numbers such as "the number of libraries, books, archeological sites, cinemas, mosques, newspapers, quran courses etc."[223] Nevertheless, villagers' engagement with water, and with what is fluid, fluctuating, cultural and social deriving from their mutual dependence have been wholly ignored. What is more striking is that the EIA focused on the cultural assets of the whole Isparta city let alone specify the Darıbükü village or other villages individually.

Table 5.1. Basic Information on Culture of Isparta City[224]

Libraries	Books	Readership	Archeological sites	Museums	Museum visitors	Cinemas	Press	Newspapers	Journals	Mosques	Religious officials	Quran courses
39	352,592	275,891	276	2	39,242	2	25	29	25	664	633	65

Likewise, experiences of a villager, aged 72 and who used to be a tinsmith before his workplace submerged could also highlight disentanglement and reduction of culture into standards and numbers. As a predecessor job, he used to be a tinsmith ever since his childhood. He used to be very happy to sustain such a rare job and culture alike. His wife showed me some samples of tinned plates while most of materials and tinned plates had been covered under water upon the construction of dam and the plant. He sighed and added that his land was more than of 400 square meters including a yard, hayloft, and his tinsmith store each of which was now inundated. What he sighed most was the loss of his tinsmith store where a unique culture inherited from his predecessors faded away. Therefore, confining living space of once 400 square meters to standardized 50 square meters also meant reducing the gradual accumulation of that rare culture -even a single word of which is not mentioned in the EIA report- to strictly-defined numbers.

[223] See the related Environment Impact Assessment (EIA) report, p.367:143.
[224] Ibid. p. 143.

Last but not least, the EIA report, with such calculative and performative capacity, does not make any calculation or measurement when it comes to anxiety, hopelessness, fear and many sicknesses such as COPD and depression which appeared with the construction of hydroelectric power plant and dam especially among women.[225] And as Mr. Uysal expressed, villagers had been exposed to both physical and psychological illnesses which he could not even make the related authorities believe. Some had been more exposed and sensitive to dust and noise of heavy equipment during the construction of the dam and hydroelectric power plant. Yet, the report, drawing rather a positive image, does not even mention the possibility of such health problems and applies to complex numbers, formulas, or modellings again. For instance, Table 5.2. shows a relatively simple table compared to other technical representations in the report) octave band distribution of sound power level of heavy equipment for Kasımlar Dam and Hydroelectric Power Plant, and finds these levels tolerable and temporary for the village. To be more specific, the report reads that "Noise will be short-termed and end with the completion of the project"[226] with no particular emphasis about its damage on villagers' health and the environment.

Table 5.2. Octave band distribution of sound power level (dB) of heavy equipment for Kasımlar Dam and Hydroelectric Power Plant.[227]

Sources of Noise	Total	Sound Power Level (Db)			
		500Hz	1000Hz	2000Hz	4000Hz
Grader	103	97	97	97	97
Truck	105	99	99	99	99
Loader	104	98	98	98	98
Dozer	107	101	101	101	101
Roller	104	98	98	98	98
Sprinkler	103	97	97	97	97
Transit-mixer	104	98	98	98	98
Rock drill	107	101	101	101	101
Crusher	115	109	109	109	109
Sieve	105	99	99	99	99

[225] Especially among women because as I learned and observed in the village, it is mostly women that more engage in water, plantation, and the nature.
[226] See the related Environment Impact Assessment (EIA) report, p.367:261.
[227] See the related Environment Impact Assessment (EIA) report, p.367:253.

Hence, it could be alleged that these very numbers or formulas have reified, or in fact, largely disregarded what was experienced in the village. In other sayings, this transformation has mostly ignored what is social, cultural, and prioritized in the village. That is to say, *cultura animi*- which is alive, changing and fluid has been disentangled and reduced into rather strict, stable, and fixed numbers and standards, which are easier to ignore.

5.4. Depoliticization via Technical Representations

My research also reveals a depoliticization process via the technical or the scientific knowledge, or in brief, via "the economy as a thing". In other words, as Mitchell (2011) puts forward, nature is excluded from politics by practices of calculation and a new space is created to be governed by *economic* calculation and representation.[228] Moreover, emphasized by some of my informants, the divide between the technical and social, or distinction between experts and lay people is intentionally created so that the political could subtly infiltrate. In this sense, the following sayings of an academician on climate change and environmental policy, are of utmost importance to point out the subtle task of the political to depoliticize itself:

> I am not against science or technical knowledge in any way. These two could be of great help in understanding and calculating the implications of the Anthropocene and the extent of environmental degradation. Yet, the point you mentioned is of topmost importance. Technocratic perspective is used to suppress and disguise concerns deriving from technology itself both in Turkey and many other countries as well. For instance, if one opposes to certain implementations of technical knowledge due to environmental concerns, be it at factories, then authorities say "we are tackling this with our environmental engineers and technocrats. Our engineers build treatment facilities, our flues have filters, you have nothing to worry about." Such concerns cannot be solved with treatment facilities or a few EIA reports. There has to be policy making on a large scale.

As pointed out in these sayings, lay people, or environmentalists in my example, are distanced from the "technical knowledge" which is solely open to technocrats, experts or to the "Scientist" in the cave allegory of Plato.[229] Aa a result, technocratic

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[228] Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*, New York: Verso, p. 292:251.

[229] Latour, B. 2004, *Politics of Nature: How to Bring the Sciences into Democracy*, Harvard University Press, p. 321:11.

knowledge also leaves no room to question the political. Similarly, in *a priori* distinctions between nature and society, and between experts and lay people, technological controversies could provide the chances to rebuild more 'technical' forms of democracy.[230]

Furthermore, the EIA report per se, could be regarded as an important technical device opening room to be governed by economic calculation and representation. This could be seen in the underlying rationale for the initiation of such report both worldwide and in the country. For the EIA emerged as an attempt by the World Bank to improve its degrading image upon resistance movements against the construction of large-scale dams which were financed by the bank in 1990s.[231] Thus, EIAs could be said to appear as an "environmentalist" measure to disguise what is political through technical knowledge and calculations. For Turkey as well, the fact that the ministry approves nearly all reports, as most of my informants stated, could be seen as encouragement of more investments and projects rather than assessment of environmental impacts. What is more, an expression in the EIA report could clearly display the exclusion of nature from politics by technical calculations or justifications. The expression reads that "if Kasımlar Dam and Hydroelectric Power Plant has to be built on forested lands due to *technical reasons*, then it is supposed that there will not be any problem regarding forestry and public-forest relations to initiate the project."[232]. This statement, by itself, could help explain the rationale behind technical knowledge and expertise in the report. Additionally, the report finds the country rich in water resources, thereby seeing it obligatory to develop more hydroelectric power plants.[233] This, in turn, reminds the inclination of economics to see nature as an abundant energy source and thus to speak for it.

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[230] Callon et al.in Mitchell, T. 2011, *Carbon Democracy: Political Power in the Age of Oil*, New York: Verso, p. 292:241.

[231] Erensü, S.2016, "Neoliberalleşmenin Doğası, Doğanın Neoliberalleşmesi: Su-Enerji Rabıtası Üzerinden Neoliberalizm ve Müphemlikleri" [Neoliberalization of Nature, Nature of Neoliberalization: Neoliberalism and Its Obscurities Through Water-Energy Nexus] In S. Erensü et al (eds.) *Sudan Sebepler: Türkiye'de Neoliberal Su-Enerji Politikaları ve Direnişler* [*Reasons of Water: Neoliberal Hydro-Energy Politics and Resistance in Turkey*] Istanbul: İletişim, p.528:50

[232] See the related Environment Impact Assessment (EIA) report, p.367:94.

[233] See the related Environment Impact Assessment (EIA) report, p.367:12.

Remarks uttered by another of my informants, an activist aged between 40-45 and the president of a foundation in Turkey writing mainly on water and the right to water, could be regarded in the similar direction. Largely criticizing Carbon Capture and Storage (CCS) technology[234], she said that these techniques have been proposed and defended by coal plants for years, adding that Turkey's current Ministry of Energy and Natural Resources legitimizes further coal-based development through promises to import these techniques to the country. She also said that there does not exist such techniques at work, be it either in Turkey or the whole world. In this way, the minister tries to "green the coal" through promises of technical development and technical knowledge, she alleged.

In the same vein, during her ethnographic fieldwork on the development of a clean and renewable energy sector at Abu Dhabi,[235] Günel (2012) points out the controversies and energopolitics deriving from the unfolding of the Carbon Capture and Storage (CCS) policies. And she makes out the completely different stances between environmentalists and oil companies towards these techniques.[236] Hence, she pays attention to usage of such highly disputable techniques as a means of technical knowledge thanks to which more fossil fuels could be "greened".

This could also be seen in the depoliticization of the climate change issue by the Turkish mass media. Confining the issue to diplomacy and international politics and to a post-political framework of degraded nature and approaching catastrophe could be seen as a coping strategy.[237] In this respect, it could also be suggested that science works discursively towards ends that are as much 'political' and 'social' as they are

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[234] "*CCS technology operates by obtaining carbon dioxide from large industrial compounds, such as coal plants, carrying it in solid, liquid or gas from to storage sites, and injecting it into geological formations such as deep saline aquifers, unmineable coal seams, or maturing oilfield, kilometers below the ground.*" For further detail see Günel, G. 2012, "A Dark Art: Field Notes on Carbon Capture and Storage Policy Negotiations at COP17", Ephemera: Theory and Politics in Organization, Vol. 12 (1/2).

[235] Günel, G. 2012, "A Dark Art: Field Notes on Carbon Capture and Storage Policy Negotiations at COP17", Ephemera: Theory and Politics in Organization, Vol. 12 (1/2), p.33-41:33.

[236] Ibid., p. 35.

[237] Uzelgun, M.A.& Şahin, Ü. 2016, "Climate Change Communication in Turkey", Climate Science, Oxford Research Encyclopedias, Retrieved from http://climatescience.oxfordre.com/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-466?rskey=WNUxDE&result=5

'scientific'.[238] When it comes to the EIA report again, attributions to diplomacy and international politics stand out as a justification of further development of hydroelectric power plants. For instance, it is stated that "Hydroelectric power plants are among world-wide preferences of energy resources since they have low operational costs and do not have serious impacts on the environment".[239] Likewise, another statement reads that "Considering incentives of the EU for these plants, it is essential that hydroelectric power plants are further developed for a sustainable national development program."[240] However, the question how such plants are put into practice in the country (in some cases the number of such plants reaching 14 in a single stream) needs urgent answers. Overall, basing on both the EIA report and the results of my multi-sided ethnography, it could be alleged that economic representations or technical knowledge have deepened the *a priori* distinction between the social and the technical, and between human and non-human entities. This has, in turn, come to serve to the very favor of the political via depoliticization.

[238] Blok, A. 2010, "Divided Socio-Natures: Essays on the Co-construction of Science, Society, and the Global Environment", PhD Thesis, Department of Sociology, University of Copenhagen, p. 317:17, Retrieved from: http://www.dasts.dk/wp-content/uploads/2010/09/Anders-Blok-2010.pdf
[239] See the related Environment Impact Assessment (EIA) report, p.367:12.
[240] See the related Environment Impact Assessment (EIA) report, p.367:13.

CHAPTER 6

CONCLUSION

The Anthropocene has made it apparent that humans have disrupted and exploited the environment. Their impacts show themselves in various forms including melting glaciers, stronger hurricanes, storms, rising sea temperatures, the extinction of animals, atmospheric changes, and the problems that accompany these. Even though it is a disputed term to be included as a formal geological time, it proves influential in capturing the impacts of human-made changes on the environment and the climate. Likewise, basing on privileged ontological status of humans and human agency, one could rightfully allege that the term could also help one re-understand the material and ethical entanglement of humans and non-humans.[241]

In this direction, with a relative increase in the awareness of the concept of the Anthropocene, some measures have been taken both at home and abroad. However, this increasing awareness has not led to a successful implementation of these measures and attempts. As my multi-sited ethnography has shown, it has been sometimes the efforts and measures taken under the name of renewable energy or climate change mitigation that have actually worsened the impacts of the Anthropocene. As in the case of Darıbükü, a hydroelectric power plant and dam, which are theoretically renewable and sustainable energy resources, become unrenewable and unsustainable in practice. This irony is the result of a network of actors that mostly ignore non-human entities and what is social and cultural. To be more precise, the question arises how could the nature sustain itself when numerous hydroelectric power plants, sometimes as many as fourteen, are built in a single stream? Or could the nature sustain its life when urgent expropriation decisions are put into place in a fiercest manner where the culture and the social fall to deaf ears? Or more tragically, the question arises whether these attempts have served for a

[241] Glabau, D. 2017, "Living in the Anthropocene: Course starts March 8th", Retrieved from https://danyaglabau.com/tag/anthropocene/

more sustainable and greener environment, or else more economic growth and development?

The thesis has aimed to answer these questions on the basis of my multi-sited ethnography, the findings of which I detail in Chapters 4 and 5. The Chapter 4 stressed the overt or covert permeation of energopolitics or energopower, which appears in my research as the governing of politics over and through energy in the Anthropocene. Within this context, energopower and energopolitics, -as a modality of modern power or as a genealogy of biopower-, revealed the interplay of multiple actors be it either the state, the energy company, villagers, technical knowledge, and network of relations among them. Similarly, the second part of the multi-sited ethnography, Chapter 5, dwelt on water both before and after its disentanglement or commodification. To be more precise, the chapter underscored how water as a full-grown non-human actor established and modified other actors and the culture in the village, and how this was impaired by its commodification or reification as hydroelectric power plant. During this commodification, the EIAs, as socio-technical *agencements*, played a leading role. In this sense, the EIAs reduced water and what is social and cultural into strictly defined numbers, terms, charts, or statistics through technical and economic representations and calculations. In this way, the reports revealed the depoliticization process through technical knowledge which also deepened the *a priori* distinction between human and non-human entities, and between the social and technical.

As for the limitations of the thesis, the difficulty of reaching related people or sites comes to the fore since most of the experts or scholars dealing with renewables or climate change did not answer my phones or e-mails. This, consequently, has an indirect effect on the results of my multi-sited ethnography. Moreover, another difficulty, which arise from my research, has been the combination of two different scopes. While one of the main theoretical frameworks elaborated on anthropogenic interventions into the environment within the context of energopower and energopolitics in the Anthropocene, the other one mainly proposed the role of non-human entities within the scope of Actor Network Theory (ANT) in Science and

Technology Studies (STS). Apart from being a difficulty, I believe, this very combination of two different scopes further enriched the theoretical framework of the thesis.

This thesis aims to promote a better recognition and grasp of the Anthropocene, "the epoch of humans". Considering the huge gap in Turkey in this sense, this thesis offers original findings and elaborations within the scope of the Anthropocene, non-human entities, the social-technical divide and energopolitics with vivid examples and experiences of villagers and other informants. Hence, the thesis, feeding from Actor Network Theory (ANT) and thus Science and Technology Studies as well, alleges to be among the first studies in Turkey. It also offers food for further thoughts and researches which are critically important and necessary for the future as well. There are many issues that are taken for granted but that deserve to be analyzed or reanalyzed in a country aiming at increasing its renewables. For instance, for future researches, quests and experiences of wind and solar power in the country could be studied in a similar scope. And I think it is specifically important to reexamine and re understand what happens to non-human entities, (be they water, animals, plants etc.) or to the social or the cultural, which have mostly been ignored. To put it differently, it seems critically important and urgent to give non-humans or what is social and cultural the place they deserve *vis â vis* the privileged ontological status of humans and human agency.

Finally, I wholeheartedly believe that this would create greater awareness and sensitivity towards "solutions" presented for the Anthropocene. For it is not only the renewable attempts or efforts taken in the Anthropocene but also the policies, trajectories, and the way how they are implemented that really matter and govern the whole process. And as exemplified with my research example, the way they are performed could in practice run counter to the very target of a green, clean and a sustainable world. That is why, the Anthropocene, where humans' interventions and disruptions are so keenly felt, requires us to reconsider and reevaluate how attempts and efforts are put into practice when it comes to climate change mitigation or renewable energy efforts.

Lastly, I believe that the thesis will contribute to the budding literature of political ecology and the almost non-existing literature on the Anthropocene context in Turkey. More specifically, with a fresh knowledge deriving from my multi-sited ethnography, it will also help (re)understand the extent of excessive anthropogenic interventions on the environment that have been conducted in the name of renewable energy. Hence, in brief, it intends to promote a (more) mindful world and to underscore the fact that there is still no Planet B.

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