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Gender As The Missing Component In The Turkish Climate Change Policies And Academic Papers

İklim Değişikliği Politikalarının ve Akademik Makalelerin Toplumsal Cinsiyet Perspektifi Açısından Sorgulanması

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Abstract: Turkey is extremely vulnerable to the adverse consequences of climate change due to its location. The effects of climate change are not gender neutral and women are more vulnerable than men to adverse effects of climate change. Although the implications of gender in relation to climate change has been extensively researched in the Global South and has started to emerge in the Global North, gender dimensions and analysis of climate change is absent from public policy discussions and academic papers in Turkey. This paper has a dual aim of revealing the gender invisibility with regard to climate change in academic literature and in the national climate change policies in Turkey as well as of increasing the academic understanding of gender dimensions of climate change to inform the public policy in the country. To this end, a combination of broad systematic literature review and document analysis method were used. In addition, decision-making bodies were analysed. I argue that the absence of critical gender analysis in policy and research in relation to climate change reduces the country's ability to develop adequate adaptation and mitigation strategies since the impacts of climate change can exacerbate existing inequalities with regard to gender. This failure may weaken Turkey's positions in the international climate change politics and the harmonisation with the European Union.

Keywords: Climate Change, Gender, Turkey, Environmental Policies, Gender Mainstreaming.

Öz: Türkiye hassas bir iklim kuşağında olduğu için iklim değişikliğinin olumsuz etkilerine maruzdur. İklim değişikliğinin etkileri toplumsal cinsiyet ekseninde farklıdır. Bu farklı etkiler, güney yarım küre ülkeleri diye de adlandırılan ekonomik açıdan gelişmemiş ülkelerde yeterince araştırılmış ve genelde kuzey yarım kürede bulunan gelişmiş ülkelerde araştırılmaya başlanmış olmasına rağmen, Türkiye'de hem ulusal iklim değişikliği politikalarında hem de akademik çalışmalarda ihmal edilmektedir. Bu makale, bu eksikliği ortaya çıkarmayı ve araştırmayı ve iklim değişikliğinin toplumsal cinsiyet eksenindeki farklı etkilerini aydınlatmayı ve böylece ilgili politikalara yön vermeyi amaçlamaktadır. Bunun için, akademik makaleleri kapsayan sistematik literatür taraması yapılarak ayrıca ulusal iklim değişikliği politika belgeleri ve karar alma mekanizmaları analiz edildi. Toplumsal cinsiyet analizlerinin iklim değişikliği politikalarında ve araştırmalarında ihmal edilmesi, ülkenin iklim değişikliğine uyum ve etkilerinin azaltılması politikalarının

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gücünü azaltmaktadır, çünkü iklim değişikliği toplumsal cinsiyet farklarını ağırlaştırabilir. Ayrıca bu ihmal, Türkiye'nin uluslararası iklim değişikliği politikalarında konumunu ve Avrupa Birliği ile uyumunu da zayıflatabilir.

Anahtar Kelimeler: İklim Değişikliği, Toplumsal Cinsiyet, Türkiye, Çevre Politikaları, Ana-akımlaştırma.

Genişletilmiş Özet

Türkiye orta kuşağın güneyinde subtropikal bölgede Ekvator'a yakın konumlandığı için iklim değişikliğinin olumsuz etkilerine maruzdur. Bu nedenle iklim değişikliğinin etkileri son yıllarda daha belirgin hale gelmiştir. İklim değişikliğinin olumsuz etkileri arasında kuraklık, olağanüstü hava olayları gibi doğrudan doğruya iklime bağlı olan faktörler ve arazi kullanımındaki değişikler ile sosyoekonomik ve çok boyutlu eşitsizliklerden doğan ama doğrudan iklim değişikliğinden kaynaklanmayan etkiler de bulunmaktadır.

İklim değişikliğinin kadınlar ve erkekler üzerinde etkileri farklıdır (cinsiyete özgü sonuçlar) ve kadınlar bu etkilerden erkeklere göre daha orantısız etkilenmektedirler. Bu durumun nedenleri arasında kadınların toplum, üretim ve ev yaşamına dair toplumsal cinsiyet rolleri bulunmaktadır. Ayrıca, kadınların sosyal, siyasal ve ekonomik marjinalleşmesi bu kırılganlıkta önemli rol oynamaktadır, çünkü kadınlar iklim değişikliğine uyum ve değişim etkilerinin hafifletilmesindeki araçlar olan eğitim, bilgi ve kaynaklara erişimde erkeklere göre daha dezavantajlıdırlar. Dolayısıyla bunlar üzerindeki kontrolleri de daha azdır. İklim değişikliğinin etkilerinin azaltılmasında adaptasyon ve risk yönetimi stratejileri kritik rol oynamaktadır. Bu nedenle kadınların karar alma mekanizmalarında yeterince temsil edilmesi ve kendilerini etkileyen kararlarda söz sahibi olmaları gerekmektedir. Bunun yanı sıra, iklim değişikliğinin yoksul ve marjinal gruplara etkisi daha fazladır. Çünkü, çevre sorunlarına ve bunun getirdiği etkilere en açık ve savunmasız olan kişiler yoksulluk içinde yaşayan ve uyum sağlamada politik, ekonomik ve örgütsel kapasiteye daha az sahip kişilerdir.

Öte yandan, akademik araştırmaların yeni bilgilerin üretimine, dönüşümüne ve yaygınlaştırılmasına katkısı azımsanamaz. Akademik araştırmalar aynı zamanda, strateji ve politika belgelerini de etkilemektedirler. Ülkemizde kadın araştırmaları merkezlerinin sayısının yüksek olması ve iklim değişikliğinin Türkiye'de giderek artan bir akademik araştırma alanı olduğu göz önüne alındığında, iklim değişikliğinin cinsiyet boyutlarının akademik tartışmalara dahil edilmesi beklenmelidir. Bu farklı etkiler, güney yarım küre ülkeleri diye de adlandırılan ekonomik açıdan gelişmemiş ülkelerde yeterince araştırılmış ve genelde kuzey yarım kürede bulunan gelişmiş ülkelerde araştırılmaya başlanmıştır.

İklim değişikliği ve toplumsal cinsiyet bağlantısının Türkiye'de ulusal iklim değişikliği politikalarında ve akademik çalışmalarda araştırılması önem taşımaktadır. Bu makale, bu eksikliği ortaya çıkarmayı, iklim değişikliğinin toplumsal cinsiyet eksenindeki farklı etkilerini aydınlatmayı ve böylece ilgili politikalara katkı sunmayı amaçlamaktadır. Bu bağlamda, akademik makaleleri kapsayan sistematik literatür taraması yapılmış, ayrıca ulusal iklim değişikliği politika belgeleri ve karar alma mekanizmaları analiz edilmiştir. Bu araştırma sonucunda, iklim değişikliği ile ilgili makale sayısının hızla artmasına rağmen, iklim değişikliğinin toplumsal cinsiyet eksenindeki farklı etkilerinin ülkemizdeki yayımlanan akademik çalışmalarda ihmal edildiği görülmüştür. Ayrıca, araştırma kadınların politika ve ilgili bakanlık pozisyonlarını da kapsayan karar alma mekanizmalarındaki sayılarının oldukça sınırlı olduğunu ve Türkiye'de toplumsal cinsiyet anaakımlaştırma (Gender Mainstreaming) stratejisinin olmadığını; dolayısıyla bu konuda var olan eksikliğin giderilmesine yönelik bir çalışmanın olmadığını göstermektedir. Bunun yanında, Birleşmiş Milletler İklim Değişikliği Çerçeve Sözleşmesi'ne göre, Türkiye'nin Birleşmiş Milletler'e sunduğu Ulusal Bildirim Belgeleri ve İklim Değişikliği Uyum Stratejisi ve Eylem Planları ve Strateji Belgeleri araştırıldığında, iklim değişikliğinin toplumsal cinsiyet eksenindeki farklı etkilerinin ülkemiz için somut anlamda analizinin yapılmadığı ve bu konuda yapılan atıfların da yüzeysel ve sembolik olarak kullanıldığı ve bu konuda herhangi bir eylem planının olmadığı görülmektedir. Toplumsal cinsiyet analizinin, iklim değişikliği politikalarında ve araştırmalarında ihmal edilmesi, ülkenin iklim değişikliğine uyum ve etkilerinin azaltılması politikalarının gücünü zayıflatmaktadır. Sonuç olarak bu ihmal iklim değişikliği nedeniyle toplumsal cinsiyet farklarını ağırlaştırabildiği gibi Türkiye'nin uluslararası iklim değişikliği politikalarında konumunu ve Avrupa Birliği ile uyumunu da zayıflatabilir.

Introduction

Turkey is an important country due to its strategic geopolitical position between Europe and Asia and the size of its economy¹ and population. As a Muslim-majority country, it has a unique position since it was re-established in 1923 as a secular modern state. Major political, social and economic reforms were introduced until 1938 by M. K. Atatürk to transform the country where secularism and liberation and emancipation of women played a central element in the reforms (Inan, 1982) when basic women's rights were considered as radical in the West (White, 2003). Furthermore, the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) was signed by Turkey and the country committed itself to achieve equality between women and men as well as to empower women in decision making. Turkey is also expected to

¹ Turkey is among the largest trade partners of the European Union (Eurostat 2020).

harmonise its national legislation with the European Union (EU)'s acquis as part of the accession process and the EU promotes strong climate action.

Turkey is extremely vulnerable to the adverse consequences of climate change since the consequences of climate change have been predicted to be more severe in the Eastern Mediterranean Basin (MedECC, 2019). It has been acknowledged that climate change related risk assessments should include exposure and vulnerability and it 'is important to include the widest possible range of impacts' (IPCC, 2014: 13). Since differential risks are greater for disadvantaged people (IPCC, 2014), adaptation to the climate change requires evidence-based risk assessment to inform public policy (UNFCCC, 2019). Gender plays an important aspect since it is known that the effects of climate change on women and men vary (UN, 2019a). The factors responsible for the gender-specific characteristics of climate change are linked to historical and existing gender inequalities² and discrimination (UN, 2019a). Hence, it is vital to conduct gender analysis and understand climate change through gender and power relations because poor and marginalised people have less ability to cope with its consequences (Kronsell, 2017).

Gender has been identified as an important element in research (Coltrane, 2000). Moreover, integration of gender considerations in climate change related issues is vital (UNFCCC, 2020). Although inequalities are the outcome of different factors including location, experience, and power relations and intersectionality³ plays an important role in inequities including age, race, disability, class, and religion in climate change policies, this paper focuses on gender because gender issues seems to neglected in the national climate change policies in Turkey.

Academic papers contribute to the production and dissemination of knowledge and academic research is likely to influence policy making (Beck et al., 2019; Boa et al., 2010). The gender related implications of climate change have been extensively researched worldwide, but gender dimensions and analysis of climate change are absent from the public climate change policies and academic literature in Turkey.

This paper has a dual aim of revealing the gender invisibility with regard to climate change in academic literature and in the national climate change policies in Turkey as well as of increasing the academic understanding of gender dimensions of climate change to inform the public policy in the country. I argue that the neglect of gender aspects⁴ in relation to climate change reduces the country's ability to respond and adapt to the consequences of climate change, particularly taken

² Gender inequalities can be measured by certain indicators including labour market participation, involvement and empowerment in decision making (UNDP, 2020).

³ Which is the interplay of gender with other vectors of disadvantage.

⁴ It covers women's involvement as well as a recognition of the gendered impacts of climate change.

into account that women have been identified as important agents of both adaptation and mitigation to climate change (UN, 2018b).

The following section will provide the methodology and an overview of the gendered effects of climate change, followed by the literature review section on climate change to reveal the invisibility of gender in academic papers as well as in the national public policy documents in Turkey.

Methodology

In order to explore the neglected gender aspects both in climate change policies and academic research, a combination of broad systematic literature review and document analysis method were used. Firstly, a literature search process was conducted in the peer reviewed Turkish journals using the databases Google scholar, DergiPark, Web of Science Core Collection published between 1975 – 2020⁵ in English and Turkish as well as YÖK Akademik website. This was done to examine Turkish academic literature on climate change in relation to gender. I used the search terms including 'climate change, gender, Turkey' and 'climate change, gender'⁶ in Turkish and English. Secondly, I examined the climate change related papers, in Turkish and English, to see whether they included any of the term 'woman', 'gender', 'gender inequalities', 'Gender Mainstreaming'. Moreover, I also analysed the official Turkish national policy documents on climate change, in terms of gendered implications of climate change, published by the Ministry of Environment and Urbanisation.

In addition, I examined the gender compositions of decision-making bodies in the country since I believe that the information on gender representation in policy making can also shed a light on the existing and future development of climate change policies in the country.

Gender Dimensions of Climate Change

Climate change influences lives of people and it is known that the consequences of climate change vary for women and men (gender-specific consequences) with regard to vulnerability as well as adaptive capacity due to women's roles in society, production and domestic life. The social, political and economic marginalisation of women plays an important role in vulnerability. Adaptation and mitigation to climate change are closely linked to factors including wealth, education, skills, information, access to and control to resources as well as to the decision-making process.

⁵ Until 1 August 2020.

⁶ İklim değişikliği, toplumsal cinsiyet, Türkiye.

Climate change hits the poor and marginalised people the hardest (CEEa, 2009). The impacts of environmental problems are heaviest on people who have less political, economic and organisational capacity to adapt. Women particularly women-headed households, are poorer as a result of various factors including unequal opportunities in education/career; gendered differences in women's labour market participation, gender pay gaps and lower pension entitlements (OECD, 2020). Because women are more likely to have jobs that are at the lower end of the pay scale, they have less resources and influence over family finances. Particularly, female-headed households are more likely to live in poor-quality housing (European Union, 2015), therefore they are at greater risk when their homes are threatened. In Turkey, gender gaps remain large due to patriarchal relations, which are reflected in labour force participation, educational attainment and decision-making (OECD, 2018). In comparison to the OECD average of 64%, in Turkey female labor force participation is very low (29,3%) and women are still 20% less likely than men to attain upper secondary (lise) or tertiary degrees (OECD, 2018). Therefore, the possibility of Turkish women to live below 50% of the median income is higher than men (UN, 2020) which makes particularly female headed households more vulnerable.

It is known that gender inequalities and relations play a vital role with regard to vulnerability and adaptation to climate change (UN, 2019). Despite significant variation in levels of so-called growth and development between rich and poor countries, women have remarkably similar roles, responsibilities and patriarchal experiences worldwide, including gendered divisions of labour by which women are usually the primary caregivers (WEF, 2020). Although it could be argued that gender is constructed differently in different places, women face gendered division of domestic labour in all societies. As a consequence of increased extreme weather events (heavy rain, storms, flooding, heatwaves and droughts epidemics) caring responsibilities are intensified as in extraordinary times the number of people in need increases. Consequently, women's domestic labour and care giving responsibilities increase. Women are also dominated in caring occupations such as nursing and therapy. An analysis conducted in more than 100 countries clearly shows that 70% of workers in the social and health sector⁷ are women (Boniol et al., 2019; Ilkkaracan, 2016), where the workload during extreme events intensifies. These workers face an elevated risk as it has been reported that 72% of health workers in Spain and 66% in Italy that were infected with COVID-19 were women (UN Women, 2020). In Turkey, during the recent pandemic, healthcare workers have faced increased violence from the relatives of COVID-19 patients as they demand more services including visiting rights (Birgun, 2020).

⁷ In Turkey, the percentage of female students in the health sector related studies is %78,5 (YÖK, 2020).

Extreme weather events may also provide a challenging task for women when it comes to secure food and clean water for their dependants and restricted mobility and gendered practices increase exposure to risk (WHO, 2012). The research undertaken from 1981 to 2002 in 141 countries showed that due to disasters, women's life expectancy decreases more than men's (UNDP, 2010). Gendered social factors increase women's vulnerability to disasters among other things due to socio-cultural norms and restricted livelihood options. As an example, higher number of women and children died in the Van⁸ earthquake in 2011, which occurred at daytime on Sunday, due to the social norms that force women to stay at home (Işık et al., 2015). Women also suffer disproportionately during post-disasters if a gender perspective is not integrated and special needs of women and girls including those of pregnant and breast-feeding women are not met (Chindarkar, 2012; UNDP, 2016).

Although vulnerability to climate change goes beyond biological differences between women and men, climate change affects men and women's health differently. Women face increased health consequences including stress-related illnesses, an increased vulnerability to infectious diseases, and risk of malnutrition. For example, pregnant women have certain health and nutritional demands that make them more vulnerable to diseases such as vector-borne diseases (Enarson and Chakrabarti, 2009) and climate related risks including heat increases 'propensity for hypertensive crises and stillbirth and during climate-related disasters, women suffer disproportionate mortality, and survivors experience decreased life expectancy' (Sorensen, Murray, Lemery, & Balbus, 2018: 2-3).

It has been documented that regardless of whether they are located in the Global South or North, women face increased domestic and sexual violence during emergencies and disasters (Sanz-Barbero et al., 2018) as it was reported after the Marmara earthquake in 1999 (Pincha, 2009). A growing number of calls for domestic violence helplines and shelters across the world and in Turkey have also been observed during the COVID-19 pandemic lock down in 2020 (UN Women, 2020; Sözcü, 2020).

Climate Change And Turkey

The effects of climate change have been more evident over the past years in Turkey. The impacts arise from direct and indirect climate related hazards like extreme weather events, vulnerability from non-climatic factors including land use change, socio-economic and multidimensional inequalities (IPCC, 2014). While in the Mediterranean basin the temperature is expected to increase 1°C to 2°C, in Turkey the average increase is estimated to be higher, namely

⁸ Southeastern Turkey.

2.5°C to 4°C, over the period from 2071 to 2100 compared to the baseline period from 1971 to 2000 (EEA, 2017).

The adverse effects of climate change have been experienced in diverse ways in Turkey, including unpredictable and extreme weather events including floods, frosts, hails, droughts and heat waves. Turkey is highly vulnerable to water resources depletion, land degradation, forest fires, loss of biological diversity and desertification (Türkeş, 2018; Bucak et al., 2017; Aktaş, 2014). Although annual number of precipitation days and rainfall is expected to be reduced, the intensity and frequency of rainfall is anticipated to increase, which will lead to water shortages (water insecurity) as well as water-related hazards such as severe and frequent floods (Turkes et al., 2020; Yilmaz, 2015). In 2017, the damage due to the floods and landslides in the Mediterranean and Black Sea regions was around 2 billion USD (UNDP, 2020a). Substantial adverse impacts will increasingly be seen on the agriculture, tourism, energy and transportation sectors (OECD, 2019). As an example, the agriculture sector will be impacted due to the climate change induced impacts and potential rise in food insecurity is expected due to considerable losses of crops (Gürsoy, 2020; Dudu and Çakmak, 2018). Moreover, having 8333 km of coastline, the sea-level rise will impact the coastal zones, marine ecosystems and freshwater resources adversely (Özyurt and Ergin, 2009; Demirkesen et al., 2008). Since the vast majority of the country's Gross National Product (GNP) is produced in the cities located at the coastal strip including Marmara, the related loss and adaptation costs are expected to be high on the economy (Karaca and Nicholls, 2008).

Given that environmental factors have a significant effect on migration, and climate change shapes patterns of migration (Kaczan and Orgill-Meyer, 2020), worldwide more than 25 million environmental refugees are expected to be moving within their countries or across borders by 2050 to escape the consequences of severe environmental problems including climate change (IOM, 2020). Gendered dimensions of migration are widely accepted. It is known that exposure to risks and threat are high for women migrants (Mahon, 2020; UNHCR, 2020). Turkey has already been facing mass migration problem as a transit route for irregular migrants to the western European countries due to its proximate location to the conflict and natural disaster-prone areas. Climate-driven migration is anticipated to increase within and outside Turkey, particularly due to climate-induced displacement from the Middle East and Sub-Saharan Africa as a direct consequence of environmental degradation, sea level rise as well as from political and social unrests triggered by climate change (Linares et al., 2020; Lieven, 2020; Bozoglu et al., 2019; Gorguner et al., 2019).

Moreover, past disasters have proven that it is important to involve women in disaster relief. As an example, the absence of women's consultation in the planning and construction of shelter houses after the 1999 Earthquake in the Marmara Region in Turkey resulted in inappropriate temporary housing facilities for families (Yonder et al., 2005).

The following section will review the academic literature on gender and environment.

Gender And Climate Change In Scientific Discourse

Scholars of ecofeminism formulated the connections between gender and environment in the 1970s (D'Eaubonne, 1974; Daly, 2016; Griffin, 1978; Merchant, 1996; Shiva, 1988). They explored a number of issues including how gender inequality plays an important role in shaping environment-human relations, environmental degradation and natural resource use (Goldman and Schurman, 2000). Ecofeminists suggest that the exploitation of nature and the domination and oppression of women are interlinked (Agarwal, 1992; Plumwood, 2002; Shiva, 1988) through a common dominant world view of hierarchy and exploitation by a privileged elite. Ecofeminism provides insights into that environmental degradation is not gender neutral which needs to be taken into account by decision makers.

Ecofeminist philosophy influenced other theories of environmental feminism including feminist political ecology (FPE), which has evolved since it emerged in the 1990s. FPE explores power relations with gender aspects. By analysing relations between nature and society through the gender lense, FPE offers a significant contribution to gender issues. It has addressed a number of issues including ecological, political and economic relations of power such as resource distribution; the differential challenges and opportunities that women and men have; scales; migration; intersectionality; environmental injustices (Elmhirst, 2015; Nightingale, 2006; Rocheleau, Thomas-Slayter & Wangari, 2013). Moreover, materialist ecofeminism (Barry, 1998; Mellor, 2000) provides ways of understanding the gender division of labour as well as, by offering a discussion on the low value jointly accorded to women and nature, the interlinkages between the domination of the environment and women.

Worldwide gendered impacts of climate change have begun to be well established in academic research. A wide range of evidence-based literature in the Global North and Global South shows the importance of gender responsive climate change policies. Scholars have examined factors including, as a power relationship, how gender impacts strategies in relation to climate change (Kronsell, 2017); the gendered dimensions of climate change and the public policy issues (Buckingham & Külcür, 2017); climate change impacts on gender relations (Nelson et al., 2002); adaptation and vulnerability (Kendall and Spang 2020; Jerneck, 2018); activism and climate change (Geiger and Swim, 2018) and climate justice (MacGregor, 2019).

In Turkey, as an interdisciplinary field of academic study 'gender and women's studies' trace back to early 1990s, when women's studies were accepted as an independent academic discipline after the formation of the Women's Studies Centre (Kadın Araştırmaları Merkezi) at University of Istanbul (Parmaksız, 2019). Currently, there are more than 85 Women's Studies Centres at universities in Turkey which have the potential to contribute to academic feminism.

Given the high number of women's studies centres and considering that climate change is a growing field of academic enquiry in Turkey, it could be expected gender dimensions of climate change to be included in the academic discussions. I have used a systematic literature review to test this assumption. A broad literature search in Turkish peer reviewed academic papers on climate change in Turkish and English was undertaken to see whether gendered implications of climate change have been explored. The first search terms were 'climate change, gender, Turkey' and 'climate change, gender'. The search results showed almost no relevant articles (except Külcür et al., 2019) for the search criteria 'climate change, gender, Turkey'. The search terms 'gender and climate change' showed only few papers including (Talu, 2016) where she provides an overall view of the gendered impacts.

Then, I conducted systematic qualitative analysis throughout the scanning process in the climate change related papers that I found. I searched for 'woman', 'gender', 'gender inequalities', 'Gender Mainstreaming' in the papers. I analysed the papers, both the abstracts and contents to see if they included any of the search terms. The papers on climate change mainly consider agricultural and economic impacts (Yeldan, 2017; Aydinalp and Cresser, 2008), security (Albayrakoğlu, 2011) and food security (Gürsoy, 2020) and they do not include any gendered aspects or implications of climate change although these issues are closely linked to gender. In the few papers where the term 'gender' was used, gender was only used as a variable on perceptions and public awareness regarding climate change in addition to other variables including education level, age and marital status (Ergun and Rivas, 2019; Korkmaz, 2018; Ateş et al., 2017).

This examination reveals that gendered implications or inequalities of climate change have been largely absent in academic literature in Turkey. It is not surprising that gender is completely non-existent in the climate change related scientific literature (see for example, Demirci & Peker, 2008) since science is still a masculine arena as Harding (1986) argued more than 30 years ago. However, it is surprising that both, old and recently published papers on climate change by Turkish scholars, resulted in similar outcomes, namely invisibility of women and gender in relation to climate change (exception Yıldız & Kovancı, 2020; Kovancı, 2017 and Alıca, 2017). Even in the relatively recent paper, where the climate change impacts are discussed on the basis of global, regional and urban level by female academics (see Kahraman & Şenol, 2018) or the paper that examines the issues related to climate change as a public policy problem (see Demirci, 2015) the words 'gender or woman' are non-existent. This is surprising considering that Turkish universities participate in the European research area where they have been actively taking part since 2002 to the EU Framework Programmes. Moreover, there is an Academic Network platform for European Union Studies (A-NEST) where the academics can exchange information and publications.

The invisibility of gender could be due to the gender denial in academic community or because the fact that climate related discussions in the country follow a male agenda and rather concentrate on technological and scientific methods to combat climate change related issues. More importantly, I argue that the blindness in the academic community has also impacts on climate change related public policies in the country since research contributes to advancing knowledge and informs decision-making. Hence, public policy developers are influenced by academic research as they refer to academic literature when policy documents are drafted. I will explore this in the following section.

Decision-Making Structures And Climate Change Policies in Turkey

Decision-making bodies

Turkey has high level of Greenhouse Gases (GHG) (526 MtCO2e) and the increase in emissions has been the largest among the OECD countries over the last decade due to the growth of its population and economy (OECD, 2019). Turkey aims to contribute to climate change efforts and reduce its GHG emissions by 21% from business as usual level by 2030 (INDC, 2015) and it is vital to develop solid policy analysis and plans.

Decision-making plays a crucial role for adaptation and mitigation strategies because of the complex adaptation and risk management strategies. An iterative risk management (Figure 1) is suggested in adaptation to climate change where 'multiple feedbacks and people and knowledge shape the process and its outcomes' (IPCC, 2014: 9).



Figure 1: Climate change related iterative risk management process, **Source**: (IPCC 2014: 9)

Procedural justice and ethical considerations are important in climate change governance to ensure fair involvement of all impacted parties in decision-making procedure (Grasso and Sacchi, 2015). In 1992 the United Nations (UN) Agenda 21 identified women as a particularly disadvantaged group and urged governments to collect information on target groups and evaluate gender specific programmes. Under the UN Gender Mainstreaming (GM) (UN, 2018), women's participation shall be achieved at all levels of decision-making to reach a gender balance.

Women are absent in decision-making bodies in Turkey and more imporantly there is a lack of government commitment on gender issues. The Climate Change Coordination Board of the Ministry of Environment assists with the climate change strategy and policy development in the country. Despite the UN call in 1992 to 'formulate and implement well-defined national policies, strategies and guidelines in order to achieve equality in all aspects of society and to increase the number of women as decision makers and women in environment and development fields' (UN, 1992), both the Board and the Department are male dominated at senior management positions (Table 1).

Directorate General (DG)	% in senior roles (M) ⁹	Head of the department/DG
DG EIA, Permits and Inspection	90% (8 out of 9)	М
DG Environmental Management ¹⁰	80% (8 out of 10)	М
DG Protection of Natural Resources	90% (9 out of 10)	М
DG Local Management	100% (9 out of 9)	М
DG Strategic Planning	90% (5 out of 6)	М
DG Infrastructure and Urban Transformation	73% (11 out of 15)	М

Table 1. Male domination in senior positions at the Ministry of Environment and Urbanisation).

Source: (MoEU, 2020b)

This bias is apparent at all levels in decision making, both in terms of participatory exclusion and in terms of under representation in authorities. For example, there are 18 committees playing an important role in the planning and preparation of regulations in the Turkish Parliament. Except for the equal opportunities for woman and men committee, all the committees are by far male dominated (Table 2).

Table 2. Women's representation at the	Turkish Parliament/Parliamentary Committees.
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Institution	(Men %)	Head
Members of the Parliament	82,52	M (chairperson)
Environment Committee (Parliament)	92 (23 out of 25)	М
Committee of Justice	88 (23 out of 26)	М
Committee of the EU Harmonisation	76 (20 out of 26)	М
Committee of Agriculture, Forestry and Rural Affairs	92 (24 out of 26)	М

Source: (TBMM, 2020)

Similarly, only 4 female mayors out of 81 cities were elected in the last local elections on 31 March 2019 (TBB, 2020) and currently (July 2020) only 2 out of 81 of the governors appointed are women (MoI, 2020). Also, there is a clear male domination in all ministries, namely 15 out of 17 ministers at the presidential cabinet is male (TCCB, 2020). It is therefore not surprising that the senior roles at the Ministry of Environment and Urbanisation, that has a crucial role in the

⁹ Management positions including managers and heads of departments.

¹⁰ The Climate Change Department is under this DG and the Head of the Department is male.

preparation and implementation of the climate change policies in the country, are mainly occupied by men. Most importantly, currently there is no affirmative action to overcome this power order. This lack of participation in senior roles renders women to influence decisions and policies that impact them directly.

I acknowledge that not all women experience gendered practices in the same way and intersectionality can play an important role to reveal multiple forms of oppression. However, 'power provides the ability to act and to affect' (Nightingale, 2019: 21), and currently, politics and ministries that play an important role in the design/implementation of climate change policies are highly male dominated in Turkey. This is not surprising considering the conservative public policy change over the last decades where the society has been moved in a more conservative direction and women have been disempowered (Güneş-Ayata and Doğangün, 2017; Zeytinoglu and Bonnabeauis, 2015). Despite the early liberalisation of Turkish women between 1920-1935¹¹, traditional gender roles remain intact (neo-conservatism and neo-traditionalism), gendered employment patterns and violence towards women are increasing. At political level, conventional gender relations are normalised and frequent speeches are given to disempower women by putting family as a priority on women's life, reinforcing motherhood¹² as a women's biological destiny idea and imposing behaviour and dress codes for women in public spaces. A close examination of regulatory and policy instruments passed after 2002 shows a clear 'incomplete and highly contradictory attitude regarding work and family life reconciliation' (Kazanoğlu, 2019: 2), which reinforced the existing patriarchal norms and roles. As an indicator, currently Turkey has a SIGI Value¹³ of 25%, which is classified as low (OECD, 2019b).

Although climate change debate has gained prominence at policy level in Turkey, the gendered impacts of climate change have still been neglected on the political agenda which will be discussed in the following heading.

National Climate Change Public Policy Documents

Turkey became a party to the UNFCCC in 2009. A number of policy documents setting climate change objectives and action plans as well as the National Communication submitted to

¹¹ In 1926 the adopted Civil Code aimed to establish gender equality and to change gender relations. The Code banned polygamy, women were granted equal rights including in employment, divorce, custody of children and inheritance. By 1935, Turkish women were granted universal full suffrage in national and local elections.

¹² Urging women to have at least three children.

¹³ The Gender Index (SIGI) of the OECD measures discrimination against women in social institutions across 180 countries. It takes into account laws, social norms and practices and captures the underlying drivers of gender inequality to provide the data necessary for transformative policy-change (OECD, 2020a).

the UNFCCC have been published. First, the documents that are displayed as the current documents on the Ministry of Environment and Urbanisation's websites¹⁴ were examined.

•The National Climate Change Strategy (2010-2020) (MoEU 2010) and its updated version (2020-2023) (MoEU, 2020a),

•The National Climate Change Adaptation Strategy and Action Plan (2011-2023) (MoEU, 2012) and

•The 7th National Communication to the UNFCCC of 2018 (MoEU, 2018).

The National Climate Change Strategy (2010-2020) document is considered as the central policy document by the Ministry of Environment and Urbanisation. The document sets out objectives to be achieved in short, medium and long term (1 to 10 years period). The document was developed 'through an effective working process by the participation of public institutions, private sector establishments, non-governmental organizations and universities, and was approved by the Prime Ministry Higher Planning Council' (MoEU, 2010: 3). Since some non-governmental organisations and universities were involved in the preparation, it could be expected that it includes a gender perspective.

Considering a number of factors including the gender invisibility in ENGOs' environmental campaigns (Külcür et al., 2019), no affirmative action on empowering women in decision-making (neo-conservatism) as well as the lack of gendered implications of climate change in academic community, it is not surprising that in Turkey climate change related public policies are gendered. The gender differentiated effects of climate change is barely mentioned in the Plan.

The National Climate Change Strategy (2010-2020) and the National Climate Change Action Plan (TNCCAP) (2011-2023) were prepared to fulfil the UNFCCC obligations and to reduce Green House Gas (GHG) emissions. In the introduction section of the Action Plan 'Gender Mainstreaming' is mentioned very briefly, and it is stated that 'it was given attention to integrate gender issues into the policies and strategies to combat climate change' (TNCCAP: 1), however, the plan does not include any gender aspects or any hint regarding how to attain Gender Mainstreaming (GM). More importantly, the updated version of the National Climate Change Strategy (2020-2023) does not include any reference to gender or women.

The National Climate Change Adaptation Strategy and Action Plan (2011-2023) aims to set up an action plan. To this end, a number of issues are pointed out to be important including resources management, biodiversity, natural hazards management, agriculture and food security

¹⁴ https://cygm.csb.gov.tr/iklim-degisikligi-i-84367 and https://iklim.csb.gov.tr/strateji-belgeleri-i-305

and human health. Gender equality is mentioned in only one instance as important for climate change adaptation. The plan briefly mentions some gendered impacts including natural disasters and vector borne diseases, but it does not include any gender perspective, apart from mentioning gender in few instances such as awareness rising, nor it provides any concrete measures for gendered implications. In one instant, it is acknowledged that 70% of farmers in Turkey are women and therefore they face adverse consequences (health effects and losses in crop production) due to climate change (p.29). It is also acknowledged in the Plan that 'in Turkey the research on the gendered impacts of climate change in relation to agriculture is very limited' (p.29).

Similarly, the 7th National Communication of Turkey which was submitted to the UNFCCC does not address any gendered implications. Women are mentioned solely with regard to 'awareness raising on sustainability of forestlands' (p.108) and 'energy consumption' (p.228) due to the assumption of gender roles within families and the unequal involvement in household chores between men and women, which, again, reflects patriarchal policy making. Although, this official document states that women can be key agents in achieving sustainability in relation to forestlands, Gender Mainstreaming is also absent in the document.

Moreover, I also examined the previous National Climate Change Adaptation Strategy and Action Plan of Turkey of 2011 to see whether it included any gender dimensions. The document mentions 'Gender Mainstreaming' in one instant as a crossing point of the vulnerability themes chosen, namely 'agricultural sector, water resources, food security, ecosystem, natural disaster risk management, public health, biodiversity and forestry' (p.55). In a Turkish context, gender is seen as relevant only with respect to the 'agriculture sector' and 'gender' is only mentioned in the document including the socio-economic impacts of climate change on the agriculture sector. Most importantly, the plan also mentions that in Turkey 'the studies that deal with the gendered impacts of climate change are limited and mostly at academic level' (p.73). This is an evidence that there are interlinkages between public policy making and academic research. However, as was described in the previous section of this paper, the academic literature including gender aspects of climate change is still very limited. As an example, the academic paper that examined the Turkish National Climate Change Action Plan (NCCAP) to propose new policy directions does not include any gender aspects (Alkan et al. 2018).

Conclusions and Policy Recommendations

This research shows that gender aspects have been neglected in academic research in Turkey and gender is under-represented or non-existing variable in the current policy documents in relation to climate change. The official documents also lack a gender perspective in future policy recommendations. I argue that the term gender is used in a 'tokenistic' and 'superficial' way in the policy papers and strategy documents since no concrete gender analysis is undertaken or any gender action plan is formulated. Moreover, due to the unequal representation of women in positions of power, women's capacity to influence the decisions that impact them directly remains limited and systematic exclusion from political power structures deepens gender-based inequities.

Negative effects of climate change exacerbate due to gender inequalities and these impacts can worsen existing gender inequalities. It is known that gender differentiated impacts are more severe in countries with higher gender inequalities (UN, 2019). Turkey rank 130th out of 149 countries in global gender parity in 2020 where the aspects including educational attainment, employment, political empowerment and health survival are considered (WEF, 2020). Adaptation strategies to climate change should encompass human development including reducing gender inequality and poverty. Thus, policies and programmes should include how gendered implications and gender inequalities are planned to be addressed explicitly rather than glossing over the words 'gender or Gender Mainstreaming' in policy making documents. However, currently, there is no genuine public plan or strategy that aims to implement Gender Mainstreaming or observe gender balance in decision-making bodies in the country.

In order to adapt the effects of climate change adequately, it is vital for researchers and policy makers to acknowledge and analyse the gender differential vulnerabilities of climate change and how men and women respond to climate change induced disasters. The analysis should include how gender division in labour, social roles and responsibilities in the workplace, family and community as well as in decision-making impact women and men differently when it comes to climate change. These are the issues that influence differentiated power relations and individuals' capability to access to and control of resources which impact vulnerability and response. Moreover, it should be analysed that how public policy affects women and men differently.

Given the emphasis on general equity issues and importance of gender in mitigation and adaptation to climate change in the EU policies, the lack of gender perspective is a significant failure by the policy makers and researchers since it jeopardises achieving sustainability and country's ability to combat and reduce the potential effects of climate change (climate change adaptation).

References

Agarwal, B. (1992). The Gender and Environment Debate: Lessons from India. *Feminist Studies*, 18(1), 119–158.

- Aktaş, Ö. (2014). Impacts of Climate Change on Water Resources in Turkey. *Environmental Engineering Andmanagement Journal*, 13 (4): 881–889.
- Albayrakoğlu, E.P. (2011). Climate Change and Security: The Case for Turkey. *Journal of Gazi Academic View*, 5 (9).
- Alkan, A., Binatlı, A.O. and Değer, Ç. (2018). Achieving Turkey's INDC Target: Assessments of NCCAP and INDC Documents and Proposing Conceivable Policies. *Sustainability*, 10 (6). Multidisciplinary Digital Publishing Institute: 1722.
- Ateş, D., Teksöz, G. and Ertepnar, H. (2017). "Exploring the Role of Future Perspective in Predicting Turkish University Students' Beliefs About Global Climate Change." *Discourse and Communication for Sustainable Education*, 8 (1). Walter de Gruyter GmbH: 32–52.
- Aydinalp, C. and Cresser, M.S. (2008). "The Effects of Global Climate Change on Agriculture." *American-Eurasian Journal of Agricultural & Environmental Sciences*, 3 (5). Citeseer: 672– 676.
- Barry, J. (1998). The emergence of ecofeminist political economy. *Environmental Politics*, 7(3), 150–155.
- Beck, S., Mahdad, M., Beukel, K. and Poetz, M. (2019). "The Value of Scientific Knowledge Dissemination for Scientists—A Value Capture Perspective. *Publications* 7 (3). MDPI AG: 54.
- Birgun. (2020). "Sağlık Emekçisi Kadınlar Anlatıyor: Bir Yanda Virüs Diğer Yanda Şiddet." https://www.birgun.net/haber/saglik-emekcisi-kadinlar-anlatiyor-bir-yanda-virus-diger-yanda-siddet-298152. (accessed on 11.06.2020)
- Boa, I., Johnson, P. and King, S. (2010). *The Impact of Research on the Policy Process*. HM Stationery Office.
- Boniol, M., McIsaac, M., Xu, L., Wuliji, T., Diallo, K. and Campbell, J. (2019). *Gender Equity in the Health Workforce: Analysis of 104 Countries*. World Health Organization.
- Bozoglu, M., Baser, U., Alhas Eroglu, N. and Kılıç Topuz, B. (2019). Impacts of Climate Change on Turkish Agriculture. *Journal of International Environmental Application and Science*, 14 (3): 97–103.
- Bucak, T., Trolle, D., Andersen, H., Thodsen, H., Erdoğan, Ş., Levi, E., Filiz, N., Jeppesen, E. and Beklioğlu, M. (2017). Future Water Availability in the Largest Freshwater Mediterranean Lake Is at Great Risk as Evidenced from Simulations with the SWAT Model. *Science of the Total Environment 581. Elsevier*: 413–425.

- Buckingham, S. and Masson, V. L. (2017). Understanding Climate Change through Gender Relations. Taylor & Francis.
- Buckingham, S. and Külcür, R. (2017). "It's Not Just The Numbers: Challenging Masculinist Working Practices in Climate Change Decision-Making in UK Government and Environmental Non-Governmental Organizations." *In Climate Change and Gender in Rich Countries*, 35–51. Routledge.
- CEE (2012). Council Conclusions on Gender Equality and the Environment: Enhanced Decision-Making, Qualifications and Competitiveness in the Field of Climate Change Mitigation Policy in the EU. http://register.consilium.europa.eu/doc/srv?l=EN&f=ST 8876 2012 INIT. (accessed on 11.06.2020).
- CEEa (2009). Council Conclusions on Climate Change and Development, 2974th External Relations Council Meeting.

https://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/gena/111278.pdf. (accessed on 11.06.2020).

- Chindarkar, N. (2012). Gender and Climate Change-Induced Migration: Proposing a Framework for Analysis. *Environmental Research Letters*, 7 (2): 25601.
- Cohen, M. G. (2017). *Climate Change and Gender in Rich Countries: Work, Public Policy and Action.* Taylor & Francis.
- Coltrane, S. (2000). The Gender Lens: Gender and Families,. Oxford: AltaMira Press.
- D'Eaubonne, F. (1974). Le féminisme ou la mort. Paris: P. Horay.
- Daly, M. (2016). Gyn/Ecology: The Metaethics of Radical Feminism. Beacon Press.
- Demirci, M. and Peker, O. (2008). Climate Change from a Post-Normal Science Perspective. Dokuz Eylül Üniversitesi Iktisadi ve Idari Bilimler Fakültesi Dergisi, 23 (1).
- Demirci, M. (2015). İklim Değişikliğinin Yerel Bir Sorun Olarak İnşası. Aksaray Üniversitesi Iktisadi ve Idari Bilimler Fakültesi Dergisi 7, Aksaray University: 103–114.
- Demirkesen, A. C., Evrendilek, F. and Berberoglu, S. (2008). Quantifying Coastal Inundation Vulnerability of Turkey to Sea-Level Rise. *Environmental Monitoring and Assessment*, 138 (1): 101–106.
- Dudu, H. and Çakmak, E. H. (2018). Climate Change and Agriculture: An Integrated Approach to Evaluate Economy-Wide Effects for Turkey. *Climate and Development*, 10 (3), 275–88.

- EEA. (2017). Climate Change, Impacts and Vulnerability in Europe 2016, An Indicator-Based Report. https://www.eea.europa.eu/publications/climate-change-impacts-and-vulnerability-2016. (accessed on 15.06.2020).
- Elmhirst, R. (2015). *Feminist political ecology*. In The Routledge handbook of gender and development (pp. 58–66). Routledge.
- Enarson, E. and Chakrabarti, D. P. G. (2009). Women, Gender and Disaster: Global Issues and Initiatives. SAGE Publications India.
- Ergun, S. J. and Rivas, M. F. (2019). The Effect of Social Roles, Religiosity, and Values on Climate Change Concern: An Empirical Analysis for Turkey. *Sustainable Development*, 27 (4): 758–69.
- European Union (2015). Main Causes of Female Poverty, Compilation of in-Depth Analyses
 Workshop 30 March 2015, European Parliament.
 https://www.europarl.europa.eu/RegData/etudes/STUD/2015/519193/IPOL_STU(2015)5191
 93_EN.pdf. (accessed on 12.06.2020).
- Eurostat 2020. Turkey-EU International Trade in Goods Statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php/Turkey-EU_-_international_trade_in_goods_statistics . (accessed on 01.07.2020).
- Geiger, N. and Swim, J. K. (2018). Gendered Impressions of Issue Publics as Predictors of Climate Activism. *Frontiers in Communication*, 3: 54.
- Gökalp A. and Süheyla, S. (2017). Kadın ve Çevre. *Türkiye Barolar Birliği Dergisi* 1 (2017): 151– 72.
- Goldman, M. and Schurman, R. A. (2000). Closing the "Great Divide": New Social Theory on Society and Nature. *Annual Review of Sociology*, 26(1), 563–584.
- Gorguner, M., Kavvas, M. L. and Ishida, K. (2019). Assessing the Impacts of Future Climate Change on the Hydroclimatology of the Gediz Basin in Turkey by Using Dynamically Downscaled CMIP5 Projections. *Science of the Total Environment* 648. Elsevier: 481–99.
- Grasso, M. and Sacchi, S. (2015). Impure Procedural Justice in Climate Governance Systems. *Environmental Values*, 24 (6). White Horse Press: 777–98.
- Griffin, S. (1978). Woman and Nature: The Roaring Inside Her. New York: Harper and Row.

- Güneş-Ayata, A. and Doğangün, G. (2017). Gender Politics of the AKP: Restoration of a Religio-Conservative Gender Climate. *Journal of Balkan and Near Eastern Studies*, 19 (6). Routledge: 610–27.
- Gürsoy, S. (2020). "Addressing the Challenge of Food Security in Turkey". In Environmental Law and Policies in Turkey, edited by Vakur Savaşan Zerrin and Sümer, 127–40. Cham: Springer International Publishing.
- Harding, S. (1986). The Science Question in Feminism. Ithaca: Cornell University.
- Ilkkaracan, P. (2016). *Deconstructing Sexuality in the Middle East: Challenges and Discourses*. Taylor & Francis.
- INDC (2015). "Republic of Turkey Intended Nationally Determined Contribution." https://www4.unfccc.int/sites/submissions/INDC/Published Documents/Turkey/1/The_INDC_of_TURKEY_v.15.19.30.pdf. (accessed on 19.06.2020).
- IOM (2020). "World Migration Report (2020)." https://www.un.org/sites/un2.un.org/files/wmr_2020.pdf. (accessed on 19.06.2020).
- IPCC. (2014). "Climate Change: Synthesis Report Summary for Policy Makers." http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. (accessed on 20.06.2020).
- Işık, Ö., Özer, N., Sayın, N., Mishal, A., Gündoğdu, O. and Özçep, F. (2015). Are Women in Turkey Both Risks and Resources in Disaster Management?. *International Journal of Environmental Research and Public Health*, 12 (6). Multidisciplinary Digital Publishing Institute: 5758–5774.
- Jerneck, A. (2018). "What about Gender in Climate Change? Twelve Feminist Lessons from Development." *Sustainability*, 10 (3). MDPI AG: 627.
- Kaczan, D. J. and Orgill-Meyer, J. (2020). "The Impact of Climate Change on Migration: A Synthesis of Recent Empirical Insights." *Climatic Change*, 158 (3): 281–300.
- Kahraman, Sümeyye, and Şenol, Pervin. (2018). "Iklim Değişikliği: Küresel, Bölgesel ve Kentsel Etkileri." Akademia Sosyal Bilimler Dergisi, no. 4: 353–370.
- Karaca, M. and Nicholls, R. J. (2008). "Potential Implications of Accelerated Sea-Level Rise for Turkey." *Journal of Coastal Research*, 24 (2 (242)): 288–298.
- Kazanoğlu, N. (2019). "Work and Family Life Reconciliation Policies in Turkey: Europeanisation or Ottomanisation?" *Social Sciences*, 8 (2). MDPI AG: 36.

- Kendall, A. and Spang, E. S. (2020). "The Role of Industrial Ecology in Food and Agriculture's Adaptation to Climate Change." *Journal of Industrial Ecology*, 24 (2): 313–317.
- Korkmaz, M. (2018). "Public Awareness and Perceptions of Climate Change: Differences in Concern about Climate Change in the West Mediterranean Region of Turkey." *Applied Ecology* and Environmental Research, 16 (4): 4039–4050.
- Kovancı, E. (2017). Kronik: Kadınların Sürdürülebilir Gelişme Için Örgütlenme Deneyimlerinden ve Toplumsal Cinsiyet Analizinden Iklim Değişikliğini Anlamak. *Ankara Üniversitesi SBF Dergisi*, 72 (2): 493–503.
- Kronsell, A. (2017). Perspectives to Climate Governance. Understanding Climate Change through Gender Relations. Taylor & Francis, p. 104-120.
- Külcür, R., Buckingham, S. and Ansell, N. (2019). Exposing the Lack of Gender in Climate Change Campaigns: Evidence from the UK and Turkey. *Dokuz Eylul University Journal of Graduate School of Social Sciences*, 21(3): 923-942.
- Lieven, A. (2020). Climate Change and the State: A Case for Environmental Realism. *Survival*, 62 (2). Routledge: 7–26.
- Linares, C. Díaz, J., Negev, M., Sánchez M. G., Debono, R. and Paz, S. (2020). Impacts of Climate Change on the Public Health of the Mediterranean Basin Population - Current Situation, Projections, Preparedness and Adaptation. *Environmental Research*, 182: 109-107.
- MacGregor, S. (2010). Gender and Climate Change': From Impacts to Discourses. *Journal of the Indian Ocean Region*, 6 (2). Routledge: 223–238.
- MacGregor, S. (2019). "Zooming in, Calling out: (M)Anthropogenic Climate Change through the Lens of Gender, In Climate Futures: Re Imagining Global Climate Justice." In Climate Futures : Re-Imagining Global Climate Justice, edited by Kum-Kum Bhavnani. Zed Books Ltd.
- Mahon, R. (2020). "Gendering Migration Management." In *The International Organization for Migration*, 53–73. Springer.
- MedECC. (2019). "Risks Associated to Climate and Environmental Changes in the Mediterranean Region." http://planbleu.org/sites/default/files/publications/medecc_booklet_en_web.pdf .
- Mellor, M. (2000). Feminism and Environmental Ethics: A Materialist Perspective. *Ethics and the Environment*, 5(1), 107–123.
- Merchant, C. (1996). Earthcare: Women and the Environment. New York: Routledge.

- MoEU (2010). "National Climate Change Strategy (2010-2020)." http://www.dsi.gov.tr/docs/iklimdegisikligi/ulusal_iklim_değişikliği_strateji_belgesi_eng.pdf ?sfvrsn=0. (accessed on 15.06.2020).
- MoEU (2012). "Turkey's National Climate Change Adaptation Strategy and Action Plan (2011-2023)." http://www.csb.gov.tr/db/iklim/editordosya/Adaptation_Strategy.pdf. (accessed on 15.06.2020).
- MoEU (2018). "7th National Communication of Turkey to the UNFCC." https://unfccc.int/sites/default/files/resource/14936285_Turkey-NC7-2-Seventh National Communication of Turkey.pdf . (accessed on 15.06.2020).
- MoEU (2020a). "National Climate Change Strategy (2020-2023) (Updated Version)." https://webdosya.csb.gov.tr/db/iklim/editordosya/iklim_degisikligi_stratejisi_EN(2).pdf. (accessed on 15.06.2020).
- MoEU (2020b). "Organisation Chart." https://csb.gov.tr/teskilat-semasi. (accessed on 10.07.2020).
- MoI. 2020. "Valilikler." https://www.icisleri.gov.tr/valilikler . (accessed on 10.07.2020).
- Nelson, V., Meadows, K., Cannon, T., Morton, J. and Martin, A. (2002). Uncertain Predictions, Invisible Impacts, and the Need to Mainstream Gender in Climate Change Adaptations. *Gender* & Development,10 (2). Taylor & Francis: 51–59.
- Nightingale, A. J. (2019). Commoning for Inclusion? Commons, Exclusion, Property and Socio-Natural Becomings. *International Journal of the Commons*, 13 (1).
- Nightingale, A. J. (2006). The nature of gender: work, gender, and environment. *Environment and Planning D: Society and Space*, 24(2), 165–185.
- OECD (2019). "Women at Work in G20 Countries: Progress and Policy Action." https://www.oecd.org/g20/summits/osaka/G20-Women-at-Work.pdf. (accessed on 11.06.2020).
- OECD (2020). "Employment Outlook." https://www.oecd-ilibrary.org/employment/oecd-employment-outlook-2020_1686c758-en . (accessed on 11.06.2020).
- OECD (2018). "Economic Surveys Turkey Overview." http://www.oecd.org/eco/surveys/Turkey-2018-OECD-economic-survey-overview.pdf . (accessed on 18.06.2020).
- OECD (2020b). "What Is SIGI?" https://www.genderindex.org/ (accessed on 18.06.2020).
- OECD (2019b). "Turkey SIGI 2019." https://www.genderindex.org/wpcontent/uploads/files/datasheets/2019/TR.pdf . (accessed on 18.06.2020).

- Özyurt T.G. and Ergin, A. (2009). Application of Sea Level Rise Vulnerability Assessment Model to Selected Coastal Areas of Turkey. *Journal of Coastal Research*. JSTOR, 248–251.
- Parmaksız, P. and Yesalı, M. (2019). "Thirty Years of Gender and Women's Studies in Turkey." In *Women's Studies International Forum*, 77:102279. Elsevier.
- Pincha, C. (2009). "Toplumsal Cinsiyete Duyarlı Afet Yönetimi." Uygulamacılar Için El Kitabı. Çeviri: Derya Keskin Demirer.(Kocaeli Üniversitesi Yayınları: 362, 11–76.
- Plumwood, V. (2002). Feminism and the Mastery of Nature. Taylor & Francis.
- Rocheleau, D., Thomas-Slayter, B., & Wangari, E. (2013). *Feminist Political Ecology: Global Issues and Local Experience*. Taylor & Francis.
- Sanz-Barbero, Belén, Linares, Cristina, Vives-Cases, Carmen, González, José Luis, López-Ossorio, Juan José and Díaz, Julio. (2018). "Heat Wave and the Risk of Intimate Partner Violence." Science of The Total Environment 644: 413–419.
- Shiva, V. (1988). Staying alive: women, ecology, and development. London: Zed Books.
- Sorensen, C., Murray, V., Lemery, J. and Balbus, J. (2018). Climate Change and Women's Health: Impacts and Policy Directions. *PLoS Medicine*, 15 (7). Public Library of Science San Francisco, CA USA: e1002603.
- Sözcü (2020). "Korona Virus Siddeti." https://www.sozcu.com.tr/2020/gundem/corona-virusu-siddeti-sokaklardan-eve-tasidi-5728085/. (accessed on 25.06.2020).
- Talu, N. (2016). Iklim Değişikliği ve Toplumsal Cinsiyet Politika Belirleme Süreçleri. Yasama Dergisi, no. 33: 68–87.
- TBB (2020). "Belediye Başkanları." http://www.tbb.gov.tr/belediyelerimiz/mahalli-idarebirlikleri. (accessed on 27.06.2020).
- TBMM (2020). "Members of the Parliament." https://www.tbmm.gov.tr/develop/owa/milletvekillerimiz_sd.dagilim. (accessed on 27.06.2020).
- TCCB (2020). "Kabine." https://www.tccb.gov.tr/en/cabinet/.(accessed on 25.06.2020).
- Turkes, M., M Tufan Turp, Nazan An, Tugba Ozturk, and M Levent Kurnaz. (2020). "Impacts of Climate Change on Precipitation Climatology and Variability in Turkey." In *Water Resources* of Turkey, 467–91. Springer.

- Türkeş, M. (2018). "Küresel ve Bölgesel Iklim Değişikliklerinin Anadolu Coğrafyasına Etkileri." *Bilim ve Ütopya*, 292: 37–44.
- UN (1992). "Agenda 21 of Rio Declaration 1992." http://www.un-documents.net/a21-24.htm.
- UN (2018). "Gender Mainstreaming."

http://www.un.org/womenwatch/osagi/conceptsandefinitions.htm. (accessed on 25.06.2020).

- UN (2019). "Differentiated Impacts of Climate Change on Women and Men; the Integration of Gender Considerations in Climate Policies, Plans and Actions; and Progress in Enhancing Gender Balance in National Climate Delegations, Synthesis Report by the Secretariat." FCCC/SBI/2019/INF.8 https://undocs.org/pdf?symbol=en/FCCC/SBI/2019/INF.8. (accessed on 29.06.2020).
- UN (2020). "Chapter 1 Inequality: Where We Stand Today." https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/02/World-Social-Report-2020-Chapter-1.pdf. (accessed on 29.06.2020).
- UN Women (2020). "COVID-19: Emerging Gender Data and Why It Matters." https://data.unwomen.org/resources/covid-19-emerging-gender-data-and-why-it-matters . (accessed on 25.06.2020).
- UN (2018b). "Women, Gender Equality and Climate Change." http://www.un.org/womenwatch/feature/climate_change/factsheet.html. (accessed on 29.06.2020).
- UNDP (2016). "No TitlFilling Buckets, Fuelling Change: Ensuring Gender-Responsive Climate Change Adaptation." http://www.undp.org/content/undp/en/home/ librarypage/climate-and-disaster-resilience-/gender-responsive-climate-change-adaptation.htm. (accessed on 24.06.2020).
- UNDP (2020). "Gender Inequality Index (GII)." http://hdr.undp.org/en/content/gender-inequalityindex-gii. (accessed on 24.06.2020).
- UNDP (2010). "Gender and Disasters, Bureau for Crisis Prevention and Recovery." https://www.undp.org/content/dam/undp/library/crisis prevention/disaster/7Disaster Risk Reduction - Gender.pdf. (accessed on 28.06.2020).
- UNDP (2020a). "Türkiye'de Iklim Değişikliği Kaynaklı Krizler Artıyor." https://www.tr.undp.org/content/turkey/tr/home/presscenter/pressreleases/2020/02/ipa-acilistoreni.html. (accessed on 28.06.2020).

- UNFCCC (2020). "Introduction to Gender and Climate Change." https://unfccc.int/gender. (accessed on 10.06.2020).
- UNFCCC (2019). "Elaboration of the Sources of and Modalities for Accessing Financial Support for Addressing Loss and Damage, Technical Paper by the Secretariat (FCCC/TP/2019/1)." https://unfccc.int/sites/default/files/resource/tp2019_1_advance.pdf. (accessed on 10.06.2020).
- UNHCR (2020). "Gender, Displacement and Climate Change." https://www.unhcr.org/protection/environment/5f21565b4/gender-displacement-and-climatechange.html. (accessed on 23.06.2020).
- WEF (2020). "The Global Gender Gap Report, Insight Report 2020." http://www3.weforum.org/docs/WEF_GGGR_2020.pdf. (accessed on 23.06.2020).
- White, Jenny B. (2003). "State Feminism, Modernization, and the Turkish Republican Woman." *NWSA Journal*. JSTOR, 145–59.
- WHO (2012). "Gender, Climate Change and Health." https://www.who.int/globalchange/GenderClimateChangeHealthfinal.pdf?ua=1 . (accessed on 23.06.2020).
- Yeldan, E. (2017). "The Economics of Climate Change Action in Turkey: A Commentary." New Perspectives on Turkey 56. Cambridge University Press: 139–45.
- Yıldız, D., & Kovancı, E. (2020). "Gıda Güvenliği ve İklim Değisikliği Arasındaki Etkileşimin Toplumsal Cinsiyet Bağlamında Değerlendirilmesi", I. Ulusal Siyaset Bilimi ve Kamu Yönetimi Kongresi.
- Yilmaz, A.G. (2015). "The Effects of Climate Change on Historical and Future Extreme Rainfall in Antalya, Turkey." *Hydrological Sciences Journal*,60 (12), 2148–2162.
- YÖK (2020). "Eğitim Birimlerine Göre Öğrenci ve Öğretim Elemanları Sayıları (2018-2019)." https://istatistik.yok.gov.tr/. (accessed on 29.06.2020).
- Yonder, A., Sengul A. and Gopalan, P. (2005). "Women's Participation in Disaster Relief and Recovery", Number 22, The Population Council. https://www.preventionweb.net/files/2731_Seeds22.pdf (accessed on 29.06.2020).
- Zeytinoglu, Gunes N., and Bonnabeauis, Richard F. (2015). "From Atatürk to Erdoğan: Women in Modern Turkey." In Psychology of Gender Through the Lens of Culture, 93–112. Springer.

