Beyond Borders: Fleeing from Ecocide and War in Syria: The Climate Crisis as a Catalyst of Armed Conflict and Environmental Refugees

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Abstract

This dissertation poses the question “How does the climate crisis as a catalyst of armed conflict lead to a massive refugee flow as a form of ecocide?” by taking Syria as a case study. The core argument defends that there is a clear link between environmental destruction and violence, through a complex and intertwined interplay of ecological, socioeconomic, political, and demographic factors. This causal chain then generates forced displacement, also transcending borders. The thesis argues that the 2011-started Syrian Civil War was a climate-catalyzed conflict, which led to the refugee crisis of the mid-2010s. The concept of ‘ecocide’ serves to stress the lethal impact on both the environment and civilians that Assads’ decades-long dictatorships had. This work of inquiry claims that the Syrian Civil War and its refugee crisis, as two of the most lethal events of the 21st century, have been induced by the global climate crisis and the regional destruction and neglect of the environment. This contention challenges traditional paradigms of armed conflict drivers within International Relations, and broadens the discipline's scope with an interdisciplinary approach. This dissertation showcases the multifold threats the climate crisis, ecocide, armed conflict, and environmental displacement pose for both the planet and humanity.

Keywords: climate-conflict, environmental refugees, climate migrants, forced displacement, ecocide, Syrian Civil War, refugee crisis, international law

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I dedicate this work to all civilian victims of ongoing conflicts, in recognition of the enduring suffering and resilience of those innocents caught in the crossfire and displaced far from home. This thesis is a tribute to all the untold stories and silenced voices, and a plea for international action towards the simultaneous and interconnected crises of climate, conflict, and refugeedom. May these findings reflect the need to acknowledge and tackle this multifold emergency, for both the planet and humanity.

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1. Introduction

The 21st century has witnessed a dreadful convergence of threats between global warming and armed conflict, and the human cost that stems from this intersection. These intertwined crises unfold in a simultaneous and correlated manner around the globe. Amidst this entangled landscape, there has been another silent yet growing one, namely the phenomenon of environmental refugeedom. Often hidden in the shadow of armed conflicts and behind the smokescreen of the climate crisis, the human suffering resulting from the intersection of these two tends to be forgotten about. This seemingly recently birthed phenomenon can be traced way back in time – however, the urgency and dimension it has been reaching, and will still continue to, is unprecedented. Similarly, environmental destruction, along with its fatal and longevous effects, is increasingly receiving attention, under the term of 'ecocide'. This thesis unravels the intricate relationships that exist and evolve between the climate crisis, armed conflict, the emergence of environmental refugees, and ecocide, particularly focusing on the case of Syria. Out of the current millennium, the Syrian Civil War, ongoing since 2011, is the most prolonged and second-deadliest conflict, and has become the world's largest refugee crisis, with over 230.000 mortal victims and more than 14 million refugees. The outbreak of an armed conflict and its consequential massive refugee flow – stemming from the Syrian authoritarian regimes' decades-long destruction and neglect of the environment – reflect the intricate dynamics between climate-catalyzed conflict and ecocide-induced refugeedom.

This dissertation explores the climate crisis, as an armed conflict catalyst, that leads to a massive refugee flow, as a form of ecocide. Therefore, departing from a climate-conflict intersection to argue that environmental refugees result from ecocide and war. There has been a wide array of conducted research throughout various disciplines, discussing the individual phenomena individually, or sometimes combining two of them. Nevertheless, this thesis innovatively links them all, with the case of Syria as a guiding example. Numerous questions remain unanswered concerning the climate-conflict link, especially regarding its effect on the population undergoing and fleeing from this twofold threat. Moreover, there is a lack of academic comprehensive understanding and legal recognition of ecocide, as a crucial way of viewing the fatality environmental refugees face. There is an urgent need to investigate and discuss this issue, since it has been growing and will only continue to do so. This thesis aims to contribute to closing this research gap and shed light upon the unattended, yet urgent matter. Further understanding of the current dynamics and processes could enable the prevention of some incoming scenarios of climate-induced conflict resulting in environmental refugeedom, and aid policymakers and lawyers dealing with ongoing situations.

Furthermore, this thesis also aims to stress the necessity of including the cases of climate-induced displacements of people within international law, such as ecocide within environmental litigation. The climate-conflict intersection leading to environmental refugees entails human rights violations, across the war and flight; potential statelessness in the eye of no binding laws; and severe, widespread, and long-term destruction of the environment. Considering these multiple implications, it becomes evident that acknowledging both phenomena in the context of climate-catalyzed conflicts is in the interest of a wide array of

stakeholders – from humanitarian and scientific perspectives regarding the human and environmental cost, for the victims suffering and fleeing from the destruction and wars, governments undergoing those conflicts and population displacements, the receivers of those environmental refugees, and lawyers and policymakers handling those crises. The current lack and neglect of corresponding laws and policies, about environmental refugeedom and 'ecocide', undermines human rights and ethics.

The case study of Syria showcasess the complex interplay and the call for international action. Situated in the South Western Asia and North Africa (SWANA[1]) region, Syria is one out of many countries undergoing water scarcity and periodic droughts. These were exacerbated by decades-long water mismanagement and environmental neglect. Within an authoritarian and oppressive regime, these policies led to a climate of instability, tension, and conflict. The geographical scope is Syria, with brief mentions of other SWANA neighbors. The temporal framework is set from the early 1970s on, marking the previous decades to the Syrian Civil War, until the outbreak of the conflict and the refugee crisis of the mid-2010s. The dissertation's theoretical framework could potentially provide explanations for other case studies, within the SWANA region and beyond. Taking into account that the climate crisis, armed conflict, climate-induced displacement, and ecocide are phenomena happening across national borders, similar trigger reactions might be explored through this thesis's model. Thus, the proposed causal chain transcends the confines of the case study of Syria to explain the repercussions of ecocide and climate-induced conflicts on displaced populations.

For the sake of entangling the intricate interplay, this dissertation explores the intersection between the climate crisis, armed conflict, environmental refugeedom, and ecocide – in the context of Syria – throughout a series of chapters. Firstly, the Literature Review provides an overview of the academia on the multiple concepts and phenomena. The contested claim that the climate crisis catalyzes armed conflict is unraveled through different perspectives. Then, the concept of environmental refugeedom is outlined as a normative disagreement and legal gap. Lastly, the term 'ecocide' is fully presented, across its history and current movement. Afterwards, the Theory and Methods chapter lays out the theoretical framework and methodological approaches this thesis employs to answer the research question "How does the climate crisis as a catalyst of armed conflict lead to a massive refugee flow as a form of ecocide?". The fourth chapter covers the case study of Syria, by chronologically and thematically diving into the intertwined factors that induced the civil war and refugee crisis. This analysis takes place across three sections: on the political history and environmental circumstances before the outbreak of the war; on the socioeconomic instability and political tension, and the water scarcity consequences on agriculture and population in the late 2000s; and escalation to armed conflict and inducement of a massive refugee crisis in 2011. These three sections subsections discern the intricate dynamics and simultaneous events. The fifth chapter sheds light upon the need to globally recognize 'ecocide' and environmental refugeedom within (inter)national politics and binding laws. Moreover, it stresses how these two phenomena interact and can pose a lethal threat to humans. Finally, the conclusion sums up the findings and arguments, and elaborates on further contributions to the literature.

[1] The term 'SWANA' to prevent Eurocentricist lens that other toponyms such as 'Middle East' or 'MENA' entail

2. Literature Review

This thesis aims to not only contribute to the ongoing discussion on the climate-conflict nexus and how it catalyzes refugee flows, but also focus on the phenomenon of ecocide within the context of the case study of the Syrian Civil War. For that purpose, this Literature Review provides an overview of the current academic debate on the link between environmental degradation and the outbreak of violence, environmental refugees, and the concept of 'ecocide'. The following sections tackle these three main topics. The first section, on environmental degradation as a catalyst of armed conflict, presents the two main clusters of Neo-Malthusianism and Cornucopianism, diving into the former by emphasizing the effects of the climate crisis on humans' security. The second section identifies the lack of agreement within the 'refugee' debate regarding definition and recognition, and the emergent need for such consensus and acknowledgment, due to the projected increase of environmental refugees. The third section illustrates the concept of 'ecocide', its historical emergence, and the international movement advocating for its inclusion within international agreements and policies. It becomes apparent that both the debate on the climate-conflict intersection and on 'ecocide' benefit from an interdisciplinary approach, and that the phenomenon of environmental refugees still requires further research and attention. The overall state of the knowledge combining these three issues is at a very initial stage, with some sources merely (implicitly) mentioning the link. This Literature Review chapter finds that there currently is no source that comprehensively connects all these topics, neither overall nor in the context of the Syrian Civil War and its refugee crisis. Such a joint approach is lacking in academia and broader international relations discussions. Therefore this thesis aims to contribute to closing the gap, by engaging with the various sources.

2.1 The Climate Crisis as an Armed Conflict Catalyst

This first section delves into the complex claim that environmental degradation can play a catalyst role in armed conflicts. Foremost, it is essential to stress that this is a contested link that has been discussed by a wide range of scholars, from political to natural scientists, throughout different historical examples. The literature reviewed below mainly focuses on the Neo-Malthusian approach, which claims environmental degradation (also as a cause of the climate crisis) to have a twofold consequence on human security: Environmental degradation, by difficult access to and usage of natural resources it: (1) sparks social and political tension out of livelihood vulnerability, and (2) increases the economic value and competition of these due to their scarcity (Bernauer et al., 2012; Wirkus & Schure, 2008). These two are not contradictory but arguably complementary, since academics have undermined the complex and intertwined nexus between nature's assets, humans' survival, and the potential of conflict. Within the disciplines of Political Science and History, there is agreement that armed conflict has traditionally often occurred over scarce resources and territory, and that environmental collapse has destabilized societies, leading to famine, migration, and even rebellion (Abel et al., 2019; Brundtland, 1987; Council of Europe, 2022; European Parliament, 2022; Galtung, 1982; Gleditsch, 2015; Gleditsch & Dalby, 1997; Hatami & Gleick, 1994; Kaplan, 1994; Koubi, 2019; Mach et al., 2019; McMichael, 1993; Institute for

Economics & Peace, 2020; Renner et al., 1991; Westing, 1986; Wirkus & Schure, 2008; Theisen et al., 2013; Wolf, 2007; Yoffe et al., 2011). Academics have listed the elements of dispute ranging from landmarks, raw materials, and energy, to food and water (idem). Throughout the decades there have been different takes and methods on the research on the contested nexus.

Already in the late 20th century scholars agreed that a prolonged deterioration of natural resource systems presents chances of exacerbating political and social instability, which could worsen already happening economic stagnation and rural poverty. A number of academics argued this chain of events further constrains future economic and social developments (Gleditsch & Dalby, 1997; Hatami & Gleick, 1994; Homer-Dixon, 1991; Leonard, 1989; Westing, 1986). For instance, one of the most prominent works on this link is Homer-Dixon's 1991 *On the Threshold: Environmental Changes as Causes of Acute Conflict*. As a pioneering publication, it breaks down the social effects of environmental change and lists them up: reduced agricultural production, economic decline, population displacement, and disruption of regular and legitimized social relations (Homer-Dixon, 1991). This text is one of the few that study the particular human process for acute conflicts to escalate, distinguishing between individual frustration in situations of relative deprivation, violence through group identities, and the systemic structure that conditions individuals' interactions (idem). Another renowned study is the book *Conflict and the Environment*, as the first comprehensive publication linking environmental security. Its findings sparked discussions at NATO workshops in the late 1990s, signifying a turning point for the perception of the environment within the military struggle. It is until today one of the most exhaustive compilations that examines a vast dataset of environmental factors as catalysts of conflict, and therefore empirically supports scholars' past and future claims (Gleditsch & Dalby, 1997).

In the eye of the climate crisis becoming increasingly threatening and thus acknowledged in the late 20th century, controversy had risen regarding the concrete role of global warming furthering that connection. A considerable amount of researchers argued that the "destruction of the environment may lead to more wars over resources" (Galtung, 1982) and that this could affect interstate relations as well, hence the international political agenda should pay attention to managing the risk between environmental degradation and war (Holst, 1989; Homer-Dixon, 1991; Lodgaard, 1992; Opschoor, 1989). The rather dividing argument often evolved around the degree, rather than the causal link itself. For instance, Holst (1989) defended that environmental stress is an increasingly contributing factor, similar to Opschoor (1989) pointing at how it exacerbates already existing tension. Some others took a rather alarmist stance, going to the extent of declaring that environmental degradation will lead to an anarchic state of the world and be one of the main reasons for armed conflict in the post-Cold War context (Kaplan, 1994; Klarre, 2002), which widened the traditional national security's lens on merely territory and sovereignty. Even the IPCC's reports looked into how climate change will majorly contribute to conflicts (IPCC, 2007), and even designated an entire section on conflict within human security (IPCC, 2014), which showcases a global and interdisciplinary acknowledgment of the link.

There are some levels of discrepancy when studying the complex claim. The writers who did question the mere link of armed conflict with environmental degradation dived specifically into the resource scarcity aspect from a Cornucopianist perspective. Opposed to Neo-Malthusian, this school defends 'resource optimism' underlining market-driven human ingenuity (Bernauer et al., 2012). For example Deudney (1990) and Simon (1996) point to technological advancements that human inventiveness has brought to counter that lack by coming up with alternatives or transport methods. Nonetheless, this argumentation has been criticized to overlook the limitations of technology, and socio-political factors (Daily & Ehrlich, 1992). It has also been argued that certain resources such as water cannot be substituted, and political constraints often do not even allow to employ these solutions (Gleick, 1994). Additionally, academic works agree on the need to embed multiple disciplines to understand the complex process (Gleditsch & Dalby, 1997; Westing, 1986).

The essential causal chain steps that most arguments from the literature follow, start with an insufficient amount of resources for the growing population, followed by the deterioration of environmental conditions causing further resource scarcity, which then leads to higher levels of competition and eventually a greater risk of violence (Abel et al., 2019; Council of Europe, 2022; Gleditsch, 2015; Institute for Economics & Peace, 2020). One case of mapping out this process is summarized by Wirkus & Schure's encompassing contribution (2008): "Environmental change induces growing pressure on the availability of natural resources and increases the vulnerability of livelihoods as well as human insecurity". From a Political Science perspective, this process has been explained by arguing that when a society grapples with such material insecurity, the established political order is undermined (Brownlee, 2013; Lautensach & Lautensach, 2020; Mildner et al., 2011). In turn, this political instability is affirmed to be expressed in social revolts and questioning of the authority, which then leads to state repression to counter that unrest. Meanwhile, a rather humanitarian point of view focuses more on multifold crises and societal vulnerabilities to explain the emergence of conflict in the face of resource scarcity (Churruca-Muguruza, 2018). Depending on the discipline of the researcher, the emphasis is placed differently within the process, with an overall warning of the climate-conflict potentially resulting in human rights violations (Levy & Patz, 2015, Shue, 2017). Nevertheless, the varying focal points are not contradictory among each other but rather reinforce the complexity and uniqueness of every single case. For instance, Percival and Homer-Dixon (1995) came up with a tripartite division, by identifying resource scarcity as either, induced by supply (linked to environmental degradation), demand (related to population growth), or even connected to structural issues of inequality. Moreover, Homer-Dixon (1998), as one of the main scholars on this nexus, has stressed for decades throughout multiple works that environmental degradation and climate change do not isolatedly lead to violence, but rather in interaction with other factors.

Although a substantial part of the past evidence has been qualitative, a noticeable amount of the bibliography within the topic has started to provide quantitative evidence (Bernauer et al., 2012; Gleditsch, 2015; Homer-Dixon, 1991; Koubi, 2019). This neglect in systematically investigating the link between armed conflict and environmental degradation is not explained by a lack of empirical relation but rather that many hypotheses have not even been tested in

the first place, and also often omitting embedding political and economic factors within the study of the nexus (idem; IPCC, 2022; Koubi, 2019). A paper (Hsiang et al., 2013) attempted to parameter which weather anomalies impact the possibility in intergroup conflict and stated that a certain deviation in temperature or rainfall entailed an associated 11.1 percent change in the risk of emerging violence. However, a simultaneously published letter suggested that specific circumstances do increase the risk for violent conflict, but that "the most important indirect effects are likely to lead from environmental changes via economic performance and migration" (Bernauer et al., 2012; Theisen et al., 2013). Still, this same letter found that a "1ºC temperature increase boosts the risk of civil war by 4.5%" (idem, 3), which supported further investigation on scientific evidence proving the consistent linkage. For example, Hsiang and Burke's (2014) examination of fifty empirical studies which concluded with a "remarkable convergence in findings and strong support for a causal association between climatological changes and conflict at all scales and across all major regions of the world" (Buhaug, 2014). Later calculations showed that between "3–20% of conflict risk over the last century has been influenced by climate variability or change" (Mach et al., 2019), which points to an urgent need to further investigate the empirical link.

A noticeably often stressed concrete motive of armed conflict in regard to developing environmental degradation has been the access and scarcity of clean and safe water, especially in regions undergoing regular droughts (European Parliament, 2022; Hatami & Gleick, 1994; IPCC, 2007; IPCC, 2014; IPCC, 2022; Koubi, 2019; Lonergan, 1997; Institute for Economics & Peace, 2020; Wolf, 2007; Yoffe et al., 2001). Water has even been argued to be "replacing oil as a flashpoint for conflict between nations" (Lonergan, 1997) and the UN has identified hundreds of major river systems located in between national borders, of which multiple already are subject to unresolved disputes (Daily & Ehrlich, 1992; Gleick, 1994; Renner et al., 1991). Although it is a renewable resource, it has been defended to ongoingly lead to insurgencies and ethnic clashes, and it has been projected that alongside other resources, such as crops or forests, it will continue to worsen, especially in developing countries (Homer-Dixon et al., 1998; Wirkus & Schure, 2008). Furthermore, a clear correlation between droughts and civil conflict has been found when comparing historical records concerning these two variables in specific regions, however these also presented certain degrees of climate vulnerability and pre-existing tension (Koubi, 2019).

Considering that current and future societies might respond similarly to environmental degradation and change, potentially leading to (inter)national violence (Buhaug, 2014), it is of crucial need to further investigate this complex nexus. Moreover, it is also essential to include multiple actors and factors, such as political and economic processes and migration flows (Homer-Dixon et al., 1998; Hsiang et al., 2013; IPCC, 2022; Koubi, 2019; Mach et al., 2019; Theisen et al., 2013; Wirkus & Schure, 2008). The following section explores the climate-induced migration factor – by unraveling the historical, normative, legal, and future projected layers of 'environmental refugeedom'.

2.2 Repudiation of Environmental Refugees

The mere term of 'refugee' has been discussed for decades by political theorists, lawyers, and philosophers. The definition regarded as most official is by the United Nations Refugee Agency in its 1951 Status of Refugee Convention: "someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion" (UNHCR, n.d.a.). The criticisms or additions on the overall concept in relation to specific environmental reasons surround this agreement (Black, 2001; Lister, 2014). Although the UNHCR currently also acknowledges how the "adverse effects of climate change interact with armed conflict and violence" as a valid reason, and characterizes forced displacement as one of the most devastating consequences of climate change (UNHCR, n.d.a.), the literature emphasizes that this is not formally embedded in the convention. The definition places high emphasis on the condition of 'persecution', which does not account for surviving within a threatening (natural) environment or under scarce resource circumstances, (Ayazi & Elsheikh, 2019). Scholars across disciplines, from scientists, lawyers, and policy-makers, to organizations like the International Organization for Migration (IOM), the IPCC, and the UN Environment Program have researched and discussed the matter.

The notion of seeking refuge from climate change is relatively new, although environmental degradation has supposedly been a historic reason to migrate (Black, 2001; Lister, 2014; McAdam, 2012). The term 'environmental refugee' appeared for the first official time in 1985 as "those… who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life" (Trimarchi & Gleim, 2008). In the 1990s scientists and researchers studied climate change's effect on people's movement, but it was not an issue widely covered by legal or normative academics. Myers and Kent, as ecologists rather than migration specialists (Black, 2001), were one of the exceptions, by describing environmental refugees as "persons who no longer gain a secure livelihood in their traditional homelands because of what are primarily environmental factors of unusual scope" (Myers & Kent, 1995, 18). For instance, some of the most comprehensive works on migration and asylum from the past century published in the 2000s (Gibney & Hansen, 2005; Price, 2009) did not mention climate change as a reason, nor island states as future affected regions – just some less prominent papers voiced the concern on the rising issue (Black, 2001; Risse, 2009). Labeled as an extremer case, Kaplan's take did list refugee migration as the overall chain of "disease, overpopulation, unprovoked crime, scarcity of resources, refugee migrations, the increasing erosion of nation-states and international borders, and the empowerment of private armies, security firms, and international drug cartels" (1994, 46).

Some of the earliest typologizations (El-Hinnawi, 1985) divided environmental refugeedom by three: "temporary displacement due to temporary environmental stress; permanent displacement due to permanent environmental change; and temporary or permanent displacement due to progressive degradation of the resource base" (Black, 2011, 1). In contrast, the International Organization for Migration drew a general distinction between

emergency and rather slow-onset movements; temporary, extended, and permanent, and internal and international (Black, 2011; IOM/RPG, 1992). Additionally, the IOM also categorized ‘natural’ and ‘man-made’ causes, and listed fleeing from resource scarcity, conflict over resources, natural disasters, desertification and land degradation, health hazards, and overpopulation and land pressure (IOM, 1996). More recent reports have supported the elements of water scarcity, food insecurity, and rising sea levels to be past, present, and future causes of environmental refugeedom (European Parliament, 2022; Lustgarten, 2020; Theisen et al., 2013).

Over time, the emphasis on the need to legally and politically acknowledge this phenomenon in the international community grew in the literature (Ayazi & Elsheikh, 2019; Black, 2001; IOM/RPG, 1992), taking into account that environmental refugees have been estimated to be and further remain a human rights violations issue (Maretti et al., 2019; Weyermuller et al., 2021). It has been claimed for some years now that the currently used international agreements on refugeedom, such as the UNHCR’s, fail to include the emerging and urgent issue of climate-induced migration (Lister, 2014; Institute for Economics & Peace, 2020). Already the IPCC reports on climate change have, over the years (IPCC, 2007; IPCC, 2014), mentioned “displacement and involuntary migration from extreme weather and climate events” (IPCC, 2022, 51). In 2018 the UN General Assembly recognized that “climate, environmental degradation and disasters increasingly interact with the drivers of refugee movements” (UNHCR, n.d.a.). Currently, the UNHCR estimates about 20 million people flee yearly from their homes because of a wide array of climate change consequences “resulting from the increasing intensity and frequency of extreme weather events, such as abnormally heavy rainfall, prolonged droughts, desertification, environmental degradation, or sea-level rise and cyclones” (idem).

As with numerous other complex processes, climate migration has been a difficult phenomenon to analyze, since intertwined causes of refugeedom are, empirically speaking, hard to isolately weight against each other. Furthermore, considering the different angles this notion entails, such as history, politics, economics, security, ecology, and geography – interdisciplinary expertise is required to fully understand its complexity. These conceptual problems, starting by even defining ’environmental refugee or (or variations like ‘climate migrant), get sharpened in combination with a lack of systematic data (Gleditsch et al., 2007; Reuveny, 2007; Theisen et al., 2013) and outcome variability (McLeman, 2018; Lustgarten 2020). Studies (Reuveny, 2007) that have looked into empirically testing the link have found suggestive evidence that “climate change could trigger more human mobility” (Theisen et al., 2013, 620). However, providing proof also presents methodological difficulties in the literature (Gleditsch et al., 2007) considering that such migration has not always been possible in situations that would require it to flee, since environmental degradation, in the form of natural disasters, can become an impediment (idem; Government Office for Science, 2011). A comprehensive report concluded that the climate crisis will trigger further migration in already vulnerable regions (Government Office for Science, 2011), which have been argued to overspill from developing regions to a global scale and non-linear population movements (McLeman, 2018; McLeman, 2019).

Regarding the projection of environmental refugees, experts have speculated different numbers for the coming decades (Lustgarten, 2020). Myers, as one of the most renowned scholars on this issue forecasted “150 million environmental refugees by 2050” in the 1990s (Black, 2001, 7), supported by the IPCC. The IOM, as one of the main organizations concerned with climate migrants, claimed about 200 million as the most agreed cipher by the same time (IOM, n.d.a.), which is still supported in current times (European Parliament, 2022) – while other reports have even estimated up to 1,2 billion (The Guardian, 2020; Trimarchi & Gleim, 2020). Similarly to the exact reasons for environmental refugeedom, the exact current and still-to-come figures are complicated to calculate.

A comprehensive report on ecological threats, linking refugee flows with high water stress and low peace indexes, showed that currently about 24 million people are yearly displaced due to ecological disasters. These are similar figures to the estimations by UNHCR (n.d.) and IPCC (2022), in addition to 7 million by armed conflict (Institute for Economics & Peace, 2020). This concern had already been voiced by scholars in the 2000s (Gleditsch et al., 2007) and has been re-emphasized by in the last years (Abel et al., 2019), including the European Parliament (2022). Moreover, it is estimated that one out of five of those migrants will seek refuge beyond national borders and that climate migrants “could regularly surpass the European migration crisis of 2015” (idem, 3). Not too far from Kaplan’s earlier ‘catastrophic’ discourse, later publications have underlined the complex process involving socioeconomic and political factors as well. For instance, forced migration has been defended in the last years to be one of the consequences of climate change, particularly in combination with loss of livelihood, economic decline, poor governance, and societal inequalities (European Parliament, 2022; Theisen et al., 2013).

Academics and politicians have been concerned by the increasing refugee flows that are related to the ongoing climate crisis, especially with the emerging scenery of those climate-induced displaced people transpassing international borders (European Parliament, 2022; IPCC, 2022; McLeman, 2019; Institute for Economics & Peace, 2020; The Guardian, 2020). Further investigation, both with vast datasets and particular case studies, seems to still be required (Abel et al., 2019; Ayazi & Elsheikh, 2019). Taking into account these concerns and projections, the matter of the human cost of such massive refugeedom arises, and how the destruction of the environment is endangering both the planet and humanity.

2.3 Ecocide as an Environmental Crime

The word ‘ecocide’ stems from the Greek ‘oikos’ (meaning ‘home, nature, and ecosystem’) and the Latin ‘caedere’ (meaning ‘to kill, to cut down, and to destroy’), hence referring to the destruction of home or to kill nature (Shamloo & Gholipour, 2022). The term 'ecocide' appeared officially for the first time in 1970 at the Conference on War and National Responsibility, held by civil society, when the biologist and bioethicist Arthur Galston proposed to ban the threatening herbicide Agent Orange, used by the US military, during the Vietnam War (Zierler, 2011). In the years prior the US military had employed Agent Orange to defoliate large areas of Vietnamese forests intending to deprive enemy combatants of cover. This herbicidal warfare program, known as Operation Ranch Hand, caused the

destruction of the environment and entailed a potential human health catastrophe (Shamloo & Gholipour, 2022; Zierler, 2011). Such outcry motivated a group of scientists to spread the concept within the community. In 1966 Galston had already coined the term 'ecocide' during his research. He suggested prohibiting it within a new international agreement, also linking the massive destruction of ecosystems as a concern for human health. The early warning on the consequences of ecocide was connected to an overall worry for humanity, and coming from natural sciences.

The scientific community regarded most industrialized countries as having already committed ecocide on their own lands. Nevertheless, Galston even pledged for a UN formulation, since he considered the US being the first ever state to commit abroad "the will-ful and permanent destruction of the environment in which a people can live in a manner of their own choosing ought similarly to be considered as a crime against humanity" (Zierler, 2011, 19). By the late 1960s, the US Ranch Hand operation had sprayed approximately 20 million gallons of Agent Orange, among other chemical herbicides, over South Vietnam (idem), polluting a twelfth of the country's area equal to the size of Haiti. In 1970 chemical 2,4,5-t – a major component of Agent Orange – was discovered to be mutagenic and potentially carcinogenic to lab rats. In light of the potential lethality that chemical weapons could impose on the environment and humans, Galston dedicated the rest of his scientific life to advocating for the prohibition or herbicidal destruction in future wars. In his eyes, this quest was bioethical, rather than explicitly environmentalist (Zierler, 2011). He viewed the phenomenon of ecocide as an issue concerning not only nature but also society, due to the potential harm of chemical weapons to the human species. Hence, the first debates on the concept stemmed from the natural sciences discipline, instead of the realm of politics, security, conflict, or international relations academia.

The first time that ecocide was mentioned at a formal political arena was in Stockholm at the 1972 first UN Conference on the Human Environment (Stop Ecocide, n.d.a.). Some government representatives from around the globe included the term in their speeches, addressing the environmental aspect of the general brutality of the Vietnam War (idem). Moreover, Principle 21 of the Stockholm Declaration proclaimed that, in accordance to the UN Charter and international law, "states have… the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction" (UNEP, 1972, 3). Later on in 1976, the UN Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Technique was adopted, as a tool of international law, "specifically intended to protect the environment in the event of armed conflict" (ICRC, 1976, 1). Signed by most UN countries, it entailed the understanding that such damage or destruction was implied to be 'widespread' (in terms of surface), 'long-lasting' (for some months), and 'severe' (serious harm to life, nature, or economy) (idem). Despite being a relatively loose, vague and superficial account for environmental destruction, the ENMOD Convention was the first formal appearance of environmental damage connected to armed conflict in international law.

The following years witnessed multiple discussions on ecocide, surrounding its formulation and potential adoption into (inter)national law. One of the main questions was whether it

should include only criminal negligence of the environment, or also deliberate threats against whole populations and ecosystems. For instance, in the 1980s, the Whitaker Report, a think tank by the UN Commission on Human Rights, suggested embedding 'ecocide' within the definition of 'genocide', including "adverse alterations, often irreparable, to the environment" such as nuclear or chemical weapons (Prevent Genocide International, 1985, 6). Moreover, in 1991 the International Law Commission, a UN-selected body of legal experts, crafted the Draft Code of Crimes Against the Peace and Security of Mankind. Article 26 arguably included 'ecocide' among one of the twelve crimes, with the words "willful and severe damage to the environment" and again employing the words "widespread, long-term and severe damage" (Ecocide Law, n.d.a.). The states opposing such inclusion of the environmental crime argued that the character 'wilful' was an impediment, since punishment should not be conditional to intent, but rather outcome. In 1998 the Rome Statute of the International Criminal Court was established on this draft. The namesake institution in the Dutch city of The Hague was inaugurated, with the absence of 'ecocide' in the treaty on internationally prosecuted crimes. Instead, the ICC still nowadays addresses environmental destruction only in the context of war crimes (idem). Vietnam became the first country to codify a national ecocide law, followed during the 1990s and 2000s by other states, mainly Eastern European and post-Soviet. Therefore, 'ecocide' started to gain international recognition, within politics and law as well, but was not yet explicitly embedded in international law.

In 2010, the late barrister Polly Higgins presented at the UN Law Commission the definition of ecocide as "extensive loss, damage or destruction of ecosystems of a given territory(ies)… such that the peaceful enjoyment of the inhabitants has been or will be severely diminished" (Stop Ecocide, n.d.b, para. 2). Moreover, at the 2012 UN World Congress on Justice Governance and Law for Environmental Sustainability, 'ecocide' was perceived among the most viable and influencing solutions in achieving sustainability. Over the years it gained public support, even by emblematic figures like the climate activist Greta Thunberg, the UN Secretary-General Antonio Guterres, and various politicians, scientists and pop culture icons. In 2017 Stop Ecocide International was founded, as a non-profit company, by Higgins and Jojo Mehta, joining legal advocacy and environmental campaigning, alongside already affected states in the Pacific (Stop Ecocide, n.d.b). It soon positioned itself as the global face of the international ecocide movement, advocating for an amendment of the ICC. In its early stages, supporters of the initiative conceived the 'ecocide' to also be applicable to climate change deniers and others that discourage the politics and practices of climate action. However, Stop Ecocide's co-founder Polly Higgins envisioned 'ecocide' concretely as an "antithesis of life", drawing a close link between resource scarcity and war, and thus considering 'ecocide' a crime against peace (Jowit, 2010, para. 5). Therefore, the campaign aims to include ecocide at the intergovernmental tribunal, which, composed of 123 member states, has the jurisdiction to prosecute the four crimes against peace (International Criminal Court, n.d.). Since the court judges individuals, Stop Ecocide's proposed addition of 'ecocide' would allow the binding arbitration of politicians, governors, CEOs, or any other person who has damaged the environment or severely neglected climate protection.

In the last few years, there has been an increasing voice to establish ‘ecocide’ whim international and domestic binding laws. In 2019 the two states Vanuatu and the Maldives, and in 2020 Belgium, called for the consideration of adding ‘ecocide’ to the court’s four crimes at the 18th and 19th, respectively, sessions of the Assembly of States Parties to the Rome Statute of the ICC (Ecocide Law, n.d.a.). There currently are about thirteen states with domestic ‘ecocide’ laws, such as France or Ecuador, joining Vietnam and many post-Soviet countries (Ecocide Law, n.d.b.). There are multiple national politicians and governors that have agreed on the pledge to push for the criminalization of the destruction of the environment on various levels – including Australia, Bangladesh, Brazil, Canada, Chile, Fiji, Kenya, the Maledives, Mexico, New Zealand, Niue, Panama, Samoa, the Solomon Island, Tonga, Tuvalu, the UK, Vanuatu, West Papua; various EU countries individually, various regional European organizations such as the Council of Europe, the Nordic Council, the OSCE, and the EU Parliament (Stop Ecocide, n.d.c.; Surma, 2021). All the different countries that have already implemented and/or advocated for ‘ecocide’ laws roughly account for about 48 states (considering the 27 EU members). ranging from world leaders, through less industrialized, and up to highly climate-vulnerable countries. In 2021 the European Parliament (2021) advanced the recognition of ‘ecocide’ as a crime and expressed member states’ interest in strengthening “existing EU rules on companies’ environmental liability to reduce and prevent environment harm” (European Parliament, 2021, para. 1). Just a month afterwards, Stop Ecocide published its official definition of ‘ecocide’. An expert panel of “diplomats, politicians, lawyers, corporate leaders, NGOs, indigenous and faith groups, influencers, academic experts, grassroots campaigns and individuals” (Stop Ecocidee, n.d.d.) crafter the following: “unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts” (Stop Ecocide, 2021). Shortly after, 17 ICC member states held parliamentary or government-level discussions on the potential recognition of environmental crime (ICC, 2021).

In the past half century ‘ecocide’ has developed into a key term concerning (inter)national environmental law and climate action advocacy. Acknowledged by multiple worldwide stakeholders, from the UN and EU, throughout governments around the globe, this climate litigation movement has been implemented through domestic laws and various international proposals. Nevertheless, are many of these existing laws only applicable in wartime, lack an exact parametrization for the element of intention. Furthermore, most of the countries present low rule of law enforcement and high levels of corruption. Therefore, environmental destruction is still often conceived as collateral damage of conflict, and considered a crime taking place during peace, anywhere in the world. This dichotomy seems to indicate that the phenomenon of ecocide only takes place in the context of armed conflict. Anyways, the environmental destruction prior to the Syrian Civil War, and the close climate-conflict nexus this case shows – elaborated in the fourth chapter – emphasize the need for an all-encompassing international ‘ecocide’ law, to prevent such climate-catalyzed conflicts in the first place.

This extensive body of literature presents evidence of a recognized link between resource scarcity – such as water, and environmental degradation and natural disasters – in combination with socioeconomic and political tensions, that in turn lead to armed conflict and forced displacement. The discussed academic works underscore that an interdisciplinary lens is essential to comprehend the intricate interplay of the climate-conflict nexus. Furthermore, it lays out the growing consensus on both expanding the notions of refugeedom to include victims of the climate crisis within an internationally binding framework, and acknowledging 'ecocide' as a fatal phenomenon, recognizing the involved lethality of the two. Simultaneously, this chapter also identified a gap in the literature and overall international relations discourse concerning comprehensive research linking all the mechanisms of climate-conflict nexus, environmental refugeedom, and ecocide. There seems to be a lack of research on the complex interplay in the disciplinary discussion of climate change, global politics of violence, and area studies concerning the SWANA region. Therefore this dissertation contributes to the literature and overall international relations debate by making such an academic innovation. Building upon these findings and identified relations, this thesis aims to to expand the understanding of these complex processes, by delving into the case of the Syrian Civil War. This dissertation's analysis seeks to further the already conducted research and focus on this specific example, that illustrates the rather theoretical argumentations. By unraveling how the climate crisis catalyzed the armed conflict, into ultimately culminating in a massive refugee flow, arguably described as ecocide, this dissertation seeks to shed light upon the often forgotten human suffering underneath the veil of violence and disaster. For that sake, the following chapter outlines the main theoretical framework and methodological approaches employed to discern this intricate interplay.

3. Theory and Methods

3.1 Theoretical Framework of Climate-Catalyzed Conflict and Ecocide-Induced Environmental Refugeedom

The research question that guides this thesis is "How does the climate crisis as a catalyst of armed conflict lead to a massive refugee flow as a form of ecocide?". It acknowledges the climate crisis as the complex and multifaceted phenomenon it is, that can even lead to escalating tensions and violence. It also presents forced displacement as a consequence of these multiple variables and underscores its scale and challenge. Including 'ecocide' highlights the harm and severity imposed on both the environment and humanity.

The core argument this dissertation posits is that environmental refugees face a lethal and multifaceted risk when fleeing from both the climate crisis and (its partially induced) armed conflict. The independent variable hence is the climate crisis, representing the previously mentioned umbrella of environmental degradations and their consequences on populations. These are compelled to migrate from their homes due to deteriorating living conditions. The dependent variable thus becomes the massive refugee flows that happen out of that intersection, since this outcome alters through multiple variables and presents various degrees in terms of numbers, regions, and causes. Accordingly, the climate crisis, by driving armed conflict, leads to environmental refugees, visualized in the diagram below (Figure 1). This scheme illustrates the climate crisis's direct impact on armed conflict, its in-between steps concerning the environment, living conditions, and socioeconomic and political tensions. Additionally, the diagram embodies the forced displacement that arises from the climate-conflict nexus, leading to environmental refugees. Lastly, the phenomenon of 'ecocide' is depicted as a way to encapsulate both the climate crisis's severe, long-term, and widespread damage, and the human cost of fleeing from its consequences. In line with the aforementioned political order implications, this thesis departs from resource, economic, and human insecurity undermining the established political order, as a driver of armed conflict and forced displacement (Brownlee, 2013; Lautensach & Lautensach, 2020; Mildner et al., 2011). As an ongoing and complex process, impacted by multiple variables, it is vital to consequently unravel the intricate relationships and interactions between these variables from an interdisciplinary approach to shed light on the manifold points of view from environmental science, conflict and political studies, and humanitarian research.

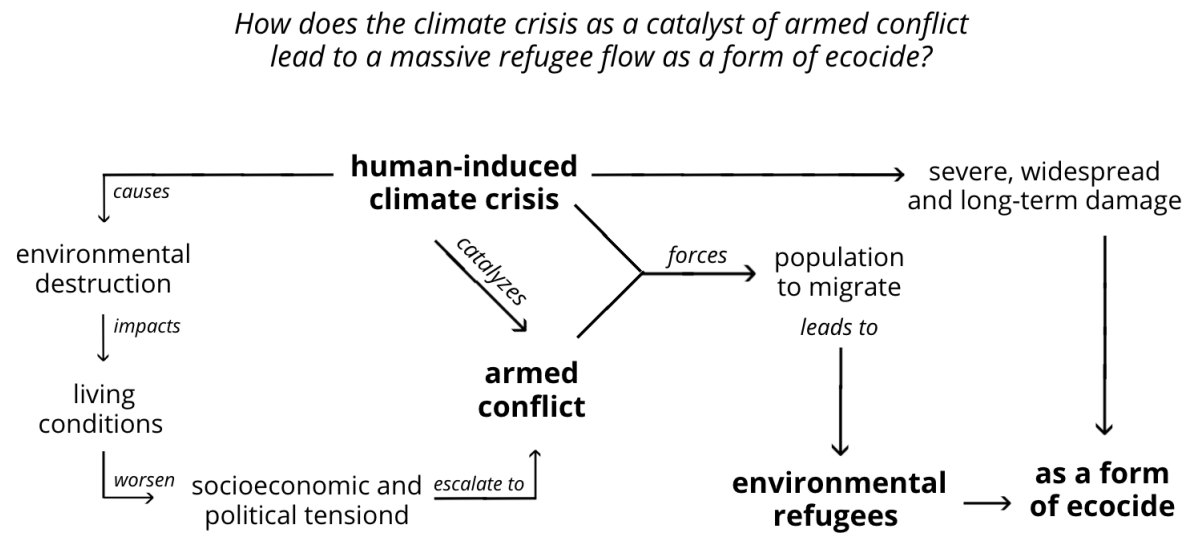

Figure 1: *Diagram visualising the thesis's core argument.* Created by the author. 2023.

After the above literature review, this section will first outline the key concepts employed throughout the analysis, to clarify what exactly is meant when using those. For the purpose of this thesis, the definitions have been chosen from a wide range of different connotations.

First, this dissertation mainly refers to 'climate crisis', instead of 'climate change' or 'global warming'. The recently published Climate Dictionary defined 'climate crisis' as "the serious problems that are being caused, or are likely to be caused, by changes in the planet's climate, including weather extremes and natural disasters, ocean acidification and sea-level rise, loss of biodiversity, food and water insecurity, health risks, economic disruption, displacement, and even violent conflict" (UNDP, 2023, 21). This thesis opts to employ this term rather than 'climate change', since the latter does not fully encompass the consequences that global warming has on society, public health, migration flows, and (in)security (Zeldin-O'Neill, 2019). Additionally, 'change' may indicate that this is a mere shift in weather, neglecting to stress its 'human-induced' aspect. This dissertation calls to pay attention to the consequences that human activity has had on the planet, affecting all species, including humans. Considering that two-thirds of the Earth's average temperature has increased by 1.2° C since the 1800s, it is clear to say that the contemporary global capitalist production model has led to the Anthropocene (idem; Waters et al., 2016). Lastly, 'crisis', or similarly used 'emergency' (Zeldin-O'Neill, 2019), emphasizes the pressing urgency and increasing danger this chain of events entails.

Second, this thesis takes 'armed conflict', alternatively of war or military struggle, to refer to violence among organized groups. The Geneva Conventions, at the core of international humanitarian law are "the body of international law that regulates the conduct of armed conflict and seeks to limit its effects" (International Committee of the Red Cross, 2014). It also encompasses civil wars in its Article 3 on non-international armed conflicts (idem; International Humanitarian Law Database, 2016), which account as non-international armed conflict in which non-state actors engage in military hostility with governmental forces. The Syrian Civil War also falls into this category of war due to its government versus non-state

nature, its long-lasting aspect and organized hostility character, and the international recognition it has had (OHCHR, 2022a).

Third, to allude to people fleeing from the climate crisis' consequences, this dissertation harnesses 'environmental refugees', also in alternation to 'climate migrants'. As previously presented, the nexus between environmental degradation and the phenomenon of refugeedom is academically acknowledged (IPCC, 2022). Anyways, the exact term to use is quite contested in the literature, since nuances between 'refugee' and 'migrant' differentiate, respectively, regarding the need and threat, and the "mere" movement of migration. Since no internationally recognized official definition exists, the formulation by the International Organization for Migration is taken to showcase the idea: "Environmental migrants are persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad" (IOM, n.d.b., para 4.).

Fourth, the term 'ecocide' embodies the destruction and damage to the environment induced by human activities, particularly emphasizing the anthropogenic character. Stop Ecocide, an international foundation advocating for the international legal and political recognition of this concept, published a definition breaking down each aspect of its complexity. A panel composed of various experts from politics, law, humanitarian work, science, and indigenous groups crafted the organization and overall movement's official definition in 2021: "unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts" (Stop Ecocide, 2021). In addition to its ecological implications, 'ecocide' also encapsulates the adverse consequences for human societies, ranging from health risks, food (insecurity) and water stress, up to forced displacement. This dissertation employs this concept to both underline the human-induced aspect of the climate crisis, and the threat it poses to human existence. For that purpose, the criteria to identify 'ecocide' will be in line with Stop Ecocide's definition of 2021, that also overlaps with the characteristics of the 1972 ENMOD Convention (ICRC, 1976). 'Unlawful or wanton acts' refers to the neglect of consequences on the environment by activities, in this case, disregard towards the climate crisis. and also within governmental policies. The aspects of 'severe and either widespread or long-term damage' becomes evident when considering the lethal, exponential, and longeveous consequences on the environment, and hence its inhabitants, to the extent of forcing them to be displaced for multiple years, even beyond national borders.

Now that the main concepts have been mapped out it is crucial to lay out the theoretical considerations that guide this thesis' analysis and structure. This dissertation follows the above-discussed scientific logic that the human-induced climate crisis catalyzes armed conflict, which leads to environmental refugees as a form of ecocide. The steps that underpin the premise go as follows: The human-induced climate crisis, by surpassing the safe threshold of greenhouse gas emissions, causes environmental degradation; in the form of global warming, ecosystem damage, rising sea-levels, droughts, floods, extreme weather phenomena and natural catastrophes like hurricanes, earthquakes, or tsunamis. These impact on living

conditions by producing crop failure, resource scarcity, food insecurity, water stress, and loss of habitability. Consequently, these worsened circumstances entail socioeconomic and political tension, inflicting increased poverty and inequality, creating competition for limited resources and disputes over territory; which when escalating can rise to armed conflict. Both environmental degradation and armed conflict (resulting from the former) force populations to migrate, which seek refuge elsewhere to survive. By endangering and even lethally threatening humans in such a manner, linked to the destruction of the environment, the phenomenon of ecocide takes place. This fatal chain of tragedies and crises is discussed in the fourth and fifth chapters, which present the intertwined processes and in-between steps that led the Syria's population from environmental neglect and destruction, to social instability and political tension, and culminating into a lethal civil war and refugee crisis.

3.2 Qualitative Case Study Methodological Approach

The Syrian Civil War will serve as the primary case study to practically demonstrate the intersection of the climate crisis and armed conflict, and its consequential phenomenon of environmental refugees. As the analysis will show, this case study serves as a clear example of the climate-conflict nexus, since it illustrates how the severe and prolonged drought of the mid-2000s led to the eventual outbreak of the war in 2011, still ongoing today. The temporary scope ranges from Hafez al-Assad's rise to power in 1970 until around 2015, the peak of the Syrian refugee crisis. Its historical and political context highlights the consequences of pre-existing deteriorating environmental circumstances worsening due to the neglect of addressing the climate crisis, in combination with the ongoing socioeconomic disparities and political instabilities in a fragile and authoritarian state. Moreover, the Syrian Civil War presents one of the highest indexes of forced displacements and entails a still ongoing significant refugee crisis, forcing millions to flee in over a decade (UNHCR, 2023). As one of the most longevous armed conflicts of the past decades, involving environmental degradations and leading to a massive refugee flow, it illustrates the phenomenon of refugees fleeing from an intersected threat.

The main employed analytical approach is a qualitative data collection analysis, looking into both primary and secondary sources, to provide both testimonies of eyewitnesses for first-hand understanding of events, and expert interpretations of the events. Resorting to qualitative social science research methodologies allows to understand complex phenomena and explore them through an interdisciplinary lens (Schwartz-Shea & Yanow, 2013). This dissertation draws from the benefits of these qualitative methodologies to showcase multiple actors and points of view, an aspect underlined in Yanow's work (idem). Other – qualitative social science – methodologies include archival research through policy documents and historical archives, and governmental and scientific records, to grasp the long-term consequences of certain policies and occurings. The conducted analysis requires to understand the wider context of the Syrian country, in regard to its politics, history, geography, and environment. Content analysis of contemporary newspaper articles and academic publications enables the acquisition of insights into multiple perspectives, through a nuanced and diverse scope, in line with social science standards (Van Evera, 1997). These various texts and studies are reviewed by the author, embedding both older and more recent

sources to ensure a comprehensive, up-to-date, and interdisciplinary analysis. Lastly, the choice of a single case study research on the Syrian Civil War provides an in-depth examination of this particular event within its unique context and unfolding (George & Bennett, 2005). Such empirical richness, in terms of source typology and discipline, enhances a broad documentation of a unique case study.

Diving into the concrete case of the Syrian Civil War allows to contrast the rather theoretical literature with a real example, among all of its complex variables, and recognize patterns and causal mechanisms (idem; Van Evera, 1997). Since the Syrian Civil War has been ongoing for over a decade, and some of its causes date back decades ago, such a wide temporal focus is essential. In this sense, this case study draws from the plausibility probe as a methodological tool, to develop a logical coherence within the argument (Van Evera, 1997). Additionally, the conducted analysis assesses the credibility of the hypothesis by building upon available evidence. It is important to note that all the employed sources have been read in English. Some of the texts have been translated from other languages, such as Arabic or French, thus might have lost some uniqueness or accuracy in terms of nuance. This language barrier remains an acknowledged constraint concerning access to information and researching individual experiences and opinions. To guarantee academic credibility and traceability, sources are selected and verified with academic rigor, cited throughout the dissertation, and listed at the bottom of the thesis, in line with methodological rigor (George & Bennett, 2005, Van Evera, 1997).

The structure follows the above-outlined theoretical considerations. The following chapter chronologically analyzes the various factors contributing to and unfolding during the outbreak of the Syrian Civil War and the refugee crisis. The three sections are divided between smaller segments, to discern the main determinants and events. The first section starts with the governmental circumstances and environmental conditions, in the decades prior to the conflict. Then, the second section elaborates on how the climate crisis worsened socioeconomic and political conditions, and deteriorated the environment. The third section analyzes how the previous conditions led to the escalation of armed conflict and forced displacement. In this way, the initial contextualization serves to navigate the following complex chain of in-between steps, to then understand the dramatic atrocious consequences. The fifth chapter sheds light upon the lethality of seeking refuge from both the climate crisis and armed conflict, by employing the concept of ‘ecocide’. This term serves to stress the threat that the climate crisis poses to both ecosystems and human population, by perpetuating environmental destruction, armed conflict, and forced displacement. This chapter illustrates the blend of all the thesis’s different components, by advocating for international recognition, in law and politics, of the joint and individual phenomena of ecocide and environmental refugees, and to acknowledge their threat.

4. Case study of Syria: Drought, Despair, and Displacement

The purpose of this chapter is to link the core argument, on the climate-conflict nexus leading to environmental refugeedom as a form of ecocide, to the case study of the Syrian Civil War and its consequential refugee crisis. The following sections illustrate this dissertation's claim that environmental destruction and violence – through a complex and intertwined interplay of ecological, socioeconomic, political, and demographic factors – induce a massive refugee flow, beyond national borders. The Syrian Civil War and refugee crisis are taken as the guiding cases to exemplify a climate-catalyzed conflict leading to forced displacement.

4.1 The Tale of Environmental Degradation within an Authoritarian Regime

4.1.1 Historical and Political Context of Syria

It is crucial to lay out the previous circumstances of Syria, before the mid 2000s, to understand the aftermath of decades-long dictatorship and repression. The provenance of the Syrian Civil War gives away the circumstances in which environmental degradation was occurring within the authoritarian regime, providing historical and political context. As previously mentioned in the Literature Review, scholars have noted that political and socioeconomic factors are disregarded, or at least neglected, when researching on the intersection between the climate crisis, alongside its environmental degradation, and armed conflict (European Parliament, 2022; Gleditsch, 2015; Theisen et al., 2013). The outbreak of the civil war has been explained by linking complexly intertwined factors such as religious and sociopolitical tensions, with "challenges associated with climate variability and change and the availability and use of freshwater" (Gleick, 2014, Abstract). This subsection dives into the political background in which environmental degradation transcurred. It is crucial to lay this contextualisation to understand how the, still ongoing, Syrian Civil War emerged and prevailed as one of the most longevous and lethal conflicts of this century. The following segment maps out the establishment of the Syrian state and its government until before the outbreak of the war, emphasizing the decade-long personalist regime and lack of democracy.

Firstly, it is essential to stress the political foundation of the Syrian Arab Republic. After centuries of Ottoman rule, and a few decades under France's colonial mandate (1923–1946), the modern Syrian state was established and declared a republic with a constitution in 1947 (Khan & Khan, 2017; Zahler, 2009). Once independence was gained, the Levant country[2] underwent a couple of decades of political instability (1949-1971), in the form of a series of military coups and government changes (idem). This political turmoil birthed and witnessed the rise of the Ba'ath Party. In the 1963 coup d'état its military committee established a one-party state. With a pan-Arab nationalist and socialist ideology, the party had been advocating since the 1950s for wider unity across the Arab World, state secularism, and socialist economics (Dhalla, 2017; Hinnebusch, 2015; Zahler, 2009). In 1970 one of its members, the military officer Hafez al-Assad, seized control of the Syrian government and became the country's President until his death in 2000. Due to his own religious affiliation, the Alawi ethnoreligious group that splintered from Shi'ism in the 9th century, he allocated

[2] The term 'Levant country' can refer to many states, however this thesis uses it to mean Syria

loyalists and like-minded in power positions throughout politics, bureaucracy, education, armed forces, and the overall ruling elite (Dhalla, 2017; Hinnebusch, 2015). Considering Syria's majority of Sunni Muslims, Alawi have only composed about a 12 percent of the population in the past half-century, and thus formed an Alawi minority rule through the personalist regime centered around the Assad dynasty in a cult manner through a façade of a presidential republic. Hafez al-Assad's rule was characterized by authoritarianism, suppressing the political opposition, and overall repression towards the population that voiced disagreement (idem).

After Hafez al-Assad's death in 2000, his son Bashar al-Assad inherited Syria's presidential rule, in line with the personalist regime and the Ba'ath Party, both deeply embedded in the state's political system (Hinnebusch, 2015; Khan & Khan, 2017; Yassin-Kassab & Al-Shami, 2018; Zahler, 2009). Initially, the turn of the millennium sparked hope for political and economic reforms, and to end the constant state of emergency, in force since 1963, "suspending constitutional rights, legalizing surveillance and media censorship" (Yassin-Kassab & Al-Shami, 2018, 18). Although optimism for freedom was nurtured through the tolerance of democratic civil society organizations and a certain degree of liberalization in the early 2000s, the Assad authoritarian regime maintained a violent and firm grip on power and continued to suffocate opposition movements (Human Rights Watch, 2010; Yassin-Kassab & Al-Shami, 2018). Alongside the increasing tensions between the Alawi Assad government and ethnic groups, such as Kurds and the Sunni majority; the authoritarian regime prevented the emergence of a multi-party system and freedom of speech and press, and perpetuated several human rights violations against its critics, including persecution, imprisonment, and torture (idem).

4.1.2 Environmental Circumstances and Water Scarcity

The environmental circumstances must be outlined in order to comprehend their impact on society and politics. As previously mentioned in the Literature Review, water has been argued to be a catalyst of armed conflict, especially in developing countries, and regions with regular droughts and difficult access to abundant and safe water (Daily & Ehrlich, 1992; European Parliament, 2022; Gleick, 1994; Hatami & Gleick, 1994; Homer-Dixon et al., 1998; IPCC, 2007; IPCC, 2014; IPCC, 2022; Koubi, 2019; Lonergan, 1997; Institute for Economics & Peace, 2020; Renner et al., 1991; Wirkus & Schure, 2008; Wolf, 2007; Yoffe et al., 2001). Therefore, the geological, and concretely hydrological, conditions must be taken into account to understand the Syrian droughts of the 2000s. A comprehensive NASA study showed that the 1998–2012 drought epoch in the SWANA region was the worst to occur in the past 900 years (Cook et al., 2016; Tharoor, 2016), and it has been suggested that climate crisis has been the main driver of worsening the environmental conditions (Gleick, 2014; Kelley et al., 2015). There is evidence that the climate crisis influenced droughts in the Eastern Mediterranean area by reducing winter rainfall and increasing evapotranspiration (Gleick, 2014). In 2013 the overall SWANA region "received only 2.1% of world average annual precipitation and contained only 1.2% of renewable water resources, while its population amounted to more than 5% of the global population and its land occupied about 10% of the world's land area" (Daher, 2022, 6). Moreover, the SWANA area has been identified among

the “three clusters of ecological hotspots, which are particularly susceptible to collapse” (Institute for Economics & Peace, 2020, 2) and explicitly labeled as the “the most water stressed region globally” (idem, 16). The climate crisis has been suggested to be a main driver of the regional severe drought, and that this water stress situation will worsen in the coming two decades, with 18 out of 20 SWANA countries facing high levels of deterioration (idem).

Syria is located in the Levant, namely the Eastern Mediterranean part of West Asia. Because of its geography, it presents a diverse and rich landscape of geological elements such as the Syrian Steppe desert in the East and center, the Al-Anṣariyyah mountains in the West, and fertile coastal plains. The coastal mountain ranges, running parallel to the Mediterranean in the West, receive the moist air coming from the sea. Through condensation over the mountains, the orographic effect takes place in the West, with increased rainfall on the coastal areas of the country – and the rain shadow effect occurs in the East, with the interior remaining in rather arid conditions, such as the desert (Daher, 2022) (see Figure 2 and Table 1). Hence, water resources, agriculture, and ecosystems vary across the entire Syrian country within different climate zones. The Euphrates in the East, as the country’s major river, has historically provided freshwater for irrigation and domestic and industrial purposes (Fanack, 2019a). Important to note, that Syria’s population has heavily relied on its own agriculture for food consumption, and the cultivation of crops is a key sector of the state’s economy, in term of GDP and workforce (idem; Institute for Economics & Peace, 2020). In Syria wheat has historically been the crop to cover the largest area, increasing from 800.00 ha in the 1960s to 1,5 million ha by 2010 (Aw-Hassan et al., 2014; Saleeby, 2012).

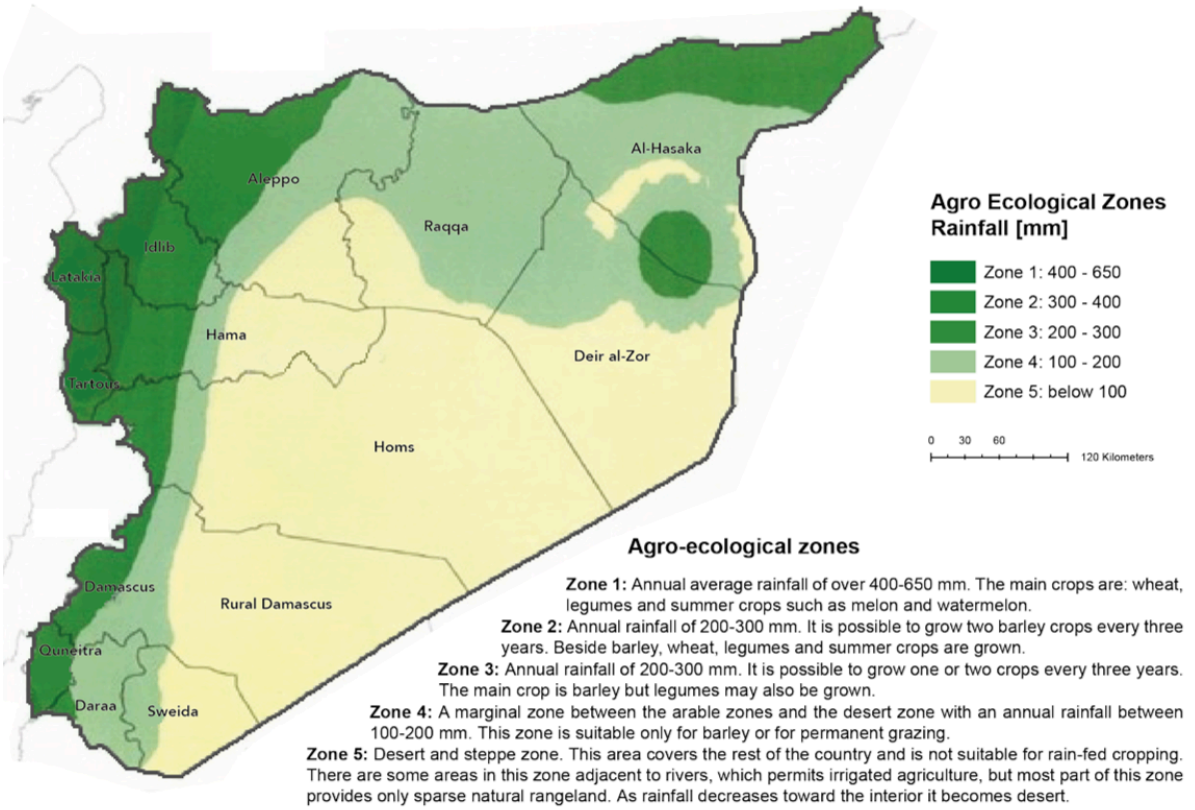

Figure 2. *Map of the Agro-Ecological Zones in Syria*. FAO (2021).

	Al-Hasaka	Deir al-Zor	Raqqa	Aleppo	Idlib	Latakia	Tartous	Hama	Homs	Daraa	Sweida	Rural Damascus
1983/84	58	68	48	51	72	100	94	89	83	74	91	64
1985/86	106	106	131	75	97	102	83	97	70	73	78	54
1986/87	85	35	47	89	120	95	111	101	109	114	120	84
1988/89	70	59	85	57	70	79	61	70	65	101	80	71
1989/90	70	83	81	67	75	72	65	54	57	123	113	76
1991/92	236	65	89	82	60	120	122	109	154	156	164	127
1992/93	161	124	130	76	92	83	80	110	57	83	96	146
1993/94	97	105	83	60	98	93	92	70	66	70	96	96
1998/99	48	27	46	84	95	93	83	78	58	39	40	36
1999/00	44	52	46	77	83	93	84	79	64	56	72	59
2007/08	31	38	42	139	103	95	99	84	116	82	59	57
2008/09	56	59	59	96	103	97	96	91	128	103	95	71
2009/10	67	103	51	119	94	83	96	83	99	104	109	96
2010/11	72	77	55	100	114	97	143	98	105	105	91	137
2011/12	61	59	74	147	151	164	119	136	116	114	127	63
2013/14	71	85	102	49	39	48	37	65	62	75	79	85
2015/16	157	105	106	80	49	47	68	73	86	99	110	52
2020/21	59	51	58	68	64	82	115	79	96	98	78	99

Moderate Draught: Annual precipitation between 40-59% of the LTA **Severe Draught**: Annual precipitation below 40% of the LTA

Table 1. *Precipitation recorded in the driest seasons from 1980 to 2021 by governorate (percent of the annual long-term average for each governorate)*. FAO (2021).

Syria has historically faced significant water scarcity issues due to, among others, the overall low annual precipitations, the over-extraction of groundwater for agricultural use, and water demands (Fanack, 2019a). In the majority of the SWANA region, agriculture is the largest consumer of water, accounting for an average of 85 percent of the entire supply (Aw-Hassan et al., 2014; Richards & Waterbury, 2008). Agriculture accounts for about 87 percent of withdrawn water from Syrian sources such as aquifers, rivers, and lakes; which severely dries out the groundwater resources (FAO AQUASTAT, 2012; Aw-Hassan et al., 2014). Especially the arid areas in the center and South have suffered from a lack of availability and uneven distribution. Out of the country's 18,5 million hectares, the annual rainfall average of almost 14 is less than 400mm. Additionally, in the past decades, water resources available per capita decreased from 12,185m3 by 1992 to 809m3 by 2011, especially in rural areas, which is below the 1,000m3 per capita internationally set level for water scarcity (idem; Aw-Hassan et al., 2014; FAO AQUASTAT, 2012; Daher, 2022). Between 1999 and 2011 "approximately 60 per cent of Syrian land underwent two long-term droughts" (Institute for Economics & Peace, 2020, 47). A United Nations analysis covering 40 agricultural seasons from 1980 on found that "the most severe, widespread droughts occurred during the agricultural seasons of 1998/99, 1999/00, 2007/08 and 2008/09" and concluded that drought often extended during consecutive seasons (FAO, 2021, 2).

These claims on prolonged severe drought periods have been supported by other scholars, with the exact years placed slightly differently, 1999-2001 and 2006-2009, but overall identifying the same seasons (Daher, 2022), and agreeing on the late 2000s drought as the worst ever recorded in Syrian history (idem; Cook et al., 2016; Gleick, 2014; Tharoor, 2016). During the drought of the late 2000s there was a multiseason and "multiyear period of extreme drought that contributed to agricultural failures, economic dislocations, and population displacement" (Gleick, 2014, para. 7). Precipitation lows reached historic records, especially in the governorates in the North-East and the South-West, throughout the entire desert as well (FAO, 2021; Femia & Werrell, 2012). The severity of these droughts impeded the production of wheat in 2007 and 2008, and losing up to 85 percent of livestock (Femia & Werrell, 2012; Institute for Economics & Peace, 2020; Saleeby, 2012) despite this crop being one of the country's main agricultural assets (Kelley et al., 2015). The Levant country has been underlined as one of the four most endangered ones in the region concerning specifically water stress and thus placing it as one of the most ecologically threatened countries in the world (Institute for Economics & Peace, 2020), especially since rain is the main water resource in Syria (Daher, 2022).

Multiple scholars have indicated that both the global climate crisis and the regional long-term mismanagement and neglect of natural resources by the two Assads' authoritarian regimes worsened the pre-existing tendency towards droughts of the semi-arid country (Daher, 2022; De Châtel, 2014; Femia & Werrell, 2012; Gleick, 2014; Hegre et al., 2016; Kelley et al., 2015; Koubi, 2019). In the decades prior to 2011, the Syrian government ministries' policies drove water scarcity and pollution. The Assad dynasty's development policies on the expansion in irrigated agriculture in Syria has been categorized into three phases by Aw-Hassan et al (2014). First, from 1966 to 1984 there was an expansion of irrigation

systems, which resulted from policies designed to improve food security, and agricultural and rural development (idem; Saleeby, 2012; Wakil, 1993). There were investments in multiple types of infrastructure, such as dams, irrigation systems, and wastewater treatment plants (Daher, 2022; Femia & Werrell, 2012). In a quest for self-sufficiency these policies entailed the overexploitation of the groundwater, freshwater shortages and land desertification during the following decades (Femia & Werrell, 2012; Kelley et al., 2015).

Second, from 1985 to 2000, the government yearly further elaborated agricultural production plans to meet the set production targets, and guaranteed the prices of the most strategic crops, such as wheat and cotton (Aw-Hassan et al., 2014; Forsythe, 2017). Farmers who complied with the regime's production schemes received direct subsidies like seeds, fuel and tools. Such incentives drove up farmer participation, which the government used to obtain well licenses and get over drilling restrictions. The largest provided agricultural input subsidy in the 1990s was for diesel fuel (idem; Varela-Ortega & Sagardoy, 2001). Therefore, despite the international oil crisis, about 75 percent of Syrian groundwater drilling and deepening of wells was financed by the government. This led to a rapid expansion of groundwater-irrigated areas and construction of wells, which incremented the wheat and cotton production. This shift entailed an irrigation-based agricultural rather than rainfed farming, setting a new standard in production but also heavily exploiting the environment and its natural resources in a short amount of time (idem). Important to note, during Hafez al-Assad's regime, most of the currently existing and operating 160 dams were constructed, including the Tabqa dam, by the Euphrates River, that created the country's largest water reservoir Lake Assad (Daher, 2022; De Châtel, 2014).

These decade-long water management decisions, followed by Bashar al-Assad's poor planning and policy errors (Daher, 2022; Gleick, 2014; Femia & Werrell, 2012; Kelley et al., 2015) sentenced Syria to being "a country marked by poor governance and unsustainable agricultural and environmental policies" (Tharoor, 2016, para. 7), the third phase that will be discussed in the next section. Although the entire wider area of the Fertile Crescent experienced a period of drought, Syria was the only country to experience a humanitarian crisis and a civil war (Femia & Werrell, 2012; Gleick, 2014; Wendler, 2015), which poses the question of why this state underwent such socioeconomic and political tension and ultimately long-lasting armed conflict. The following section dives into the various hardships that the Syrian population was facing during Bashar al-Assad's presidency, regarding socioeconomic and political challenges, water scarcity, and agricultural failure – all leading to worsened livelihoods and social dissatisfaction.

4.2 Socio-Political and Environmental Corrosion of Syria

4.2.1 Worsening Socioeconomic Conditions and Political Tension

Bashar al-Assad's first decade as a president has been described as "the period of time when the revolutionary seeds were sown and slowly sprouted up" (Brownlee, 2013, para 2). During his initial time as a ruler there were a series of happenings that fueled the social frustration, economic despair, political dissent, and livelihood struggle, that alongside environmental degradation and resource scarcity later sparked the escalation to armed conflict. The

continuation of the Assad dynasty's regime had "systematically created or deepened the divisions in Syria politically, economically, and socially in order to maintain a divided people incapable of rising up together against his unjust rule" (Ziadeh, 2015, 232). This subsection explores the intricated relationships between all these dynamics. It is crucial to note that the interplay of these variables is not a linear process, but rather engaging in mutual causation, reciprocally influencing one another.

Regarding political reproaches, the Syrian government Assad had three opportunities to meet popular demands, which he missed (Brownlee, 2013). First, at Assad's succession to power in 2000, by not conceding a transition free of bloodshed and suppression. In the early 2000s, within the previously outlined background of authoritarianism, there had been some initial hope for democracy, transparency and compliance with human rights (Brownlee, 2013; Human Rights Watch, 2010; Yassin-Kassab & Al-Shami, 2018; Ziadeh, 2015). The so-called Damascus Spring, a short period during which citizens privately discussed political reforms and modest demands, was characterized by the emergence of forums for social debates, led by the opposition and Syrian intellectuals. In early 2001 over 20 of these informal groups were allowed to function in the entire country, ranging from human rights advocates to the Sunni Muslim Brotherhood (idem). Nevertheless, the Damascus Spring abruptly ended in January 2001, when Assad's regime called out these civil society organizations to resemble political parties too much. Half a year later the government's armed forces resumed the prosecution of opposition leaders and outspoken lawmakers as political prisoners, the arrest of journalists and human rights activists (Ziadeh, 2015; Zisser, 2003). This took place alongside repeated corruption behind an opaque governmental decision-making process that gave no explanation of the sudden change despite initial promises of expanding freedom. The state of emergency, enacted in 1963, still prevailed to justify Assad's use of the Supreme State Security Court, to sentence people without fair trials, and the security agencies to torture detained citizens. The Ba'ath Party remained as ruler of a de facto single-party state, controlling the access to information by censoring various news outlets and books (Brownlee, 2013; Zisser, 2003). The ban on all independent publications in 1963 and Bashar al-Assad's 2011 new Press Law had enabled the Assad dynasty to restrict the criticizing voices that objected to the authoritarian regime (Human Rights Watch, 2010).

The second chance Assad missed was in 2005 by not listening to the 'Damascus Declaration', in the light of the international tension concerning Iraq and Lebanon. The third, not clearly time-limited but instead encompassing from the mid 2000s on, by again dismissing the demands for democracy and reform by human rights groups (Brownlee, 2013; Wieland, 2012). The October 2005 'Damascus Declaration' called for democratic reforms and the end of the state of emergency. The historic document brought together for the first time all major opposition parties, ranging from secular figures to Muslim, Kurdish and Muslim Brotherhood groups (Brownlee, 2013). The Kurdish minority had been stripped from cultural and linguistic rights and when voicing these grievances in large-scale demonstrations in 2004, they were met with further oppression and lethal force. Many Syrian Kurds were still being denied citizenship, in line with the 1960s government's exceptional census and that left hundreds of thousands of Kurds stateless. Assad had promised laws to broaden

ethno-religious representation and civil society participation, and in 2005 the Ba'ath Party Congress recommended establishing a new law for creating non-religious or ethnic political parties. Nevertheless, none of these predicaments on widening political pluralism were solved (Human Rights Watch, 2010).

Syria faced significant foreign policy issues in the 2000s, due to two major events. First, the 2003 US invasion of Iraq caused a heavy refugee flow into neighboring countries (Forsythe, 2017; Kelley et al., 2017). Syria was the country in the SWANA region to host the highest amount of Iraqi refugees, namely a few hundreds of thousands since the start of the war (Wilkes, 2010), and 1,2 million refugees by the beginning of 2007 (Al-Miqdad, 2007). Considering the back-then Syrian population of 18 million, this huge influx negatively affected Syria's limited resources such as water and supposed an economic burden on its health and education services, and employment infrastructures (idem). Additionally, the Iraqi war, causing massive forced displacement, has been argued to "raised the cost of oil with evident consequences for the cost of living and the increase in numbers of those who lived below the poverty line" (Brownlee, 2013, para 3; Brown & Crawford, 2009; Ziadeh, 2015). Second, the 2005 political crisis in Lebanon had international consequences, also on Syria (Harris, 2007). Since the Levant country was suspected to have assassinated the Lebanese President Rafik Hariri in 2005, Syria withdrew from its neighbor due to political pressure. This loss of political influence "exacted a high price in terms of international accountability and economic recession" (Brownlee, 2013, para 3). Syria became isolated by Western powers, undergoing economic sanctions, which worsened the national economy (idem; Harris, 2007). Independently of these international events, Assad had already employed consistent repression of popular dissent previously. The economic pressures resulting from the Iraq war and the international isolation contributed to the worsening conditions of Syria's opposition politicians, journalists and human rights activists, despite several encounters with EU and US political representatives.

Assad argued in public interviews that the lack of political amelioration was due to the more urgent need for economic reform (Human Rights Watch, 2010; Ziadeh, 2015). Furthermore, in the inaugural speech of 2007 after his second term endorsement, he justified the hindering of development through interferences of regional circumstances for the sake of security and stability, with 97.6 percent of the vote, as the only candidate within non-transparent elections (idem). There he also raised the possibility of amending the media law, in response to complaints by journalists, anyhow no such law was introduced (Middle East Web, 2007). Moreover, Assad did not establish public institutions to surveill finances or showed any intention of redistributing profit, despite his effort to improve the opening up of the economy, in an attempt to tackle low degrees of growth rates and diversification. This lack of transparency, alongside high levels of unemployment, exposed the country to multiple structural issues, including a heavy reliance on the oil sector. But since oil production was declining in the 2000s, the Syrian government lost a substantial source of its income. This decline in oil revenue strained the state's finances and hence impacted Assad's ability to address economic challenges. This intertwined combination of factors worsened living conditions and increased socioeconomic discontent. These years-long grievances sparked a

significant sentiment of socioeconomic and political frustration, related to employment opportunities, economic disparities, and lack of political representation (Human Rights Watch, 2010; Ziadeh, 2015).

4.2.2 Drowning Fields and Thirsty Population

Various scholars (Aw-Hassan et al., 2014; Daher, 2022; Femia & Werrell, 2012; Forsythe, 2017; Gleick, 2014; Haddad et al., 2008; Kelley et al., 2017) have pointed out that factors related to the prolonged drought period, "including agricultural failure, water shortages, and water mismanagement… played an important role in contributing to the deterioration of social structures and spurring violence" (Gleick, 2014, para 8). As previously mentioned, issues regarding water management, scarcity, and distribution have prevailed in Syria's history, long before the outbreak of the civil war. The two successive presidents implemented policies that caused high degrees of water scarcity and pollution, alongside the recurring droughts, rising water needs of the increasing population, and mismanagement of water pollution and waste (Daher, 2022). The third phase of the above outlined Assad dynasty's water mismanagement, elaborated by Aw-Hassan et al (2014), went from 2001 to 2010. Bashar al-Assad faced the "challenge of dealing with groundwater depletion while ensuring food security", considering the demographic growth of the 2000s (idem; para 14; Brown & Crawford, 2009; Forsythe, 2017). Assad's response to the drought was criticized for further exacerbating the pre-existing social and economic disparities (Gleick, 2014). In the name of economic development aims, and to achieve self-sufficiency and stabilize farm incomes, the Assad government devoted 70 percent of its total agricultural budget to irrigation subsidies (Haddad et al., 2008). The amount of groundwater-irrigated areas, and especially wells continued to grow in this decade, since farmers were expecting past-similar water extraction levels and agricultural production. This has resulted in "the natural recharge of the aquifer and that eventually the aquifer might go dry" in some areas like Tel Hadya (Aw-Hassan et al., 2014, para 17). In combination with the previous decades, by 2010 Syria had experienced about forty decades of unsustainable water policies.

Assad's groundwater policies had focused on short-term gains in agriculture for irrigation abstraction, worsening the pre-existing drought and leading to water scarcity (Aw-Hassan et al., 2014; Femia & Werrell; Forsythe, 2017; Kelley et al., 2017). Despite having achieved food policy objectives, governmental fuel subsidies and crop procurement price supports further incentivized such unsustainable use of groundwater. The rapid decrease of groundwater availability demonstrated that Assad's agricultural development strategy did not consider long-term consequences on the natural resource and thus farm productivity. Syria, within the broader SWANA region, is under the risk of unsustainable water management such as groundwater over-extraction and aquifer depletion (idem). The increase of water use of agriculture was underestimated and even overlooked by scholars and scientists, that focused more on its effect on income and food security, rather resource sustainability and capacity. By disregarding the enduring effects of the climate crisis, the prolonged drought was compounded by the poor governance of Assad, which "perpetuated mismanagement and neglect of Syria's natural resources, which have contributed to water shortages and land desertification" (Femia & Werrell, 2012, 3). By subsidizing water-intensive crops like wheat

and cotton farming, the government blundered water resources and even encouraged its waste by enabling inefficient irrigation techniques (idem; Forsythe, 2017).

By the same token, because of these water shortages, induced by both the global climate crisis and regional human neglect, farmers turned to the groundwater resources to meet their supply, hence drying up the wells and aquifers even further (idem). Syria's National Agricultural Policy Center reported "an increase in wells tapping aquifers from just over 135,000 in 1999 to more than 213,000 in 2007" (Femia & Werrell, 2012, 3). This water pumping had led to a significant decline in groundwater levels across various regions in Syria and raised considerable concerns regarding the water quality in the remaining aquifer stocks (idem). This intense water pumping was only possible due to the governments' subsidization of the required oil. Diesel fuel had been used as a main energy source throughout decades to power groundwater abstraction in Syria. In 2011 diesel prices in Syria increased with the world oil price surge, but still remained sustained by the regime, and accounted for the country's 5 percent yearly GDP (Aw-Hassan et al., 2014; The Economist, 2011). In a quest of economic stability, sacrificing groundwater resources, the population's living conditions worsened. Although over 90 percent of Syrians officially had reliable access to safe water (before 2011), there were significant disparities between the urban and rural communities, the latter receiving 6 percent less. The rural population, rather disadvantaged concerning water, also suffered under a lower per capita consumption, with a difference of over 40 liters a day, and a 20 percent disparity of connection with sewage networks. The most drastic ratio related to the disproportionate water access was that only 7 percent of the rural regions, but 71 percent of the urban areas, had connections to wastewater treatment plants (Daher, 2022; Fanack, 2019b; ICRC, 2021).

This water scarcity, caused by the human-induced desertification, had a profound impact on the Syrian population and contributed to rising socioeconomic tensions and worsened living conditions in the following ways: "a) by increasing pressure on urban infrastructure and services; b) undermining economic growth; c) by increasing the risk of social instability and/or triggering further movement through illegal migration; and d) by leading to worsened health, educational and social indicators among the migrated population" (ICRC, 2009, 2). The drought and water mismanagement affected up to 60 percent of Syria's land and 1.3 million of its people, led to over 800.000 people losing their entire livelihood in 2009, according to the UN and ICRC (Femia & Werrell, 2012; ICRC, 2009; OCHA, 2009; Wodon et al., 2014) (see Table 2). Comparing the geological conditions of Syria and the administrative governorates, it becomes evident that the majority of the affected population by the drought and water mismanagement were located in rural areas (see Figures 2 and 3). A comprehensive comparative study found that, in 2011, out of multiple surveyed SWANA countries, Syrian households were the ones perceiving the most changes related to the climate crisis. These perceptions in alterations, ranging from 83 to 100 percent, included erratic and lower levels of rain, dryer and less fertile land, crop failure and damage of livestock (Wodon et al., 2014). In fact, all researched Syrian households declared "having been affected by droughts, this being the adverse event considered the most damaging", whereas the other countries presented indexes of not even a third stating these effects (idem, 11).

By 2011, the amount of Syrians left extremely 'food insecure' as a consequence of the droughts, was around 1 million, and between 2 and 3 million people were driven into extreme poverty, according to the UN (Femia & Werrell, 2012). Moreover, Syria had experienced a substantial demographic growth, shifting from 16,3 million inhabitants in 2000 to 22,7 million in 2011 (Our World In Data, n.d.), for which the state did not account in terms of education, employment, healthcare, and services. The overall costs of living grew, such as rising prices in food, gasoline, or housing; in addition to an increasing uneven distribution of resources, higher rates of unemployment (idem; Brown & Crawford, 2009). As a consequence of water shortages, vital resources became more scarce, leading to malnutrition, greater indebtedness, and children interrupting their studies to help out financially (Institute for Economics & Peace, 2020). Additionally, levels of inequality became apparent, specifically between the urban and the rural populations (Brown & Crawford, 2009). In the rural sector, comprising around 44 percent of the total population of over 20 million Syrians (FAOSTAT, 2013), agriculture employed about 15 percent of the total labor force and accounted for 17 percent of total GDP (Aw-Hassan et al., 2014). Agricultural failures and the economic crisis deeply impacted farmers. Particularly the youth struggled to find opportunities for better livelihoods (Forsythe, 2017). Due to agricultural failures the drought thus firstly affected rural regions (see Figure 3), these experienced water shortage and resource scarcity, which then led to an exodus towards urban areas (Gleick, 2014). Various layers of inequality regarding resources, capital, and opportunities exacerbated social and economic disparities, leading to a climate of frustration.

Governorate	Population	Severely affected
Rural Damascus	1,765,622	2,500
Homs	2,033,337	20,500
Hama	1,997,870	98,000
Ar-Raqqah	934,897	155,000
Dair-Ezzor	1,566,691	41,000
Al-Hasakah	1,495,276	486,000
Total	**9,793,693**	**803,000**
Total households		**75,641**

Table 2. *Affected populations in different governorates, data from the Ministry of Agriculture and Agrarian Reform and UN Needs Assessment Mission*. (ICRC, 2009).

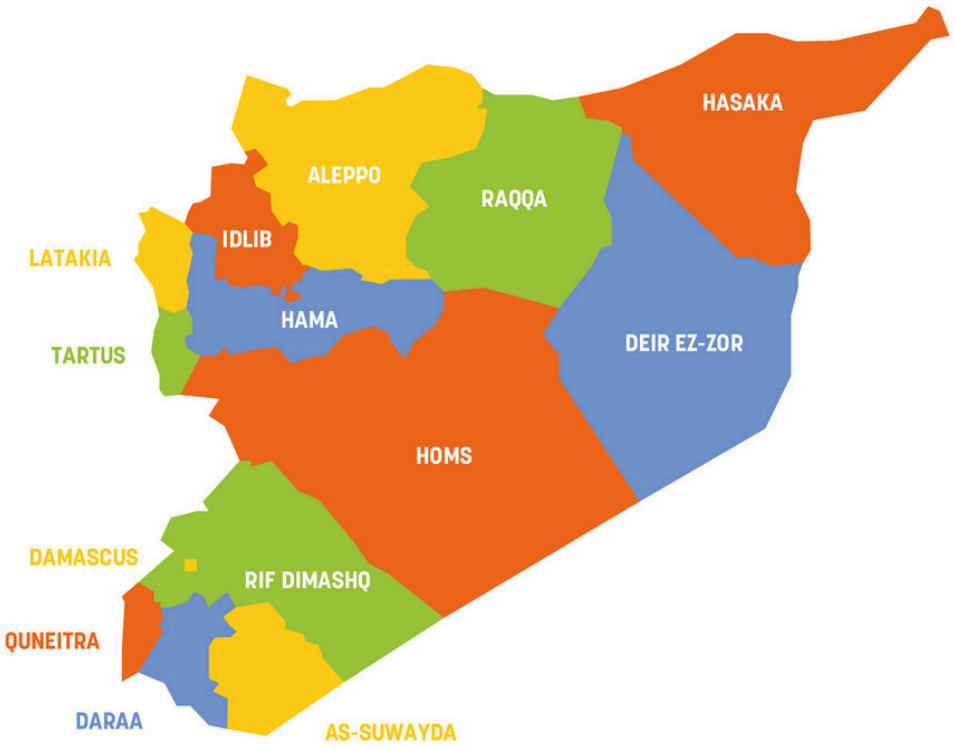

Figure 3. Map of Syrian governorates. (Vector Stock, n.d.).

This section has outlined the multiple ways in which Bashar al-Assad let down the population throughout his first decade in charge, and how the neglect and destruction of the environment led to agricultural failure and poverty. Both Assad governments, attempting to secure agricultural production and farm income, overlooked the long-term consequences on the groundwater and hence neglected the environment's natural resources. Subsidies like diesel fuel and strategic crops further stimulated such reckless production and severely damaged groundwater aquifers, thus jeopardising the overall country's water supply for the years to come (Aw-Hassan et al., 2014, Forsythe, 2017). This systemic water mismanagement, in combination with other factors such as demographic growth, socioeconomic inequality, "aggressive economic liberalization policies and the influx of Iraqi refugees had all placed an unsustainable burden on water resources, including rainfall and ground water resources" (Kelley et al., 2017, 3) Iraqi refugees (idem; Forsythe, 2017; Wendle, 2015). Together with the pre-existing political conditions, marked by oppression, violence and authority, these complex and interconnected socioeconomic, political, and environmental changes "eroded the social contract between citizen and government in the country" (Femia & Werrell, 2012, 2). Based upon these explored tensions and hardships, the following chapter sheds light upon, through its three segment, how the climate-conflict nexus linked to such migration, the outbreak of the Syrian Civil War, and its consequential refugee crisis

4.3 Escalation to Armed Conflict and Forced Displacement

4.3.1 Climate-Conflict Nexus linked to Migration

This last section analyzes the interconnected dynamics that occurred in Syria between environmental degradation and its inducement of armed conflict and migration. Firstly it is crucial to note that violence and refugeedom find themselves within a feedback loop in which alterations in one variable can both trigger and result from changes in others. For the sake of structure, this dissertation foremost dives into the outbreak of the Syrian Civil War, to then discuss the involved massive refugee flow, which occurred both internally and externally. Environmental refugeedom is taken as the last step of this thesis's analysis, since its international spillover is arguably, chronologically speaking, the final stage of the wider complex phenomenon.

As the Literature demonstrated, a high amount of research linking climate and conflict has been conducted. Coming back to Thomas Homer-Dixon, as one of the main scholars on this intersection, three hypotheses can be found on the relationship between environment and conflict. These include socioeconomic, political and migration factors (1994), and have been reinforced by other academics (idem; Reuveny, 2007; Wirkus & Schure, 2008). All three theses align with the outbreak of the Syrian Civil War, namely resource scarcity as a cause of conflict, which then causes large population movement and thus group-identity conflict, and also economic deprivation and social disruption (idem). The Syrian Civil War, as a result from multiple and simultaneous causes, partially arised from such water scarcity, the divide between rural and urban, worsening of socioeconomic conditions, and forced displacement. Furthermore, Homer-Dixon (et al., 1998) defends especially developing countries being less able to prevent violent conflicts. When looking into his identification of five violent conflict categories it becomes evident that all evolve around the themes of the climate crisis, environmental stress, and resource scarcity; also including consequential population migration and deepened social cleavages (idem; Wirkus & Schure, 2008). These conflicts range from disputes and ethnic clashes, to civil strife and even spilling over to interstate conflicts. One of the main mutually causing processes between environmental migration and armed conflict is competition, namely how "the arrival of environmental migrants can burden the economic and resource base of the receiving area, promoting native–migrant contest over resources" (Reuveny, 2007, para. 13). Other major elements are rising tensions between ethnic groups, and situations of distrust and mistreatment between the local residents and arriving migrants (idem).

Scholars warned in the late 2000s that all above listed joint social and economic circumstances, as an indirect result of the climate crisis, could weaken the government's ability to provide for its population, "in turn potentially creating the conditions for extremism of all kinds, increased crime and social breakdown" (Brown & Crawford, 2009, 2). Assad's water policies led to a state close to failure, which made it ripe for internal violence and external penetration (Forsythe, 2017, 181). Syria, as some of its SWANA neighbors, has been placed among one of the most volatile countries regarding armed conflict, in combination

with ecological threats. As one of the world's least resilient countries, it has been identified as "more likely to experience civil unrest, political instability, social fragmentation and economic collapse" (idem). The Syrian Civil War has been identified to illustrate "how ecological risks can intensify existing social and political grievances" (Institute for Economics & Peace, 2020, 69; European Parliament, 2022; Gleditsch et al., 2007; Reuveny, 2007; Theisen et al., 2013). Syria, as one of the countries with the highest number of ecological threats, is among the world's least peaceful states (Institute for Economics & Peace, 2020). Moreover, there is supranational agreement upon the complex interplay of the climate crisis's effects leads to both armed conflict and forced displacement (Council of Europe, 2022), which also retrofeed each other. Although this dissertation takes armed conflict as a previous step of forced displacement, to methodologically and chronologically make sense of the case study, it is important to note that these two processes are intricately intertwined and happen simultaneously as each other's cause and consequence (Abel et al., 2019; Ash & Obradovich, 2019; Brown & Crawford, 2009; Institute for Economics & Peace, 2020; Reuveny, 2007; Richards et al., 2021).

According to a conceptualization developed by Richards et al (2021) following historical studies, environment mortality, conflict mortality and emigration entail population loss, which in combination with institutional breakdown leads to social collapse. Their comprehensive analysis identified "different causal pathways between anthropogenic climate change effects and potential impacts on the human world system, with the latter reflecting key determinants of societal collapse observed in the historical studies" (idem, 49). When studying the feedback between migration and conflict driven by climate change. Abel et al (2019) concluded that, although regional circumstances highly condition the single cases and hence the variables' order and impact slightly vary, increasing drought episodes can drive out migration by exacerbating conflict in countries with a certain degree of democracy (idem). This claim illustrates how the Syrian Civil War, catalyzed by the droughts, serves as a case to practically make sense of this phenomenon. Their study also found that the climate crisis and human mismanagement co-contributed to armed conflict only in the concrete period between 2010 and 2012, specifically in SWANA countries experiencing the Arab Spring (idem). To make sense of the case study of the Syrian Civil War, the following segment outlines the main events unfolding from the surge of environmental degradation, the authoritarian regime, social discontent, and the international Arab Spring.

4.3.2 Outbreak of the Syrian Civil War

The Arab Spring was a series of pro-democracy uprisings across the Arabic world in 2010 and 2011, that also inspired protests in Syria (Alsaleh & Sluglett, 2015; Lynch et al., 2014; Zuber & Moussa, 2018). Demonstrations in Tunisia, which then spilled over to Bahrain, Egypt, Libya, Syria and Yemen; initially called for democratic reforms and the end of economic corruption. The Arab Spring, "with the purpose of overthrowing the most powerful, long-lasting, and reactive violent regimes in such countries", emerged in Tunisia, as a response to corruption and economic stagnation (Zuber & Moussa, 2018, 245). There were multiple conflicts between 2008 and 2010, with months-long protests and strikes – repressed and silenced by the regime – leading to hundreds of wounded perople, arrests and

two fatalities (idem; Kuznetsov, 2022; Lynch et al., 2014). The demonstrations started in December 2010 with the so-called ‘Tunisian Burning Man’. The street vendor Mohamed Bouazizi set himself on fire out of despair, when his merchandise was confiscated, and humiliation inflicted on him by a municipal official. The Tunisian Revolution (or Jasmine Revolution) took place, a month of civil resistance, clashes between the police and the demonstrators, who represented a substantial part of the population, such as unemployed, activists, labor and trade unionists, students, professors and lawyers. The protests ceased mids of January 2011 when the authoritarian President Ben Ali promised not to run for another term and expressed grievance over killed protesters (idem). The Arab Spring was initially "gripped by the narrative of a young generation peacefully rising up against oppressive authoritarianism to secure a more democratic political system and a brighter economic future” (Hassan & Dyer, 2017, 3). The Tunisian triumph, in combination with its transition to constitutional democratic governance, contagiated other Arab countries to rise as well, including the Syrian uprising (Femia & Werrell, 2012; Yassin-Kassab & Al-Shami, 2018; Zuber & Moussa, 2018).

Protests in Syria began on March 6th, the so-called ‘Day of Rage’ in Dara’a, the first city to collectively protest against the Ba'athist government (Khan & Khan, 2017; Yassin-Kassab & Al-Shami, 2018; Zuber & Moussa, 2018). Despite being of Sunni majority, thus traditionally supporting conservatism and Assad, the city was ripe for unrest (Yassin-Kassab & Al-Shami, 2018). Children had previously written revolutionary phrases on their school walls in the Southwestern city. They had picked up these slogans from Arab Spring demonstrations in Tunisia and Egypt, that they followed on TV channels and social media (Stepanova, 2011; Zuber & Moussa, 2018). The arrest of these children and their violent treatment in prison spread visible protests in Dara’a. Expatriates had created the Facebook page *Syrian Revolution 2011 against Bashar al-Assad*, which called for further local protests. The outrage extended even more when peaceful demonstrators were fired at by Assad security forces, killing and injuring several civilians (Ash & Obradovich, 2019). In just a few weeks the total toll of deads, injured, and arrested people was of a couple of hundreds, so the protests spilled over nationwide, demanding a prisoner release, a repeal of the emergency law, or a new parties law (Yassin-Kassab & Al-Shami, 2018). The measures that were announced to pacify the social unrest, announced by President Bashar al-Assad’s political and media adviser, were merely economic, for instance raising state salaries minimally. The government blamed armed gangs and infiltrators as the snipers responsible for the deaths to justify hiring assassins to conduct an “out-of-control onslaught of civilian protesters” (Alsaleh & Sluglett, 2015, 199). These so-called *shabiha*, alongside regime forces, beat the demonstrations’ participants and even army soldiers that had defected. Nine days afterwards, on March 15th, thousands of demonstrations took place all over Syria, triggered by the Dara’a happenings. Violence by the Syrian authorities also quickly spread to these cities, including Deir al-Zour, Homs, Damascus, Aleppo, Raqqa, al-Hasakah, and Idlib (idem; Ash & Obradovich, 2019; Wodon et al., 2014; Yassin-Kassab & Al-Shami, 2018; Zuber & Moussa, 2018).

The Syrian Arab Spring did not coincidentally emerge in Dara’a (Alsaleh & Sluglett, 2015; Yassin-Kassab & Al-Shami, 2018). Dara’a was “among the cities whose residents’

livelihoods were most crippled by recent drought" and historical 'bread basket' of Syria, as a source of financial income (Saleeby, 2012, para. 18). The Southwestern city had undergone "a particularly large influx of farmers and young unemployed men displaced off their lands by crop failures" (Brown & Crawford, 2009; Gleick, 2014; Yassin-Kassab & Al-Shami, 2018). The initial chants, bringing together disparate groups, included demands for respecting human rights, equality, and the end of corruption, in line with other Arab Spring demonstrations (Ziadeh, 2015, 230). The protests did not directly mention the 'droughts' as one of the grievances, but these had clearly catalyzed some of the raised issues, such as socioeconomic inequality, increased prices, (especially youth) unemployment, and forced displacement (Brown & Crawford, 2009; Kelley et al., 2015). In hindsight, citizens described the start of the revolution being about water and land, some years after the protests (Wendle, 2015). The two Assad regimes' "failure to put in place economic measures to alleviate the effects of drought was a critical driver in propelling such massive mobilizations of dissent" (Brown & Crawford, 2009, 12) and had turned civilians resigned to all kinds of hardship (Wendle, 2015). Another indicator of a correlation between the demonstrations and the droughts is the city of Deir ez-Zor, one of Syria's driest areas, that also harvested the seeds of dissent, on the opposite site of Dara'a (Ash & Obradovich, 2019). After the social uprising began in the Northeastern city, Deir ez-Zor underwent one of the strongest sieges by the Assad's army. A *Syria Today* article reported its citizens to be suffering and denouncing the lack of help by the Syrian authorities "who tell them what type of crops they have to plant, and have a monopoly on buying up what they produce" (Saleeby, 2012, para. 18). Additionally, another highly affected by the regime's violence was Hama, which had developed into "a major destination for drought-displaced farmers despite suffering its own water scarcity woes" (idem). These three hotspots of social unrest and political instability demonstrate the close link between popular uprisings stemming from environmental degradation's as a consequence of lost livelihoods and forced displacement, and rising conflict.

By April 2011 anti-Assad-government demonstrations had spread across all Syria, and hundreds of people had been killed. Dara'a's central Balad district was under complete lockdown, with snipers on rooftops and citizens who attempted entering the neighborhood being shot. The civilians were trapped with no administration of water and food, and electricity and the internet were cut off (Yassin-Kassab & Al-Shami, 2018). Some of the soldiers refusing shoot-to-kill orders and instead surrendering to protestors contributed to the "extension of the crackdown to nearby towns and villages" (idem, 44). The first announced reforms did not meet the demonstrations' demands. People across religious, sectarian and ethnic boundaries were uniting in the movement for political rights. Throughout the months the riots called for the fall of the regime, with chants including "The People want the execution of the President" (46). By early June about 1.000 people had been killed and at least 3.000 had been arrested since the start of the uprising, according to the UN (OCHA, 2011). Soon, the country found itself in an endless spiral of violence in which "protests were met by gunfire which led to funerals, which led to larger protests, which led to more funerals" (Yassin-Kassab & Al-Shami, 2018, 56). In July the governmental cabinet backed a draft law to allow rival political parties for the first time in decades along with other political reform.

Anyways, protests continued as many of the announced reforms were not implemented and Assad's violence towards civilians continued. The brutal regime response fueled the last needed spark to the pre-existing tensions and transformed the peaceful protests into a broader anti-government movement, which marked the beginning of the civil war.

In that Summer of 2011 the Free Syrian Army was formed, seeking to remove Bashar al-Assad and his regime from power. By the end of 2011, armed warfare began between the government forces and the opposition rebels. In 2012, the violent battles took over the capital of Damascus and the country's second largest city Aleppo (Zuber & Moussa, 2018). One main turning point was in August 2013, when the chemical weapons employed by Assad killed over one thousand civilians in the Ghouta suburb of Damascus. This massacre pushed for a massive international response, leading to US and Russia's political involvement as well. In early 2014 UN-brokered peace talks took place in Geneva, aiming to end the armed conflict and install a transitional government, however with no success (Alsaleh & Sluglett, 2015), which indicated that the civil war could become a longeveous conflict. Although the Arab Spring's wave of protests faded by mid-2012, due to violent responses by the various governments, the Syrian Civil War has still been going on, witnessing international management attempts, such as monitor missions, failed ceasefires, chemical attacks and air strikes for over a decade now (Britannica, 2023; Yassin-Kassab & Al-Shami, 2018).

Although at the beginning of the conflict, the two fighting sides were quite clear to tell apart, "the complexity of the war… intensified due to the interference of global and regional powers as well as Islamic Jihadists" (Khan & Khan, 2017, 561). Initially the armed conflict entailed only one homogenous side, namely Assad's Alawite elite, along his security forces and allied militias. Whereas, the demonstrators composed of Syria's Sunni population, as the country's majority, were distributed across regions and sectors. That decentralization soon turned into division and tension, which, instrumentalized for propaganda, led to internal fragmentation into different subgroups (idem). The complicated scheme of alliances did not prevail rigid during the development of the conflict. Throughout the years the chessboard became much more disperse and complex, and developed into a stalemate.

Early in the armed conflict, various regional, international, and religious actors became involved, and due to their own interests, they supported different factions in the civil war. It is crucial to differentiate between the multiple involved actors' affiliations throughout the armed conflict. Put in a simplified manner, the Alawite-led regime was being opposed by the Sunni-majority rebel groups, internally divided and even disputed (Khan & Khan, 2017; Zuber & Moussa, 2018). Assad counted on the support of Shia-majority Iran and Iraq, and Russia. Moreover, also alongside the Lebanese militant group Hezbollah, supported with resources by Iran, that has been broadly condemned by the West for their human rights violations (Loft et al., 2023). On the other side, Sunni majority countries such as Turkey, Qatar and Saudi Arabia supported the rebels against Assad (Khan & Khan, 2017; Zuber & Moussa, 2018). The Syrian opposition, mainly Sunni, has become widely fragmented: ranging from secular pro-democracy groups like the Free Syrian Army at its beginning, Kurds, and Islamist organizations (Khan & Khan, 2017). The FSA was an initially secular and pro-democratic formation, and developed into a decentralized umbrella, including

various groups, among them also Islamists. The West aligned itself with the pro-democracy fronts, such as the Kurdish Syrian Democratic Forces. Among the allies of the insurgent groups, there have also been actors such as the Islamic State of Iraq and the Levant (known as ISIS) or Saudi Arabia. The Jabhat Al-Nusra Front was a Salafi jihadist organization, initially affiliated with the FSA and eventually with Al Qaeda. ISIS/ISIL, another Salafi jihadist organization, emerged from Al-Qaeda in Iraq, originally joined the rebels but later turned against these. Some Gulf States such as Saudi Arabia and Qatar, as Sunni countries, have been militarily and financially aiding the rebel fractions. ISIS/ISIL, emerging around 2013 and 2014, exploited the power vacuum in Syria and took advantage of the sectarian tensions to control significant territories and population groups. Russia, to counter Western influence, has been supporting Assad as well. Turkey as a predominantly Sunni country, although it firstly opposed Assad, switched to combat the Kurdish rebels, due to domestic Turkish security issues with YPG[3].

With all the involved actors' employment of reckless violence and collective slaughter, Syria's undergoing of over a decade of war has placed it among the top five most fragile countries for the last seven years (Fragile States Index, 2023). The Syrian Civil War has been described as the "longest and bloodiest conflict resulting from the Arab Spring" (Zuber & Moussa, 2018, 248). Within the first decade of the civil war over 300.000 civilians have been killed, according to the UN (OHCHR, 2022b). About 12 million people suffer from food insecurity (UN News, 2022), and there have been reports with around two thirds of the Syrian population living in extreme poverty (World Bank, 2017). Around 2022 more than 10 million people have been reported to seek refuge during the first decade, both internally and externally (Loft et al., 2023).

This subsection has delved into the first few years of the armed conflict, to understand its multiple and interconnected roots that have led to the years-long and still ongoing stalemate. However, the evolving dynamics of the war are not accounted for in this thesis, hence the last ten years are not looked into. The Syrian Civil War has been described as being trapped in a "vicious cycle where competition for scarce resources creates conflict and conflict in turn leads to further resource depletion" (Institute for Economics & Peace, 2020, 2). Furthermore, it has also been identified as an armed conflict that further damages the environment, therefore creating another retrofeeding loop (Abel et al., 2019).

4.3.3 Refugees fleeing from a Climate-Catalyzed War

Having exacerbated pre-existing socioeconomic vulnerabilities and political grievances by triggering agricultural collapse, the severe drought forced millions of people to flee their homes and relocate. The firstly affected population were mainly farm families, and their internal movements was "unlike the usual seasonal labor migrations or the rural-to-urban migration from prior years" (Kelley et al., 2017, 2; Daher, 2022; Erian et al., 2010; Gleick, 2014; Tharoor, 2016). A quantitative study, revising year-over-year night-time light intensity as a proxy for changes in population density, found that drought drove migration from the

[3] The Kurdish forces – firstlly YPG, later called SDF (Syrian Defense Forces) as a Sunni group – originally focused on self-defense and received US support, to then seek autonomy in Northern Syria.

most affected rural regions towards urban areas. Additionally, the research concluded that higher levels of migration were associated with increased likelihood of protest, since the receiving regions experienced unprecedented stress (Ash & Obradovich, 2019; Saleeby, 2012). At these receiving urban areas there were pre-existing frustrations about the repressive regime and high rates of youth employment (Gleick, 2014; Tharoor, 2016, idem) and due to the previous influx of Iraqi refugees (Femia & Werrell, 2012). This social dissatisfaction and competition between rural and urban communities then worsened, due to crime rates induced by the fight over resources, scare employment and space – all caused both by the drought and the population displacement (Brown & Crawford, 2009; Erian et al., 2010; Kelley et al., 2015; OCHA, 2009; Reuveny, 2007; Wendle, 2015). In this sense, it is empirically speaking extremely difficult to fully measure the reasons to migrate, since environmental, political and socioeconomic motives often overlapped as well (Ash & Obradovich, 2019). Moreover, these retrofed each other. For instance, falling agricultural productivity was more likely to "undermine rural livelihoods, worsen job prospects in rural areas and accelerate migration to urban areas", consequently straining urban services and social relationships even further (Brown & Crawford, 2009, 3).

In the previous years to the war, the UN and various NGOs had reported approximately 50.000 families migrating due to the drought, but calculations were hard to specify because of the shifting dynamics (OCHA, 2009; Wodon et al., 2014). The water shortage, cause and consequence of land desertification, in combination with the rapid population growth, led to farmers and herders having "no choice but to move elsewhere, starve, or demand change" (Femia & Werrell, 2012, para. 9; Institute for Economics & Peace, 2020). This migration towards the urban areas implied the abandonment of between 160 and 220 villages whose wells had dried out and houses were windblown by sand (Ababsa, 2015; Brown & Crawford, 2009). The climate crisis was already expected to force between 2 and 4 million people "from the Nile delta as a result of a sea level rise of just 50 centimetres" (Brown & Crawford, 2009, 26). In 2010 the UN Office for the Coordination of Humanitarian Affairs declared that around 300,000 families were driven to the major cities as part of the "largest internal displacements in the Middle East in recent years" induced by drought (Kelley et al., 2017, 2; Ababsa, 2015). The receiving cities included "Aleppo, Damascus, Dara'a, Deir ez-Zour, Hama, and Homs" (Gleick, 2014, para. 11). By 2011 a total of around 1,5 million people migrated to urban centers (Gleick, 2014; Institute for Economics & Peace, 2020).

By ends of 2013 there were over 2,4 million Syrian refugees spread outside of Syria (UNHCR, n.d.b.) and by 2015 approximately alone 2 million Syrians (and Iraqis that had lived in Syria for multiple years) fled to Europe (Institute for Economics & Peace, 2020; Trimarchi & Gleim, 2020). In 2015 Syrians represented the main nationality of origin of the arriving refugees through the Mediterranean Sea (Ayazi & Elsheikh, 2019). The Syrian Civil War has been described as the 21st century's most prolonged and second-deadliest conflict, with over 230.000 deaths between March 2011 and 2023 (OCHA, 2023). The exact amount of internal and external refugees is hard to calculate but it has been estimated that in total "more than 14 million Syrians have been forced to flee their homes in search of safety" (UNHCR, 2023, para 1; OCHA, 2023), resulting in the "world's largest refugee crisis"

(idem). Between 6,6 and 7 million people have been and still are internally displaced (Mandic, 2023; UN, n.d). Currently around 70 percent of Syria's internal population, more than 15.3 million people, is "in need of humanitarian assistance and 90 percent… live below the poverty line" (UNHCR, 2023, para 1).

Nowadays over 5,5 million refugees are located in the neighboring countries, namely Türkiye, Lebanon, Jordan, Iraq and Egypt. Moreover, Germany is the largest non-neighboring host country where over 850.000 Syrian refugees are currently located (UNHCR, 2023; Institute for Economics & Peace, 2020). The phenomenon of environmental refugees has been stated to add pressures on neighboring countries and government resources, hence contributing to socioeconomic instability and political tension, hence increasing the likelihood of conflict (Conflict and Environment Observatory, 2021; Zawahri, 2017). The influx of Syrian refugees into Jordan, over half a million between 2011 and 2014 (Susskind, 2017), entailed further water scarcity, "challenging the government's capacity to meet domestic needs and contributing to social protests in Jordan over inadequate domestic water supplies (idem, 152; Lenton, 2017; Institute for Economics & Peace, 2020; Zawahri 2012), a pattern that occurred in other host countries receiving environmental refugees during that time such as Israel (Zawahri, 2017; Weinthal et al., 2015). The Syrian refugee crisis, spilling over into the SWANA region and Europe, drew international attention to the link between environmental destruction, political unrest, and refugee flows – both at the regions of origin and destination (Trimarchi & Gleim, 2020). The climate crisis was acknowledged as a co-catalyst of the armed conflict outbreak in Syria, and even recognized to have "played a significant role as an explanatory factor for asylum seeking in the period 2011–2015" (Abel et al., 2019, Abstract), and as a growing issue at some of the receiving countries (Lenton, 2017; Institute for Economics & Peace, 2020; Zawahri, 2017).

There has been some conducted research that provides evidence from the affected population for this environment-migration link in the Syrian context. For example, a World Bank's comprehensive study found that in 2011, out of all the adaptive strategies employed by households (in various SWANA countries) to deal with the climate crisis, Syria's main strategy was 'moving out'. Out of the eight coping mechanisms used by five countries, Syria's 85,25 percent rate of migrating elsewhere was the highest cipher, by far (Wodon et al., 2014, 26; Institute for Economics & Peace, 2020). This shows evidence that the Levant country's citizens saw migrating as the main coping mechanism, a view highly contrasted with their SWANA counterparts that recurred to other ways. When interviewing the population on their reasons to migrate, climate factors were mentioned, especially escaping the droughts. Over 11 percent stated the droughts as a first or second reason (idem, 155), and overall the droughts were the third most prevalent reasons (idem, 161). Although the other most mentioned motives were related to employment, this study presented evidence of the environmental degradation in the form of droughts being a main catalyst of this migration flow, since back then 45 percent of the population worked in agriculture, which had been undergoing severe and long-term water scarcity (idem). Additionally, at refugee camps on Europe's doorsteps, multiple Syrian farmers and former business owners declared that the drought had been a key reason for their displacement (Wendle, 2015). This anecdotal

evidence, presented in a 2015 article in Scientific American, stemming from a dozen of interviews, indicated consensus on the exceptionally severe drought having contributed to the initial social turmoil and instigated the mass migration, both within and beyond Syrian borders (Kelley et al., 2017).

The Syrian case study illustrates potential future scenarios linking the climate crisis, governmental neglect of the environment, social unrest, authoritarian regimes, armed conflict, and refugee flows (Koubi, 2019). This foreshadowing becomes even more evident considering that, since the civil war started, the climate crisis has gotten even worse. Although it had been expected that in Syria "the absolute water scarcity threshold (500 m3/capita/year) would be reached by 2050", the climate crisis and the consequences of the civil war intensified and accelerated the prevailing water scarcity and pollution issues (Daher, 2022, 6). This goes in line with the so-called ecological hotspots, in which environmental and humanitarian crises spill over, often also across international borders (Institute for Economics & Peace, 2020). Ecological Threat also describes this phenomenon to happen through refugee flows and armed conflict, and directly takes the Syrian refugee crisis to Europe as a primary example. Climatologists affirm that Syria is a "grim preview" of what could happen in the the overall SWANA region and other parts of the world, insisting on the clear causal relationship between the climate crisis and governmental induced drought that displaced millions of people (Wendle, 2015, para. 3). The phenomenon of Syrian refugees represents a threatening worldwide crush of refugees that flee from unstable and repressive regimes that collapse under the intersected effects of the climate crisis, and governmental water mismanagement and unsustainable farming (Wendle, 2015). Asylum seeking related to the climate crisis is expected to rise, especially in countries "undergoing political transformation where conflict represents a form of population discontent towards inefficient response of the government to climate impacts" (Abel et al., 2019), thus pointing towards a need to internationally acknowledge that incoming trend.

This last section has shed some light upon how the, originally, local dispute was catapulted into the second-deadliest conflict and the world's largest refugee crisis of the 21st century. It firstly emphasizes the feedback loop that exists between armed conflict and forced displacement, in which both phenomena act as simultaneous mutual causes and consequences, in the context of environmental degradation. Then, the outbreak of the Syrian Civil War was outlined, in connection to water scarcity, worsening socioeconomic conditions, rural-urban divides, and protests arising in the most vulnerable regions, such as Dara'a. The Arab Spring sparked revolt in Syria, where regional, originally peaceful, protests escalated into a lethal armed conflict within just some months. The meanwhile over one-decade-long civil war has involved, and continues to, multiple local and foreign actors that fight for their own geostrategic and religious interests. Lastly, this section has elaborated on the initial rural-to-urban migration, which then evolved into a massive refugee flow spilling over internationally, which has become to be known as the Syrian refugee crisis. The above segments have showcased Syria as one of the current world's most unstable countries, where unresolved water scarcity, socioeconomic grievances, and political tension catapulted the population into death and flight.

This chapter has identified and elucidated Syria as condemned by natural ecological risks and mismanagement over four decades of dictatorship until bursting out into war and refugeedom. It has also dived into the climate-conflict hypothesis linked to environmental migration, all connected through a complex trigger chain of water scarcity and drought, governmental neglect, agricultural failure, socioeconomic deterioration, political oppression, rural-urban competition and interaction, forced internal displacement, civil unrest, and regional and global actors' involvement. All these, in an intertwined loop have led to global implications for neighboring and even inter-continental countries; which must be recognized and tackled to avoid or mitigate future similar environmental, political, and humanitarian crises. This chapter provided a comprehensive aspect of the answer to this thesis' research question in the context of Syria. Namely by unraveling the intricate dynamics of the climate crisis (globally induced and nationally neglected) catalysing armed conflict (throughout a wide array of social, political, and economic in-between steps) leading to a massive refugee flow (that took place gradually internally and then in huge figures internationally).

5. Ecocide as the Silent Perpetrator of Environmental Refugees

This chapter underlines the lethality that environmental refugees face, through the perpetuation of ecocide and armed conflict. The case study of the Syrian Civil War and refugee crisis have exemplified this fatality, which now needs to be recognized in order to prevent further disaster chains like this to happen. This thesis aims to broaden 'ecocide' by including the threat the human-induced climate crisis' environmental destruction imposes on both the planet, and humans. Since nature and people cannot be fully separate, as part of a broader ecosystem, ecocide entails endangering human population as well. Fifty years after Galston's coining of 'ecocide' (Shamloo & Gholipour, 2022). the Stop Ecocide's expert panel defined it as "unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts" (Stop Ecocide, 2021), drawing from terms employed in previous international agreements and debates. This definition has been taken by scholars to call for an ecocide law, on national, regional, and global levels (Shamloo & Gholipour, 2022). This chapter focuses on two main claims and calls for action, linking climate-conflict induced migration to ecocide. First, ecocide must be internationally acknowledged, in politics and binding laws. Second, environmental refugees as a current and future occurrence have to also be globally recognized. There is a need to take worldwide action to tackle both intertwined threats, since these two phenomena, going hand in hand, will increase and worsen in the coming decades, continuing to cause human rights violations (Council of Europe, 2022; Curcio Lamas, 2017; Maretti et al., 2019; Setiyono & Natalis, 2022; Weyermuller et al., 2021; Zierler, 2011). 'Ecocide' has even been described as the "large-scale impairment of the environment and human rights" (Curcio Lamas, 2017, Abstract) and stressed as a human rights concern (Council of Europe, 2022; Zierler, 2011). The topics of environmental refugeedom and the climate crisis, without explicit mention of 'ecocide', have been found to be jointly discussed in the literature (Maretti et al., 2019; Weyermuller et al., 2021). Climate migration has been explored in academia also linked to human rights, "but also to those of development, vulnerability, adaptability and resilience", however rather isolatedly instead of combining all (Maretti et al., 2019, 152). A bibliometric analysis (idem) found that there is still an urgent need to address human rights protection of environmental refugees. This indicates the necessity to further develop this web, linking all its threats of climate-conflict, forced displacement, and ecocide.

As the Literature Review already elaborated, currently there is no international ecocide law (Shamloo & Gholipour, 2022). Nowadays there are advancements within national politics, and there are multiple voices stemming from EU entities that advocate for such a legal framework. In 2022 the Parliamentary Assembly of the Council of Europe expressed the possibility of "establishing a new 'ecocide' criminal offense at Council of Europe level", in times of both peace and war (Council of Europe, 2022, 1). Still, the climate litigation movement pledging for the international recognition of 'ecocide' remains in process. Since the climate crisis has cascading effects on the entire planet, it must be handled on such a global scale as well. Environmental destruction does not respect borders or differentiate

between nationalities, hence international effort is required to mitigate its devastating impact. Whether this takes form as a supranational fifth crime of the ICC's Rome Statute, or other national laws, the all-encompassing lethality environmental destruction must be persecuted in a legally binding manner, to prevent such atrocities. There are ongoing initiatives to enforce such laws, for instance the Council of Europe (2022) supporting the two suggestions of amending the Rome Statute, and introducing national criminal legislations. Such advancements would be fundamental, since tackling ecocide at its roots could even prevent a certain degree of armed conflict. As previously discussed, environmental degradation perpetuated by the human-induced climate crisis, and its consequential resource scarcity and worsening of living conditions, leads to social dissatisfaction, political instability, and civil unrest. By exacerbating pre-existing tensions, ecocide arguably contributes to triggering violence, and thus should be mitigated to prevent armed conflicts and its human rights violations (Council of Europe, 2022). Ecocide, in the form of environmental destruction, is causing poverty, famine, and exacerbation of prevailing hardship, by damaging fertile land, driving agricultural failure, and food shortage, in the form of droughts and desertification (Kowalska, 2023). Despite the growing consensus on ecocide and its lethal consequences, there is still a lack of comprehensive case-study research, to further exemplify this ongoing phenomenon around the globe.

In academia and politics there is no major claim of ecocide having taken place in Syria and hence led to the civil war and massive refugee flow. Nevertheless, this dissertation argues that this has actually been the case for multiple reasons. As outlined in the fourth chapter, the two Assad regimes systematically neglected and even actively damaged the environment throughout decades. Taking the aspects of "unlawful or wanton acts" of the 'ecocide' definition, it can be observed that the two Syrian Presidents had a position of disregard and carelessness concerning the environment, when deciding and implementing policies on water and agriculture. The Syrian governments pursued policies that led to the mismanagement and exhaustion of water resources. Their large-scale irrigation and over-extraction projects, without sustainable water management practices, degraded the wells and underground aquifers, misused the land, induced a hyper-reliance on water-intensive crops, and eventually contributed to water scarcity. There were no planned alternatives or in-between investigation, hence also a lack of effective water and soil conservation measures.

Additionally, the 'severe', 'long-term', and 'widespread' damage is very clear. The Assads' policies during four decades were focused on the short-term gains, instead of the longeveous consequences on the environment, agriculture, and water. This lack of planning ahead generated soil degradation and water scarcity. This heavy impact on water resources and loss of arable land showcases the severe, long-term, and widespread damage that the Assads' regimes imposed on Syria. This environmental destruction was enforced by the (human-made) global climate crisis and the regional governmental neglect, creating a complex trigger chain. The regimes' policies, in combination with the droughts, led to agricultural failure, worsening living conditions, socioeconomic inequality and discontent, political tension, and armed conflict. This interconnected loop further perpetuated environmental damage, throughout its steps of repeated attempts to extract further water to

cover for livelihood needs, forced displacement due to water stress, or military destruction of ecosystems during the armed struggle. Lastly, Syria's environmental destruction had impacts beyond its borders, by imposing water stress on neighboring countries. This international spillover, combined with the climate crisis being caused by a wide array of worldwide actors, illustrates ecocide's global ramifications, also in the case of Syria.

It must also be emphasized that ecocide and armed conflict can have a close link in causing each other. As previously outlined, competition for resource scarcity, induced by ecocide, is a well-known driver of armed conflict (Gleditsch, 2015). The destruction of the environment during armed conflict, as collateral damage or intentional weapon, is also a recurring issue (Daher, 2022; Gleick, 2014; OCHA, 2021; Von Lossow, 2020), that could be categorized as ecocide. Although this is beyond the temporary scope of this thesis, it is to be noted that during the civil war, the environment has been damaged in such a severe way that it could also be considered ecocide (Conflict and Environment Observatory, 2021). It has led to water shortages, ecosystem pollution, and the spread of diseases, this harming both the planet and people (idem; Al-Marashi, 2023; Daher, 2022). Water has been used as a weapon of war and bargaining tool, furthering the link between humanitarian issues during armed conflict and natural resources (Daher, 2022; OCHA, 2021; Von Lossow, 2020). This often occurs, as in Syria, in the form of targeting water systems during a war, or using it as bargaining tool. For instance in 2012, Aleppo's major pipeline was severely damaged in a way that caused water shortage, depriving millions of people (idem; BBC News, 2012). This example, within a wider trend, reflects the fragility that water supply and scarcity can play in situations of armed conflict, with similar cases happening elsewhere, like in the ongoing invasion of Ukraine (Euronews, 2023; Yermak & Wallström, 2023).

Research has confirmed that governmental policies focused on human rights, anti-corruption and adequate natural resources management face lower risk of armed conflict (Koubi, 2019; Hegre et al; 2016, Witmer et al., 2017). Additionally, a report has found links between higher deaths rates by natural disasters and lower peace indexes (Institute for Economics & Peace, 2020). Thus, good governance politics, that also consider environmental protection and human well-being, could decrease the potential for both the furthering of the climate crisis' effects and armed conflicts. If Assads' regimes had responded better to water scarcity instead of perpetuating it, and implemented socioeconomic measures and political reforms to respond to the humanitarian crisis and the social unrest, the Syrian Civil War could have been avoided (Koubi, 2019). Anyways, there is a need for scholars and scientists to continue investigating the climate crisis' interaction with socioeconomic and political factors, and joint effects on and consequences with armed conflicts (Hegre et al., 2016; Koubi, 2019; Witmer et al., 2017). Overall, ecocide and armed conflict should be investigated more, in various scenarios, as retrofeeding threats to both the environment and humanity.

A comprehensive report on ecological threats, resilience and peace, shows multiple accounts of migration-related cases in which conflict and refugeedom intersect in the context of environmental disaster (Institute for Economics & Peace, 2020). Beyond Syria, countries – such as Afghanistan, El Salvador, Ethiopia, Guatemala, Honduras, Haiti, Myanmar, Somalia, Sri Lanka, Tuvalu, Yemen – present dozens of thousands of civilian deaths and forced

displaced people fleeing from both armed conflict and natural disasters (induced by the climate crisis) (idem; Ayazi & Elsheikh, 2019). Furthermore, the report emphasizes the globally increasing trend of natural disasters, rising from "39 incidents in 1960 to 396 in 2019" (Institute for Economics & Peace, 2020, 49). Once again, hydrological stresses have played a key role in this increment (see Table 3), affecting aquifers and rivers, causing cyclones or floods, or in the form of sea-level rise (idem; Ayazi & Elsheikh, 2019). In 2018, out of the new 28 million worldwide refugees, there were more displaced due to natural disasters, 17,2 million, than through armed conflict, namely 10,8 million (Ayazi & Elsheikh, 2019, 1). The IDMC reported over 253,7 million forced displaced people by natural disasters between 2008 an 2018, "with such disasters displacing three to 10 times more people than conflict and war worldwide" (Ayazi & Elsheikh, 2019, 5). Research conducted by the scientific community has strongly supported the claim of a causative and direct link between the climate crisis and migration (idem; Black, 2001; El-Hinnawi, 1985; Lister, 2014; Lustgarten, 2020; McAdam, 2012; Myers & Kent, 1995; Theisen et al., 2013; Trimarchi & Gleim, 2008). There have been reports of around 24 million people being yearly displaced by environmental disasters and about 7 million by armed conflict (Institute for Economics & Peace, 2020; IPCC, 2022; UNHCR, n.d.a.). This concern had already been voiced by scholars (Gleditsch et al., 2007) and has been re-emphasized by others (Abel et al., 2019) and the European Parliament (2022).

Total number of global disasters, by disaster type, 1990–2019

Globally, floods and storms account for 71 per cent of the natural disasters that occurred between 1990 and 2019.

Disaster Type	Number of disasters (1990 – 2019)	Percentage (%)
Flood	4119	41.5%
Storm	2942	29.6%
Earthquake	818	8.2%
Landslide	551	5.6%
Extreme temperature	524	5.3%
Drought	475	4.8%
Wildfire	341	3.4%
Volcanic activity	154	1.6%
Total	**9924**	**100%**

Source: EM-DAT, IEP Calculations

Table 3. *Total number of global disasters, by disaster type, 1990–2019*. (IEP, 2020).

In a context of environmental degradation, armed conflict, and environmental refugeedom, another relevant, yet understudied, issue is food insecurity. Scholars agree that resource scarcity, as an effect of the climate crisis, leads to the loss of livelihood, socioeconomic disparities, and forced displacement (Theisen et al., 2013), all linked to lack of and competition for food. In combination with poor governance, political tension, and social inequalities, climate migration and armed conflict are more likely to happen (idem; Šedová & Thalheimer, 2022). The IPCC has affirmed that crop failure, in combination with demographic growth and competition for water resources, will likely impact food security,

particularly in the SWANA region (IPCC, 2022). This projected future insecurity and land degradation, induced by the climate crisis, are expected to become major drivers of social unrest, political tension, and potential violence in the SWANA region (idem; Šedová & Thalheimer, 2022). The concrete consequences of just hydrological changes are far more difficult to project, due to influencing factors like economy, global trade, technology, and management decisions regarding agriculture and water allocation (idem; Gleick, 2014). Despite this estimation uncertainty there is increasing concern on the dimension that these alterations will have on food security, and consequently on socioeconomics, politics, migration, and conflict. Taking into account that over half of the world currently relies on three mega-crops for food (International Development Research Center, 2010; National Geographic, 2023; World Economic Forum, 2018), ongoing cases of ecocide can be lethal to civilization. For instance Syria's reliance on wheat (one of the three mega-crops), and its agricultural failure, sparked famine and discontent among the population. There have been other examples in which inability to grow or pay for these food staples (dominant part of a population's diets) has led to protests and violence (Gleditsch, 2015; Kunnie et al., 2018) In this sense, it is of international security interest to protect the environment, preserve biodiversity. and restore ecosystems, considering the disappearance of biodiversity at unprecedented scale and its future migration, military, and humanitarian impacts (Kowalska, 2023).

This trend in climate-induced migration is expected to continue and even increment. As previously mentioned in the Literature Review, there is no numerical consensus regarding the projection of future amount of environmental refugees. Considering this contested forecast for 2050 ranges from 200 million climate migrants (IOM, n.d.a., European Parliament, 2022) up to 1,2 billion (The Guardian, 2020; Trimarchi & Gleim, 2020), there is no agreement on the amount, but definitely on the incoming crisis. The phenomenon of environmental refugeedom is expected to especially hit the overall SWANA region's population, including Syria too, as one of the least peaceful countries (Institute for Economics & Peace, 2020; Trimarchi & Gleim, 2020). Various policy and academic bodies have recently raised concerns on the high amount of environmental refugees transpassing international borders (IPCC, 2022; McLeman, 2019; Institute for Economics & Peace, 2020; The Guardian, 2020). Moreover, there is an estimation that one out of five of those migrants will seek refuge beyond national borders and that climate migrants "could regularly surpass the European migration crisis of 2015" (Institute for Economics & Peace, 2020, 3; European Parliament, 2022). This scenario could easily lead to a surpass of the European refugee crisis of 2015 (idem; Šedová & Thalheimer, 2022). Abel et al's extensive research found that "climatic conditions, by affecting drought severity and the likelihood of armed conflict, played a significant role as an explanatory factor for asylum seeking in the period 2011–2015", hence pointing at a direct impact of climate on conflict and forced migration within this specific time period and context (2019, Abstract). Nevertheless, the climate crisis' role was not being taken into account throughout legal and political responses.

When 2 million (partially environmental) refugees fled from Syria to Europe in the wake of the civil war, European politics became heavily unstable and hostile towards migrants.

Although that 2 million figure did not even represent 0,5 percent of the entire EU population, populism and xenophobia rose across the countries (Institute for Economics & Peace, 2020). This anti-migrant backlash, that propelled nationalist leaders into power around Europe, underlined that these refugees and their non-Western origin were perceived as the threat, and not their reason to flee (Lustgarten, 2020). Such SWANA (environmental) refugees undergo a process of securitization, through which they are portrayed as (inter)national security threats (Šedová. & Thalheimer, 2022; Valero, 2015). Considering the projected numbers of environmental refugees (IOM, n.d.a., European Parliament, 2022; The Guardian, 2020; Trimarchi & Gleim, 2020) and that Europe will likely develop into a "destination for future displacement from ecological threats" from its neighboring areas (Institute for Economics & Peace, 2020, 60), governments should instead advocate for international legal agreements, and prepare politically, socioeconomically, and administratively for this great wave that will otherwise shock their borders and societies (Lustgarten, 2020). Suggestions to prevent such massive climate migration, imposing (perceived) security threats to Europe, are mainly mitigation and adaptation (Apap, 2023; European Parliament, 2022; Šedová & Thalheimer, 2022). However there is little initiative to realize these migrants as environmental refugees and take own action (Apap, 2023; Valero, 2015).

The latent potential for large-scale international movements in the form of climate migration is undoubtedly becoming closer and greater (Lustgarten, 2020, 4), and thus arises questions of how the international community shall proceed legally and politically. There are conceptual disagreements, and therefore no standardized definition of 'environmental refugee', 'climate migrant' or any similar term (Feng, 2023). This historical lack of consensus is an impediment to political, legal, humanitarian, and financial advancements regarding this increasingly recurrent phenomenon (Ayazi & Elsheikh, 2019; IOM, n.d.b.). Internally displaced people, due to climate as well, can potentially fall within the 1998 UN Guiding Principles on Internal Displacement's human rights protections, since they are included in the category of people forced to flee their homes due to "natural or human made disasters, and who have not crossed an internationally recognized State border" (Ayazi & Elsheikh, 2019, 26; IOM, n.d.b.; UNHCR, 2004). Anyways, these principles do not serve as legally binding, but instead allow national governments to decide if and which strategies and policies to adopt (Apap, 2023). The 2011 Nansen Conference: Climate Change and Displacement in the 21st Century deliberately avoided using terms like 'environmental refugee' or 'climate migrant', and instead preferred phrasings such as external displacement driven by extreme weather events, to counter the rather "legally inaccurate and misleading terms" (Ayazi & Elsheikh, 2019, 26). Similarly, although the 2018 UN Global Compact for Safe, Orderly, and Regular Migration recognized the climate crisis as a catalyzer of migration, it still avoided the explicit use of these terms (idem; Apap, 2023). It seems that legal, political, and financial implications hinder the international community from embedding these concrete terms in conferences and treaties, which consequently allows a further lack of accountability and reparation towards these internationally climate-induced displaced people.

There are multiple reasons for which climate-induced displaced people, despite wide consensus on their existence and circumstances, are still being denied international refugee status and adequate protection. For instance, it is often argued that climate migration is mainly internal (Apap, 2023; UN, 2019). Nevertheless, the UNHCR estimates already "show that at least one in five people moves beyond their country and region" (Institute for Economics & Peace, 2020, 51), a ratio that is expected to shift over time (Abel et al., 2019; European Parliament 2022; Gleditsch et al., 2007). Another motive for the neglect of an international binding admission is the empirical difficulty to isolatedly study environmental factors as a cause for migration, without the interactions with political, socioeconomic, military, or humanitarian reasons (Apap, 2023; UN, 2019). Moreover, the 1951 UN Refugee Convention cannot be expanded to include climate migrants, since the definition is based upon 'persecution' as the motive for not returning home (Apap, 2023; UNHCR, n.d.a.). Therefore, this conceptualization, as the most official and universally accepted one, stands in conflict with the notion of fleeing from environmental destruction and its multiple complex consequences and could only include environmental refugees if amended. Otherwise, remaining within this limited framework of 'refugeedom' from 'persecution', it would be nearly impossible to make an argument that climate migrants fall into that category. This is because the 'climate crisis', 'environmental destruction', or 'natural disasters' cannot be held accountable and be prosecuted as legal entities. Nevertheless, these ecological catastrophes are perpetuated by actual human beings, in the form of governments or companies that actively damage or neglect the environment. Thus, the causality could be identified and condemnation could take place. One of the hindering factors of establishing an international environmental refugee definition is the acclaimed lack of research of the direct causality between the climate and migration (Apap, 2023). Although there is still a long way to go in the academia on this link, there is already a large amount of evidence proving this correlation (Abel et al., 2019; Black, 2001; European Parliament, 2022; IPCC, 2022; Lister, 2014; McAdam, 2012; McLeman, 2019; Institute for Economics & Peace, 2020; The Guardian, 2020; Trimarchi & Gleim, 2008; UNHCR, n.d.a.).

Advocating for the international recognition of both 'ecocide' and environmental refugees underscores the urgency of the ongoing and incoming climate crisis and the wave of climate-induced displaced people. The current measures, policies and legal frameworks are outdated and do not reflect nowadays' reality. The UN Refugee Convention is over 70 years old, the Rome Statute was established a couple of decades ago, and ever since, the climate crisis has gained considerable impact and corresponding attention. Although bodies such as the UNHCR and the European Commission have recently expressed their understanding of the current and future role of climate crisis in the forced displacement of people (Apap, 2023), there is still a void in the international arena. It is necessary to shift away from the narrow normative and legal framework of the 1951 Convention, and expand nowadays' notions. International agreements must align with the current reality of the climate crisis, and its global effects must be embedded when understanding and acting upon forced displacement. Addressing ecocide's present and potential role in displacing millions of people is key to ensure coordinated safeguarding of environmental refugees' rights and provision of assistance. Considering not only the difficulty of getting most countries to sign and ratify

such an international treaty like an amendment to the ICC, but also taking into account every single scenario's unique context, there might be alternative or parallel methods. For instance, bilateral agreements between the countries of origins and reception of environmental refugees, or ecocide perpetrators and victims, could provide enough room for regulating agreements that already apply to a wider group of people. Even if this form of accountability entails the tedious task of investigating complex cases, it would not only serve individuals, but rather entire masses of refugees that had all to flee from the same or similar chain of events. The current vagueness and uncertainty around the "legal framework and practice about protection of climate refugees" (Feng, 2023) must be tackled in a binding and effective manner that includes accountability.

This last chapter has underscored how the urgency of addressing ecocide as a global issue and the need to acknowledge environmental refugees in international law and politics are of paramount importance for the preservation of both the environment and people, and protecting them from the lethal threat of armed conflict and the climate crisis. The Syrian Civil War and refugee crisis have been the grim preview of what could occur if the environment is not protected from human-induced destruction. This case study should be taken as a warning to other nations, neighboring ones with similar conditions, and rather faraway states that could soon undergo the same fatal fate, causing death and flight. There has been responsibility evasion for the ecocide committed in Syria, and the phenomenon of environmental refugees fleeing from that destruction and its catalyzed war urge. This absence of responsibility and accountability has resulted in leaving millions of victims in a state of limbo and no agency for the long-term and severe environmental destruction. Existing international bodies referring to refugeedom are limited and not legally binding, so the environmental catalyzer is not accounted for. Additionally, nowadays' frameworks mainly apply to internally displaced people, leaving out the increasing number of cross-border climate migrants. Therefore, the two intertwined phenomena of ecocide and environmental refugees must be acknowledged in politics and law, both on a domestic and on an international level. These measures, as policies or laws, could be dealt with individually, and simultaneously combined, reflect their complex intersected threat on the planet and humanity.

6. Conclusion

This last chapter culminates this thesis's main findings and pledges. Throughout the previous chapters, this dissertation has elaborated on the climate-conflict nexus leading to environmental refugeedom as a form of ecocide, taking the Syrian Civil War and refugee crisis as the case study. The employed qualitative analysis as the main methodological approach has served to answer the research question "How does the climate crisis as a catalyst of armed conflict lead to a massive refugee flow as a form of ecocide?". By unraveling the intricate relationships of the various concepts and processes, the in-between steps could be entangled and explored (Figure 1). The aforementioned theoretical framework elaborated on the logic that the human-induced climate crisis catalyzes armed conflict, which leads to environmental refugees as a form of ecocide. The causal chain departed from the climate crisis, caused by human driven industrialization, destroying the environment; this damage in turn negatively impacting living conditions by driving water scarcity, agricultural failure, food insecurity, and loss of habitability. Then, these worsened circumstances intensify socioeconomic instability and political tension, increasing poverty and inequality, creating resource competition and territorial disputes. Consequently, the escalation of these social dissatisfactions leads to armed conflict, which combined with environmental degradation, causes forced displacement, considered environmental refugeedom. Due to the risk and even lethally threat of the affected people under these conditions, the theoretical framework employed 'ecocide' to encapsulate the danger and fatality. This work aimed to contribute to the ongoing discussion, in academia and international relations practice, on the contested claim, the repudiated yet atrocious reality of climate migrants, and the lethal phenomenon of ecocide – and advocate for the global recognition of all these complexly intertwined issues.

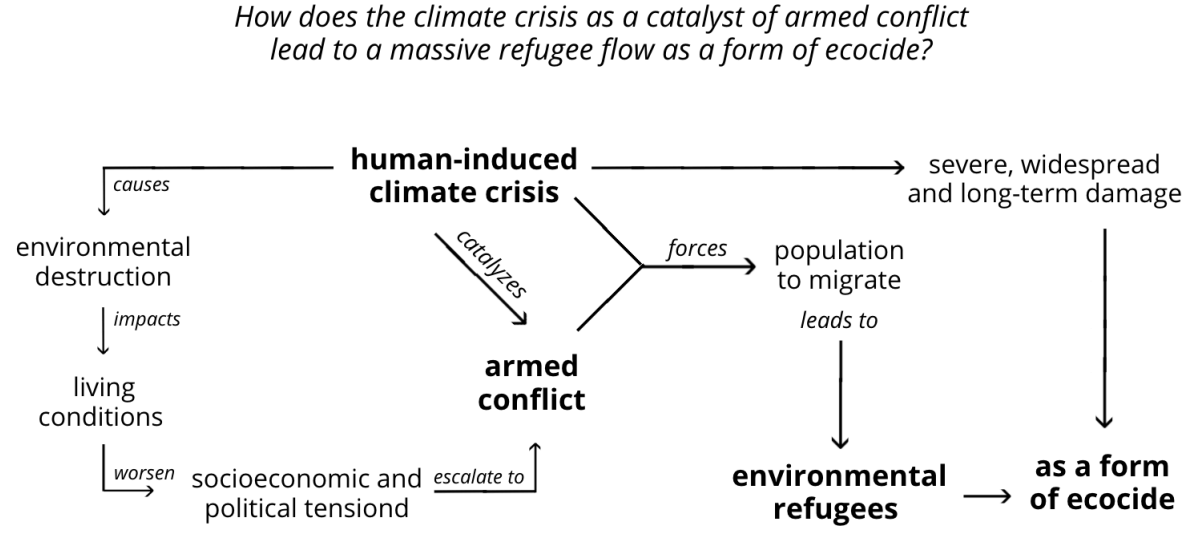

Figure 1: *Diagram visualising the thesis's core argument.* Created by the author. 2023.

This dissertation has found that the Syrian Civil War was catalyzed by the climate crisis, through global warming's overall environmental degradation, and the regional water scarcity that took place in Syria due to Assads' decades-long neglect and destruction. Both dictators did not consider the long-term consequences that their water management policies would

have on future agriculture and the Syrian population. Furthermore, the authoritarian regimes' systematic suffocation of opposition movements, the political repression towards minorities, and human rights violations, also built up a climate of resentment and social discontent. Under environmental circumstances that already did not favor water abundance but rather caused droughts, regional neglect and destruction, and the global climate crisis effects, corroded the Syrian society. By the turn of the millennium, Syrians had hope for reform and democracy. However, they were soon met with suppression and violence. By not conceding the blood-free transition towards the demanded Damascus Spring, Assad killed the peaceful seeds for change and instead cultivated further frustration and socioeconomic hardship. In combination with the high influx of Iraqi refugees, Western isolation, and an unsolved economic crisis, Assad was not able to counter years-long grievances. Instead, he further worsened socioeconomic and political elements such as employment opportunities, economic disparities, lack of political representation, and minority persecution. The late 2000s drought period, found to be inflicted by poor water management and distribution, entailed land desertification, agricultural failure of the main crops, and thus a lack of resources, and famine – also connected to population increment. The over-exploitation of groundwater led to water scarcity and pollution, and ultimately exacerbated pre-existing social and economic disparities.

Forty decades of unsustainable water management, periodical droughts, almost half a century of state emergency, the aforementioned political oppression and human rights violations, economic uncertainty, food insecurity, and rising inequality between the urban and rural populations culminated in high levels of socioeconomic instability and political tension within Syria. With internal population movements already occurring, a feedback loop took place between violence and refugeedom, both induced by environmental degradation. The last spark that fueled the spiral of climate, conflict, and displacement, was the Arab Spring. The 2010 pro-democracy uprisings across the Arabic world inspired similar demonstrations in Syria a few months afterwards. Dara'a became the scenery of the first protests, a city highly crippled by past droughts. Marked by crop failure, youth unemployment, and internal migration, civil unrest soon spread around the country during 2011, receiving high amounts of lethal responses and arrests by Assad. The violent and repressive governmental response motivated more riots, thus the initial peace movement developed into a civil war. In this sense, the drought eroded the social contract between Syrian citizens and the regime, breaking with the decades-long established political order. The armed conflict witnessed multiple actors emerging, both internal and external groups involving for various reasons, from religious to political and geostrategic interests. Within just some years, the Syrian Civil War became an entangled bloodshed, with shifting alliances and no expectation of peace and democracy. It became the Arab Spring's longest and bloodiest conflict, lasting until nowadays, The Syrian Civil War is the 21st century's most prolonged and second-deadliest conflict, with over 230.000 deaths, and turned Syria into one of the most fragile countries.

Furthermore, the resulting forced displacement has become the world's largest refugee crisis, with about 14 million people displaced, spread throughout Syria, neighboring countries, and elsewhere. Considering that the conflict was catalyzed by environmental destruction and that

it led to massive destruction, death, and displacement, the thesis dived into the need to address the phenomena of environmental refugeedom and ecocide, both combined with the climate-conflict nexus. This dissertation dived into Syria as a unique case, due to its environmental and political circumstances, and current war and humanitarian crisis. Nevertheless, it also echoes the warnings about Syria being a grim preview of what is to (similarly) repeat, if action is not taken – also taking into account the estimated figures of up to 1,2 billion environmental refugees by 2050. The thesis advocated for the simultaneous international recognition, in politics and law, of the phenomenon of ecocide as a crime, and of environmental refugeedom – since these two threats, individually and combined – already do and will showcase lethal danger to humanity and the planet. Although there are ongoing initiatives concerning such climate litigation, on domestic and international levels, there still does not seem to be a tangible chance of embedding both 'ecocide' and environmental refugeedom within international binding agreements and global politics. This further perpetuates the risk that humans undergo, and grants responsibility evasion to the committing and neglecting actors. By contributing an innovative link between the climate-conflict nexus, environmental refugeedom, and the case of Syria, this dissertation joins the call for climate litigation and environmental refugeedom acknowledgement, to protect humanity and preserve the environment. The thorough compilation and conducted analysis echo the green legal legacy and human rights advocacy.

This work contributes to the academic debate and wider international relations discussion on the climate-conflict nexus and how it catalyzes massive refugee flows, but also focuses on the phenomenon of ecocide within the context of the case study of the Syrian Civil War. Besides pointing towards a gap in the literature connecting all these issues, the findings also present a need to perhaps even further the scope, by including other factors. For instance, the two Assads' decades-long authoritarian characteristics and committed human rights violations indicate a potential link to a higher degree of undergoing climate-catalyzed conflict. Considering high indexes of vulnerability could potentially explain increased chances for conflict fragility, due to pre-existing tensions. This dissertation has included these elements in the research and analysis, but further scholar investigation could already embed authoritarianism and state violence within the complex (above elaborated) chain. Anyways, it has been shown that this pre-existing oppression and violence have not been the main catalysts, since Syria was not the only country to present them within the SWANA region. The Levant country was the only one to experience such a degree of armed conflict, that broke out into a civil war shortly afterwards. Throughout four decades, Assads' longevous water mismanagement and environmental neglect long-term destroyed the ecosystem, eventually spurring social uprising, military struggle, and forced migration.

Hence, considering the Syrian Civil War has been the longest and bloodiest conflict resulting from the Arab Spring, this might indicate towards the joint role that the environmental destruction within the authoritarian context played. This emphasis on the importance of the droughts highlights how the water mismanagement affected the outbreak of the war, without denying the complexity of armed conflicts, but instead adding a nuance in the exploration of their catalysts. This opens up the question on how Syria compares to other SWANA regions–

such as Yemen or Sudan, as climate-conflict-stricken countries – regarding the climate-conflict nexus and environmental refugeedom. Other factors to integrate already in the premise, or general scheme, could be the rural-urban divide or the influx of external refugees. Both happened in Syria, in the form of increased tensions between urban and rural populations due to resources, employment, and migration; and through the arrival of hundreds of thousands of Iraqi refugees. These two might have not been determinants on their own, but surely be considered as migration-themed variables. Moreover, the refugees arriving in Dara'a also played a crucial role in catapulting the city into starting the protests in Syria, thus signifying a relevant variable, that further stressed the region ripe for unrest and triggered by brutality.

This thesis has demonstrated the causal link between the climate-conflict nexus, environmental refugeedom, and the case of Syria, as a pattern that might apply to other current and future scenarios. To avoid similar and further environmental disasters and humanitarian catastrophes, the climate-conflict nexus must be investigated in its total complexity and continuously evolving nature. This work aims to be a step into that research and advocacy, since the general risk of the climate crisis and armed conflict are agreed upon, but their inducement and catalyst effect with other phenomena is yet not extensively explored in academia or international relations practice. Lastly, this dissertation reiterates the cruciality that the global binding recognition of 'ecocide' and environmental refugees could pose – beyond academia – for international politics, the legal status of displaced people and damaged ecosystems, the protection of human rights, the preservation of nature, and overall life on this planet.

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