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The relationship between natural resources and conflicts in Africa

Deconstructing Malthus through the Political Ecology approach

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To my beloved parents and family, to whom I owe everything.
To every soul I have met during these five years.
To Brazil, Morocco, Belgium and France.
To all the trains, planes, gondolas, buses, trams, metro and boats I have taken.
But above all to Venice, my first and eternal love.
All these people, situations, places and languages have made me who I am today.
To the satisfaction of a path that I would not change for anything in the world.

Thank you.

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Abstract

Alla base di questo studio vi è l'analisi delle relazioni tra risorse naturali e conflitti in Africa, analizzate a partire da due correnti teoriche opposte: il Malthusianesimo e l'ecologia politica.

A partire dal 24 febbraio 2022, con l'invasione dell'Ucraina da parte della Russia, il territorio europeo ha ricominciato a tremare sotto la minaccia di una guerra improvvisa e vicina, catalizzando fortemente l'attenzione del mondo intero.

Quello che però potrebbe sembrare un sincero atto di compassione, ovvero di scandalizzarsi davanti alla feroce atrocità commessa in un territorio a noi vicino, secondo una parte dell'opinione pubblica cela in realtà una cecità selettiva nei confronti degli altri 58 conflitti che pervadono incessantemente gli altri continenti, in particolare quello africano che, più di tutti, sembra essere sempre di più calato in un silenzio mediatico assordante.

Sembra infatti che la narrazione dei conflitti armati sia spesso superficiale ed emotiva: un eccesso di informazioni su alcune guerre fa da contraltare il silenzio assoluto su molte altre. Al 21 marzo 2022, infatti, sono 59 i conflitti (o situazioni di emergenza, a seconda dell'intensità dello scontro) che continuano a uccidere e affamare milioni di persone. Ecco perché, quindi, l'obiettivo primario di questa tesi è quello di saperne di più su quanto sta accadendo nel mondo, su quali e quanti tipi di conflitti esistono, sulle loro cause, sulle possibili soluzioni e su come vengono percepite a livello internazionale e interno. A partire dai vari modi di definire le risorse naturali, i conflitti, e la correlazione tra questi concetti, questa tesi analizza le tendenze ricorrenti soprattutto nel settore estrattivo.

Il secondo principale motivo per il quale è importante studiare approfonditamente la relazione tra risorse naturali e conflitti sta proprio nella base dell'ideologia (neo)malthusiana secondo la quale le risorse saranno sempre scarse e l'umanità è destinata a soccombere sotto la pressione demografica, in particolare a causa dei paesi in via di sviluppo. Tra gli studiosi, c'è chi pensa che dovremmo tremare di paura e prevede uno scenario orribile. Dall'altra parte, alcuni pensatori più positivi ripongono la loro fiducia nell'inventiva umana e in altre fonti energetiche, come quelle rinnovabili.

Un altro punto focale di questa tesi è il collegare le questioni ambientali alle questioni politiche. Oltre il 40% della terra mondiale, infatti, è impoverita e degradata. Il sistema che noi oggi

conosciamo ha già raggiunto i suoi limiti nel modo in cui utilizziamo le risorse naturali ed è perciò essenziale fornire gli strumenti adatti per interpretare le crisi ambientali.

L'obiettivo principale di questa tesi è quello di rafforzare e amplificare la comprensione interdisciplinare del nesso tra politica, ambiente e conflitto in Africa, coinvolgendo diversi approcci e dibattiti teorici, concettuali e metodologici nel campo dell'ecologia politica, della storia ambientale, dell'economia politica delle risorse e degli studi sui conflitti. Ciò è possibile navigando criticamente nei principali dibattiti teorici e concettuali sulla politica delle risorse, sulla trasformazione ambientale e sui conflitti, soprattutto in Africa. Un altro step essenziale avviene attraverso la comprensione dei modi in cui le disuguaglianze di potere e di ricchezza modellano la politica delle risorse e il ruolo che la politica svolge nel produrre cambiamenti ambientali in Africa. Ultimo ma non meno importante, considerare il ruolo centrale svolto dallo Stato, dal capitale, dai donatori e dalla comunità internazionale nella governance dei fenomeni ambientali.

L'ecologia politica è emersa negli anni '80 come campo interdisciplinare che analizza i problemi ambientali utilizzando i concetti e i metodi dell'economia politica. Una premessa centrale del campo è che il cambiamento ecologico non può essere compreso senza considerare le strutture e le istituzioni politiche ed economiche in cui è inserito. La dialettica natura-società è il fulcro fondamentale dell'analisi. L'argomentazione dell'ecologia politica parte da tre domande chiave: "chi ha diritto a cosa?" (*who olds what?*), introducendo la questione della proprietà, che è fondamentale per comprendere le questioni delle risorse e dei conflitti. La seconda domanda è "chi fa cosa?" (*who does what?*), ovvero attirando l'attenzione sul ruolo delle *élite* rispetto a quello dei meno abbienti. L'ultima domanda è "chi riceve cosa?" (*who gets what?*) facendo riflettere sull'importanza di un'analisi di classe durante lo studio dei conflitti ambientali.

Insieme a tutto questo, un'altra provocazione lanciata dall'ecologia politica è rappresentata dalla questione della scarsità di risorse: siamo davvero davanti a un mondo che non riesce a sfamare e a provvedere a tutta la sua popolazione, oppure semplicemente non vogliamo e/o non siamo in grado di distribuire in modo uguale le ricchezze? Questa domanda viene posta in modo abbastanza retorico, in quanto in base ai dati rilevati è evidente come globalmente ci sia un problema nella distribuzione di risorse e ricchezze.

Secondo l'ecologia politica quindi non è quindi la scarsità di risorse a generare conflitti, ma al contrario l'abbondanza. Se nella logica capitalistica, infatti, ci sono molte risorse da sfruttare,

si generano più facilmente conflitti. Per essere più precisi, dalla ricerca condotta sia la prospettiva dell'abbondanza che quella della scarsità di risorse non tengono sufficientemente in considerazione la natura socialmente complessa delle risorse e, così facendo, non spiegano nemmeno perché l'abbondanza o la scarsità di risorse preziose non sia un fattore necessario o sufficiente di conflitto.

Uno dei problemi principali della prospettiva Malthusiana, oltre la teoria in sé, è il fatto che si sia diffusa globalmente in paesi emergenti come gli Stati Uniti, dove in alcuni casi ha delineato la politica fino ad arrivare al *security approach*. A partire dalla pubblicazione di Kaplan (*The Coming Anarchy*), la politica estera americana cambia. Tutta una serie di problemi ambientali e di sicurezza in Africa iniziano a interessare la politica americana, perché secondo il governo americano questi problemi destabilizzavano l'ordine politico esistente e rischiavano di scatenare delle crisi. I processi ambientali cominciano a essere letti principalmente attraverso la lente della sicurezza (*security lens*) statunitense, che si basa su migrazioni e conflitti: i processi di trasformazione dell'ambiente sono legati alla visione di sicurezza di un programma ambientale aggressivo come strategia di difesa per evitare di destabilizzare l'ordine politico statunitense. Ciò ha portato a considerare l'ambiente come una questione fondamentalmente di sicurezza, che dà forma alle relazioni internazionali. Dall'altra parte, in Europa, stiamo vivendo una guerra che non si combatte per le risorse naturali, ma che ha ripercussioni sulle risorse di tutto il mondo, in particolare in Africa.

I casi studio analizzati, insieme alle fonti in materia, dimostreranno che, se è vero che da una parte la modernità può essere un problema, è anche vero che la teoria Malthusiana è sempre stata usata a scapito dei più bisognosi, rappresentati spesso e volentieri come "parassiti" della società. Non a caso, il discorso pubblico tendenzialmente usa la tecnica del "*blaming the poor*", soprattutto quando si parla di sovrappopolamento del pianeta. Nel frattempo, nelle zone estrattive in Africa, dove si combatte e dove i potenti svolgono a loro beneficio le loro attività, c'è un enorme *mismatch* tra la popolazione. Tra gli esperti, c'è chi parla di "maledizione delle risorse" (come i neo-Malthusiani) e chi invece (come gli ecologisti politici) pensa che le risorse in sé non possano portare a una maledizione. "*Resources are not, they become*" ovvero, le risorse in sé non esistono, ma lo diventano nel momento in cui una classe dominante decide di sfruttare un determinato prodotto grezzo a proprio vantaggio. Non a caso, il petrolio e i diamanti, abbondanti nel continente africano, sono i prodotti più contesi e reclamati non dalla popolazione povera, ma dai grandi e potenti. La guerra delle risorse, infatti, inizia con un

particolare gruppo che controlla la risorsa e un aggressore che vuole prendere il controllo di tale risorsa.

Analizzando le situazioni di conflitto presenti e passate in Nigeria, Angola, Repubblica Centrafricana, Repubblica Democratica del Congo e Sud Sudan la situazione è evidente il fenomeno sopracitato, in quanto sono tra i paesi più poveri al mondo in cui però le élite detengono tutto il patrimonio dello stato, ottenuto nella maggior parte dei casi attraverso lo sfruttamento delle risorse ambientali e a danno della popolazione.

Con una popolazione di 1,34 miliardi di abitanti (la più giovane del pianeta), 30 milioni di chilometri quadrati di territorio ricco di risorse naturali e 54 Paesi suddivisi in 5 grandi regioni (Nord, Ovest, Centro, Est e Sud), l'Africa è il secondo continente più popolato al mondo. Dall'analisi svolta emerge che la maggior parte di questi conflitti sono interni e non interstatali, ma spesso e volentieri con l'influenza di altri Paesi esteri per quanto riguarda l'accesso alle risorse e gli investimenti diretti nell'area di interesse. Oltre ai conflitti tra gruppi etnici diversi - spesso descritti dai media come la causa principale dei conflitti in Africa - esiste la pratica dell'accaparramento della terra (*land grabbing*), spesso perpetrata da attori potenti come Stati o multinazionali a danno di comunità vulnerabili. Non è un caso che tra i 10 Paesi più colpiti da questa pratica, la maggior parte si trovi in Africa: Repubblica Democratica del Congo, Sud Sudan, Mozambico e Liberia. Il land grabbing crea una reazione a catena di crisi: agroalimentare, ambientale (riduzione della biodiversità del suolo) e gravi violazioni dei diritti umani di intere comunità. La domanda di fondo è: come sono collegati i conflitti, le relazioni di potere asimmetriche, i diritti fondiari e i sistemi di credenze culturali?

Da questa analisi emerge chiaramente la gravità della situazione in Nigeria, Angola, Repubblica Centrafricana, Repubblica Democratica del Congo e Sud Sudan, che sono tra i Paesi più poveri del mondo dove, però, le élite detengono tutte le ricchezze statali, ottenute nella maggior parte dei casi attraverso lo sfruttamento delle risorse ambientali e a scapito della popolazione. Queste informazioni suggeriscono che se fosse davvero come pensano i neomalthusiani, allora si lotterebbe per qualcosa di più del petrolio e dei diamanti. È un'ulteriore prova che le élite al potere pensano solo ai propri interessi finanziari e che questi conflitti non sono il disperato bisogno di conquistare il minimo indispensabile per sopravvivere a una carestia, ma piuttosto il tentativo di accaparrarsi quanta più ricchezza e potere possibile. Dall'altra parte, ci sono persone che muoiono ogni giorno per le conseguenze di queste azioni.

INTRODUCTION

Ever since Russian armies invaded Ukrainian territory, the word "war" has once again become part of our daily lives. Yet, far from our eyes, conflicts and humanitarian tragedies have never ceased to inflame parts of the planet, with dozens of wars around the world. As of 21 March 2022, there are 59 conflicts (or emergency situations, depending on the intensity of the clash) that continue to kill and starve millions of people.[1] From Afghanistan, to Libya, to Myanmar, to Palestine, to Nigeria, there are many individuals in the world for whom conflict is the tragic norm. Some of these wars have been going on for decades and find their causes in struggles for the possession of strategic resources, like many of the conflicts that plague the African continent. The narrative concerning armed conflicts is often superficial and emotional: an excess of information on some wars is counterbalanced by absolute silence on many others. That's why, therefore, the aim of this dissertation is to find out more about what is happening in the world, what and how many types of conflicts exist, what causes them and, what possible solutions exist and how they are perceived internationally and internally.[2]

This study will start tackling the cardinal definitions around natural resources and why they are defined as such, in contrast with raw materials and commodities. This is a fundamental step together with the defining concepts of war and conflicts. As we will see, whether in the name of modernisation or, on the contrary, in the name of preserving the wilderness, natural resources have become the object of government techniques by which, in addition to controlling the territory and its raw materials, it is also intended to dominate the population by controlling its numbers, distribution and socio-economic behaviour.[3]

The more controversial materials around this discussion are mostly oil and gas supplies, which are apparently becoming increasingly scarcer and more expensive. Is there a risk of other deadly and dramatic conflicts? Among the scholars, there are some who think that we should be trembling in fear and who envisage an horrific scenario. On the other side, some more positive thinkers rely their faith in human inventiveness and in other energy sources, such as the renewable ones. Of course, for resources such as natural gas and oil, the prices will continue to rise and they are scarcer, but is there a solution for that? Attention is focused on China as

[1] Armed conflict location & event data project (Acled)
[2] Andrea Degl'Innocenti, *Non solo Ucraina: ecco quante e quali sono le guerre nel mondo*, "Italia che Cambia", 13.04.2022
[3] Amalia Rossi e Lorenzo D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, in "University of Reading, 2012, p. 12

well, who seem to be fighting for resources more aggressively than anyone else and with even less scruples than the Western countries. It is to say, however, that on a global scale the Chinese are more moderate in their fuel consumption with respect, for instance, to the US.[4]

In addition to the five best-known major conflicts (Afghanistan Conflict, Myanmar Civil War, Yemen Crisis, Russian-Ukrainian War and Tigray Conflict, Ethiopia), there are many other wars around the world that are just as dramatic, more local, scattered, with fewer deaths, or perhaps of which less is known. Of the other 18 significant conflicts scattered around the world, no less than 14 are in Africa (some of them involving more than one state, such as the Maghreb conflict involving ten), two are in Asia (Iraq and Syria), one is in South America (in Colombia), the other in North America (the drug war in Mexico). And of the further 19 conflicts considered minor, 11 are in Asia and 8 in Africa. In this context, Africa appears as the most tormented continent of all.[5]

The focus will then shift on the so-called natural resource war and how conflicts and resources interact, whether there are any remarkable trends depending on the geographical area and the type of resources.

We will see that there are various ways to classify wars in the world. First of all, there is a criterion related to extension, whereby wars can be classified into world conflict, extending to several theatres of war simultaneously, even on different continents, and regional conflict, which essentially takes place in one theatre of operations and involves at least one regional medium power, plus other minor powers in the same region. Then we have local conflicts, which occur between a very limited number of powers, often only two, and involving a limited territory. Another criterion is related to the type of actors fighting it. In this perspective, one speaks of symmetrical conflict, which tends to occur between two states, with regular armies clashing, and asymmetric conflict, which tends to occur between a state, with an army, and less organised groups, or local militias. Another classification that can be made is on the basis of the means employed. In this sense, a distinction is made in unconventional warfare, which occurs between two or more powers that have weapons of mass destruction and are prepared to employ them from the outset of the conflict. This type of conflict is fortunately hypothetical,

[4] Erich Follath, *The Coming Conflict: Natural Resources are Fuelling a New Cold War*, in "Spiegel International", 8th August 2006. Available at: http://www.spiegel.de/international/spiegel/0,1518,429968,00.html
[5] Degl'Innocenti, *Non solo Ucraina*

since there are no examples of it in history, and conventional conflict, in which the parties do not have weapons of mass destruction, or renounce their use a priori.[6]

Another predominant issue analysed during this dissertation will be the demographic growth. Currently, the world is populated by around 8 billion people. The density of human beings populating the planet has started to be a hot topic of discussion since the industrial revolution and the recognition of the so-called Anthropocene. From this point forward, and particularly over the last two centuries or so, the focus has been on the relationship between human beings on the planet and natural resources, which have been defined as insufficient in the vast majority of cases to sustain life on earth.

The issue of the relationship between natural resources, population and conflicts in Africa has been the core of the geopolitical scenario for decades, and we are here to analyse it according to the two dominant and opposite theories to explain environmental crises: neo-Malthusianism and the political ecology.

With the theory on the principle of population by Malthus, who believed that population grew geometrically while food arithmetically, the division began regarding environmental and demographic factors in their relation to conflicts. Malthus' words did not remain relegated to the past, however. In fact, after him and to this day, the Malthusian idea persists that natural resources are disproportionate to the population, and that this imbalance will generate famine, wars and destruction. During this thesis, we will take a critical viewpoint, seeing how such a viewpoint may not only be unhelpful for global development, but also blame the weakest and most marginalised part of the population. For this reason, it is also important to see the counterpart to this position, in this case given by the political ecology coalition that has been trying to explain the political matrix of climate change for the past 40 years.

Among the factors opposing neo-Malthusianism and Political Ecology there is the discussion around scarcity versus abundance of natural resources, whether the demographic pressure generates conflicts and whether some countries experience a resource curse. These theories are extremely relevant as they are translated into political actions by governments. In particular, we will see how the pessimistic neo-Malthusian view has influenced American security policy and what the practical implications have been.

[6] Degl'Innocenti, *Non solo Ucraina*

The main objective of this dissertation is to strengthen and amplify the interdisciplinary understanding of the nexus between politics, environment and conflict in Africa by engaging different approaches and theoretical, conceptual, and methodological debates in the field of political ecology, environmental history, political economy of resources and conflict studies. We will critically navigate the key theoretical and conceptual debates about resource politics, environmental transformation, and conflict in Africa. Another point concerns the understanding of the ways in which power and wealth inequalities shape resource politics and the role politics plays in producing environmental change in Africa, while considering the central role played by the state, capital, donors and the international community in the governance of environmental phenomena.

CHAPTER 1: Natural Resources and Conflicts

1.1 Defining concepts

1.1.1 Natural resources and raw materials

For the purpose of this research, it is essential to underline the difference that lies between the terms 'natural resources' and 'raw materials', first from the linguistic point of view and then theoretically, following the two main opposing theories in this field: the political ecology and the Malthusian theory. In fact, the classification and explanation of the concept and definition of natural resources depends on the context in which the term is used. The use of one term rather than another, as we shall see, in fact implies different meanings that leading scholars in the field often emphasise.

Natural resources are difficult to define in a precise way. We can have an intuitive idea of what they are, but definitions based on common sense cannot be relied upon since they eventually run into problems when dealing with ambiguous cases. The World Trade Organisation (WTO) provides us with the example of crude oil and wood, which are clearly natural resources, but saying that it is less obvious how intermediate and final goods made from these products should be classified. All goods either embody natural resources or require resources for their production, so all goods could technically be classified as natural resources. At another extreme, we could choose to focus strictly on resources in their natural state. However, most resources require at least some processing before they can be traded and/or consumed.[7]

Raw materials (together with commodities and natural resources) are the "skeleton" of our modern economies, contributing to economic growth and competitiveness, and are defined in the Oxford dictionary as "a basic material that is used to make a product", while natural resources are defined as "materials or substances such as minerals, forests, water, and fertile land that occur in nature and can be used for economic gain." It thus appears, from these first brief definitions, that the striking difference between the two terms lies in the socio-economic life of the object, the so-called "economic gain", that in the latter case goes beyond the existence of the product in itself.

[7] Marc Bacchetta et al, *World Trade Report 2010, Trade in Natural Resources*, in "World Trade Organization", 2010, p. 46

According to the annual report of the WTO, natural resources are:

> Stocks of materials that exist in the natural environment that are both scarce and economically useful in production or consumption, either in their raw states or after a minimal amount of processing.[8]

Also in this definition, note how the qualifier "economically useful" takes into consideration the economic aspect of the resources.[9]

Following the work of Philippe Le Billon, on "Wars of Plunder: Conflicts, Profits and the Politics of Resources", the term 'resource' conveys the idea of re-empowerment and opportunity, and at the same time also dependence and vulnerability. In the specific case of this research, the term 'natural resource' refers to natural materials that are produced for satisfying human needs and desires. The notion of production is central to this definition: while nature creates these (raw) materials, it is their use by humans that make them turn into resources. We can therefore state that "resources are not; they become"[10] meaning that materials exist in itself, but only through human intervention they become resources.

Another term often used as a synonym for resource is "commodity", which is typically defined as a homogeneous product which can be exchanged among consumers and producers. The term is often used to refer to agricultural goods, including also a number of other products that are classified as natural resources, such as fuels, forestry products, minerals and metals.[11] While most agricultural goods, including food, are primary products, they do not come under the category of natural resources, first because their production requires other natural resources as inputs, particularly land and water but also various types of fertiliser, but also because agricultural products are cultivated rather than extracted from the natural environment. Natural resources can be thought of as natural capital assets, not as physical and human capital since they are not created by human activity. It is important to distinguish between natural resources as factors of production and natural resources as goods that can be traded. For instance, minerals, oil, and various other materials can be extracted and traded.[12]

[8] Bacchetta et al, *World Trade Report 2010* p. 5
[9] Ivi, p. 46
[10] Philippe Le Billon, *'Resource Wars Reframed', Wars of Plunder: Conflicts, Profits and the Politics of Resources*, online edn, Oxford Academic, 2014, p. 11
[11] Bacchetta et al, *World Trade Report 2010*, p. 59
[12] Ivi, p. 46

Goods must also be economically scarce in order to qualify as natural resources; otherwise, anyone could consume as much as they wanted without costs to themselves or to others. Following this line of reasoning, air would not be considered a natural resource because it can be obtained freely by simply breathing. This is not to suggest that air or sea water are without value, but it does mean that they are not commodities that can be traded in markets.[13] Moreover, air and water entail different types of conflictuality in comparison with natural resources and materials such as crude oil, diamonds, timber and so on. Precisely for this reason, Philippe le Billon specifies that resources cannot be simply defined as raw materials that come out from nature or of which you may freely dispose at will, but as more complex objects derived by socio-natural processes. More controversially, they are also understood as subjects that can influence social relations. From his perspective, natural resources can "act" and have a "role" in armed conflicts. Such an idea must not lead to a fixed and deterministic role of resources; oil itself, as a resource, cannot declare war. Rather it is about recognising the social life of these specific materials, so that resources both reflect and contribute to material cultures.[14]

This does not mean that water, land and forest are uncontroversial. In many cases, developed countries exercised their power over under-developed ones by depriving the local populations subject to the domination of a central state of the right to exploit the natural resources such as land, water, forest. A process that has also led, in all continents, the progressive abandonment of the countryside, the overcrowding of urban areas and the uncontrolled expansion of peri-urban areas. In this perspective, even those resources and substances that we are used to taking for granted because we consider them to be almost inexhaustible (for instance. air), or because they are apparently very abundant (such as water), or even because they may be renewable (forest vegetation), could thus become strategic.[15]

For the purpose of this research, it may be helpful to classify natural resources in two different trends. The first ones, such as water and land, are used locally and may not have much impact beyond the local area, whereas other resources, such as timber, minerals, and oil, are used to produce revenue - as defined in the difference between raw materials and natural resources. It

[13] Ibidem
[14] Le Billon, *Resource Wars Reframed*, pp. 11-12
[15] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, pp. 12-24

is these revenue-producing resources that the social life of these materials causes the most problems.[16]

Another way of classification of natural resources is to divide them into these following main groups: renewable and non-renewable ones. Non-renewable ones are diamonds, fossil fuels, metallic ores and minerals. Renewable resources include forests, fish, water and land, but it is important to keep in mind that even renewable resources can be exhausted if they are mismanaged.[17] Non-renewables resources (for instance oil and natural gas) are turned into the energy that is essential for the production of any other good or service. Renewable resources (such as forests, fisheries and aquifers) are between the world's most precious natural assets. Properly managed, they also have the potential to provide an endless stream of products that can boost the quality of human life.[18]

In order to track the effect of non-renewable resources on violence scholars have classified the former according to particular features, such as non-fuel and fuel, lootable and non-lootable resources, and point and diffuse resources. If a resource requires less investment, human intervention, and unskilled labour to extract and transport it while also having a high market value then, it is a lootable resource. Then, diffuse resources are spread over vast areas and can be extracted by a large number of groups while point resources are located in a small sized area and controlled by a limited group of producers.[19]

The emphasis on the term raw materials rather than natural resources is one of the pillars of the rivalry between Malthusian theories and political ecology, which is the starting point of this analysis and will be analysed more in detail in the following pages. In particular, we will see that distinguishing between different types of commodities and conflicts some patterns emerge.

Another distinctive rivalry between the theoretical literature on resources can be divided into two main trends, resource abundance and resource scarcity. Literature included in the first group argue that the abundance of non-renewable natural resources leads to violence, inequality and conflict, while those of the second group believe that scarcity of both renewable and non-

[16] Michael T. Klare, Barry S. Levy, Victor W. Sidel, *The public health implications of resource wars*, in "American Journal of Public Health", 2011, p. 1916
[17] Agha Bayramov, Review: *Dubious nexus between natural resources and conflict*, in "Journal of Eurasian Studies", Volume 9, 2018, p. 73
[18] Bacchetta et al, *World Trade Report 2010*, p. 40
[19] Bayramov, *Review: Dubious nexus between natural resources and conflict*, p. 73

renewable natural resources can exacerbate rivalry leading to conflict and instability.[20] Extractive processes are neither ecologically nor politically neutral.

1.1.2 Armed conflict, war and violence

According to the Armed Conflict Location & Event Data Project, an unconventional organisation that collects non-aggregated data to monitor conflicts, there are currently 59 wars in the world. But before we start talking about the correlation between natural resources and conflict, it is necessary to clarify a few more concepts, such as the ones of conflict, war, and violence. These, as for the term natural resources, do not have a clear definition and they entail other concepts depending on how these terms are used.

It is necessary to specify that conflict in itself is not necessarily a negative event. Conflict occurs when two or more groups believe their interests are incompatible, and a sort of non-violent confrontation between parties can arise. Non-violent conflict can represent the steppingstone of social change and development, and is a necessary component of human interaction. This resolution of conflict is possible only if and when individuals and groups trust their governing structures, society and institutions to manage incompatible interests.[21] But for the purpose of this research, we are going to analyse armed conflicts, war and violent clashes since these are those that, in particular concerning natural resources, have been corroding entire societies for centuries.

Conflict, following the definition of the United Nations Environment Programme (UNEP), is

> A dispute or incompatibility caused by the actual or perceived opposition of needs, values and interests. In political terms, conflict refers to wars or other struggles that involve the use of force. [...] "conflict" is understood to mean violent conflict.[22]

Hence, the use of force here is implied in the concept of conflict as well as of war.

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[20] Ivi, p. 72

[21] UN Interagency Framework Team for Preventive Action, *Toolkit and guidance for preventing and managing land and natural resources conflict*: *Extractive industries and conflict*, in "The EU-UN Partnership on Land, Natural Resources and Conflict Prevention", 2012, p. 6

[22] Richard Matthew, Oli Brown, David Jensen and others, *From Conflict to Peacebuilding The Role of Natural Resources and the Environment, Policy Paper No. 1*, in "United Nations Environment Programme", 2009, p. 7

The term "war", which is still nowadays subject to dispute, can take many forms and interpretations that can lead to multiple definitions. It is one of the conditions of human existence. According to the position provided by Antoine Bousquet (2016), war cannot be reduced simply to the strict temporality of the battle, but it also covers a broader condition of hostility that includes the actions of preparation, observation and manoeuvre that separate actual clashes of arms.[23]

One definition adopted for the study of early warfare is that of a "collective armed conflict in which the deaths of other persons are envisioned in advance, and this envisioning is encoded in the purposeful act of taking up lethal weapons." (Raymond C. Kelly, Warless Societies and the Origin of War, Ann Arbor: University of Michigan Press, 2000). In other words, war under this broad definition is an intentional and potentially lethal organised violence.[24]

We can see that in both these definitions the number of deaths is not taken into account, and that's why using the parameter of deaths to classify conflicts is very reductive because it does not take into account the dynamics behind the conflict and does not help us understand its evolution. For example, some conflicts can remain 'low-intensity' for years and then explode violently, as happened in Ukraine.[25]

A definition of war by Hedley Bull (2002) is "organised violence carried on by political units against each other". In this case, War is purposefully conducted by and in the name of social groups against other groups in order to resolve disputes or compete claims between them.[26]

For the Prussian war thinker Clausewitz, war is entirely understood in terms of an instrumental action undertaken by states for the purpose of accomplishing their political goals, which can be of aggrandisement or of mere survival. For Clausewitz (1989),

> War, therefore, is an act of policy. Were it a complete, untrammelled, absolute manifestation of violence (as the pure concept would require), war would of its own independent will usurp the place of policy the moment policy had brought it into being; it would then drive policy out of office and rule by the laws of its own nature […] In reality war, as has been shown, is not like that. Its violence is not of the kind that

[23] Antoine Bousquet, *"War",* in: Felix Berenskoetter, *Concepts in World Politics*, London, SAGE Publications, 2016, p. 94.
[24] Le Billon, *Resource Wars Reframed*, p. 12
[25] Degl'Innocenti, *Non solo Ucraina: ecco quante e quali sono le guerre nel mondo*
[26] Bousquet, *War*, p. 93.

> explodes in a single discharge […] War moves on its goal with varying speeds; but it always lasts long enough for influence to be exerted on the goal and for its own course to be changed in one way or another […] Policy, then, will permeate all military operations, and, insofar as their violent nature will admit, it will have a continuous influence on them.[27]

The whole mindset of war - which promotes violence as the best way to resolve conflicts or disputes - contributes to domestic violence, street crime, and other kinds of violence throughout the world. War, and the preparation for war, contaminates and generates serious and permanent damages to the environment and uses vast amounts of non-renewable fuels and other resources. Experts' opinion is that war damages not only the health of people but also the very fabric of society.[28]

There are many different types of conflict, which vary from interpersonal conflict to interstate fighting. We can then make a broad distinction between internal armed conflict, which is a conflict between a government and a nongovernmental party, with no interference from other external countries; and armed conflict, so a contested incompatibility that concerns a government and/or a territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.[29]

In the contemporary age we witnessed an increase of civil wars, fought within nations, instead of wars fought between nations. The former is fought mainly with small arms and light weapons, and a major difference is that they usually involve attacks on civilians. Since the end of the Cold War and withdrawal of US and Soviet military assistance to many less developed countries, military forces and armed groups in some countries became more self-reliant, for example by engaging in illicit enterprises and exploiting local natural resources. As the International Committee of the Red Cross has demonstrated, insurgent groups frequently acquire weapons by trading resources (such as minerals) that are under their control, often illegally. Such resources have come to be called "conflict resources." Also in the past 30 years, control over armed groups has become decentralised, with military power deriving from control of resources, arms, or drugs, or from the intensity of fear created within the local population.[30]

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[27] Ivi, p. 96.
[28] Klare, Levy, Sidel, *The public health implications of resource wars*, p.1615
[29] Eleonora Nillesen, Erwin Bulte, *Natural Resources and Violent Conflict*, in "Annual Review of Resource Economics", 2014, p. 70
[30] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1615

The same opinion is shared by the UN Interagency Framework Team for Preventive Action and the United Nations Peacekeeping, saying that environmental factors are rarely, if ever, the sole cause of violent conflict. However, the exploitation of natural resources and related environmental stresses can be implicated in all phases of the conflict cycle, from contributing to the outbreak and perpetuation of violence to undermining prospects for peace.[31]

Conflicts over resources were especially prominent and violent in the colonial wars and interimperial clashes that culminated in World War I. However, from the beginning of World War II and the end of the Cold War, conflict over resources was rarely a central issue. With the end of the Cold War, resource conflicts have made a comeback, particularly in the African continent.[32]

There is also a broader range of violence, such as the perspective of geographers Nancy Peluso and Michael Watts, who argue that power relations and material transformations occur at different scales, but also for the recognition of multiple forms of violence in relation to certain resources. In addition to the coercive use of physical force to control or access resources, according to them there is a broader dimension of violence, such as the notions of physical, cultural, and structural violence or the multiscalar forms of social, economic, and political violence.[33]

But why do we make wars in the world? The reasons behind conflicts can be very diverse but are mostly attributable to the few following key factors: possession of resources and energy, flourishing economy, demographic pressure, cultural aspects or changes in the environment and climate crisis.[34] In this dissertation we will focus on the alleged link between natural resources, demographic pressure and the environment.

1.1.3 Resources War

Dominance by a particular group or country over resources and energy sources is perhaps the main reason why humans have been leading to wars around the world since prehistoric times. According to some scholars, the necessity of having to compete with other species - often better

[31] UN Interagency Framework Team for Preventive Action, *Extractive industries and conflict*, p. 6
[32] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1616
[33] Le Billon, *Resource Wars Reframed*, p. 20
[34] Degl'Innocenti, *Non solo Ucraina*

equipped than homo sapiens in terms of natural weapons - in order to hoard food and survive, a condition typical of the African savannah where our species evolved, has led us to develop a rapacious and predatory propensity towards the planet's resources and a natural tendency to hoard. Although today technological development has emancipated much of the world's population from the pure struggle for survival, these primordial vestiges have survived intact as evolutionary plumes and continue to characterise our attitudes. Even today, we continue to struggle for resources, which - those resources - are different: they are no longer sugary fruit or animal carcasses from which to recover furs but oil, gas, water, fertile land.[35]

The nexus between natural resources and conflicts is one of the most popular debates among international relations scholars. Once again, let's analyse some common terms that are always present in literature on this subject.

The intellectual developments of ideas and expressions regarding the resource-conflict relationship first blossomed after the Arab Oil Embargo of the 1970s, but the term 'resource war' first appeared in the United States in the early 1980s. It refers to the Soviet movements in Afghanistan, the Middle East and Africa, which were perceived as threats to US access to important natural resources. The term 'resource curse' emerged in the late '80s as well as a way to address the economic crises being experienced by resource rich countries. This theory was introduced by Richard Auty in 1993, but it was the paper of Sachs and Warner "Natural Resource Abundance and Economic Growth" in 1995 that really caught the attention to the resource curse position. Resource curse scholars argue that an abundance of resources (particularly oil) in developing countries weakens the economic, democratic, and institutional capacities of national governments, making their societies vulnerable to armed conflicts.[36]

Competition on the control over vital, valuable and/or profitable raw materials has been a source of violent conflict since prehistoric times. Resource wars can broadly be defined as a type of violent conflict mostly driven by competition for control over vital or valuable natural materials such as oil, water, land, timber, animals (or animal products), gold, silver, gems, and other minerals.[37] Moreover, conflicts over renewable resources generally take place over issues such as who should have access to and control over resources, and who can be influential in

[35] Degl'Innocenti, *Non solo Ucraina*
[36] Bayramov, *Review: Dubious nexus between natural resources and conflict*, p. 73
[37] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1615

the decision-making processes regarding their allocation, sharing of benefits, management and rate of use.[38]

Philippe le Billon (2004), defines resource wars as an armed conflict waged to control valuable natural resources, stating that while resource control may be the driving factor leading to a conflict, wars are too complex to be attributed to a single motivation. The term resource war can also be used to define an armed conflict in which the control and revenue of natural resources are significantly involved in the economy of the conflict and/or the motivations of the belligerents.[39]

Natural resource conflicts are undertaken when parties disagree on the management, distribution and protection of resources and their ecosystems. These conflicts can escalate into violent relations and armed conflicts when the parties are unable or unwilling to address a constructive dialogue and conflict resolution. Societies or states that lack the institutional arrangements that facilitate constructive conflict resolution can be drawn into ever-ending cycles of violence and conflicts, in particular where political systems are weak, and in situations where divisions between opposing parties are extreme.[40]

Resource wars may occur between states as wars of conquest, in which a state or empire employs force to acquire territories which are rich in resources or colonies; territorial disputes, in which states fight over a border region or offshore territory with valuable resource deposits; or access wars, when a state fights to have access to a critical resource deposit in another country. Resource wars can also be triggered within states, when groups fight for control over key sources of raw materials or over the allocation of the fees and rents obtained by governments from private entities that extract resources from areas owned or controlled by the state. A desire to gain control over a valuable resource supply or the wealth it generates is a dominant factor leading to war; however, conflicts over resources are usually driven by other factors as well, such as ethnic discrepancies and historical grievances.[41]

Of course, within the aspect of trade, natural resource trade differs from any other form of trade, in particular when it comes to its effects because natural resources exports are at higher

[38] UN Interagency Framework Team for Preventive Action, *Toolkit and guidance for preventing and managing land and natural resources conflict: Renewable Resources and Conflict*, in "The EU-UN Partnership on Land, Natural Resources and Conflict Prevention", 2012, p. 8
[39] Philippe Le Billon, *The Geopolitical Economy of Resource Wars*, in "Geopolitics", 9, 2004, p. 22
[40] UN Interagency Framework Team for Preventive Action, *Extractive industries and conflict*, p. 9
[41] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1615

risk of contributing to the outbreak of a conflict. The risk of war, moreover, is higher when around a quarter of the country's GDP is generated by natural resources exports: at this economic level, the risk of the outbreak of a conflict is around five times higher than in countries without such resources.[42]

Competition for resources between or within nations is already a pressing issue that needs to be tackled, and it's likely to become an increasingly common cause of armed conflict. Philippe le Billon's (2014) opinion is that,

> The idea that wars are associated with resources is probably as old as war itself. The central question is not whether resources and wars are connected, but how.[43]

Many armed conflicts in the Third World are financed by raw materials: as the United Nations Environment Programme underlines,

> In the last 60 years, at least 40 per cent of all intrastate conflicts have a link to natural resources, and this link doubles the risk of a conflict relapse in the first five years. Since 1990, at least 18 violent conflicts have been fueled by the exploitation of natural resources, whether high-value resources like timber, diamonds, gold, minerals and oil, or scarce ones like fertile land and water.

The control of resources, their territories and marketing networks influences the strategies of armed groups, the course of conflicts and their resolution. However, describing conflicts as resource wars driven by the greed of combatants is simplistic. Foreign commercial interests and the context of dependence on raw materials, sometimes leading to the collapse of states, are all major factors to be taken into account. From Malthus' point of view, natural resources have long been among the explanations for the causes of armed conflict "strategic resources" and national security. Between the security of the rich and the fear of the poor, access to natural resources and the transformation of nature into marketable products are deeply political processes, often involving conflicts over property rights, labour, or the distribution of costs and benefits.[44]

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[42] Jedrzej George Frynas and Geoffrey Wood, *Oil & War in Angola*, in "Review of African Political Economy", Vol. 28, No. 90, 2001, pp. 588-89
[43] Le Billon, *Resource Wars Reframed*, p. 9.
[44] Philippe Le Billon, *Matières premières, violences et conflits armés*, in "Tiers-Monde", 44, n°174:297-322, 2003, p. 297

Another point of view on the subject is that of conventional geopolitical perspectives, that define these resource wars as armed conflicts around the "pursuit or possession of critical materials." To paraphrase the aforementioned Clausewitz, resource wars are the continuation of resource politics by military means. This concept is used in reference to inter-state conflicts over the supply of "strategic resources," giving way to a limited and militaristic notion of "resource security" and in particular of "energy security." Therefore, resource wars are in some ways the result of a lack of imagination, knowledge, and capacity to find an alternative for some resources; going to war over resources is a symptom of an incapacity to acquire them, or their alternatives, through less costly and risky means.[45]

Upon Philippe Le Billon's research and analysis on the subject matter, there are three main views on the relationship between resources, conflicts and violence. The first one is the "resource curse" argument, for which resource dependence results in economic underperformance and a weakening of institutions, making the society more vulnerable to armed conflict; hence, vulnerability to war is associated with the institutional and economic impacts of resource exploitation. The second view is the "resource conflicts" argument, upon which grievances, conflicts and violence associated with resource control and exploitation increase the risk of a larger-scale armed conflict. In other words, violence and conflicts are directly tied to the control and exploitation of resources. The third and last view is the "conflict resources" argument: it focuses on the financial opportunities that support armed conflicts, or the instrumentalization of opportunities related to resources by belligerents. Taken singly, these three views fail to capture the complexity of the relationship. Together, however, they are helpful to explain how resource endowments, exploitation practices, social entitlements, and discursive representation help shape greater vulnerability to, risk of, and opportunities for armed conflicts.[46] [47]

Africa's enormous wealth in terms of raw materials and resources has always been considered an Achilles' heel - following the resource curse argument - for the continent, exposing it to ever-changing conflicts. In fact, some of the bloodiest wars between African countries, with regional and local powers playing a leading role, have been consumed precisely on the

[45] Le Billon, *Resource Wars Reframed*, p.13.
[46] Le Billon, *Resource Wars Reframed*, p. 14-15.
[47] Philippe Le Billon, *Diamond Wars? Conflict Diamonds and Geographies of Resource War*, in "Annals of the Association of American Geographers" vo. 98 n.2, 2008, p. 347

resources front.[48] For example, the conflict in the Democratic Republic of the Congo - perhaps the most lethal conflict of the post–Cold War era - has largely been fuelled by competition for control of valuable mines in the eastern part of the country, and although formally no longer at war, remains prey to hundreds of armed groups, many of which are local gangs linked to the control of a territory and its resources. The fighting between northern and southern Sudan, another well-known lethal conflict, has been driven in part by a struggle for control over valuable oil fields.[49]

The relationship between the environment, conflicts and resources is thus highly complex and multidimensional. Nevertheless, it is possible to trace three main routes. The first one concerns the contribution to the outbreak of the conflict: attempts to control natural resources or grievances caused by unequal distribution of wealth or environmental degradation may contribute to the outbreak of violence. Countries dependent on the export of a narrow range of primary goods may also be more vulnerable to conflict. The second one, financing and sustaining conflicts: once conflict breaks out, 'high-value' extractive resources may be exploited to finance armed forces or become strategic considerations for the conquest of territory. In these cases, the duration of the conflict is prolonged by the availability of new sources of funding or complicated by efforts to gain control over resource-rich areas. Third and last, undermining the peace process: the prospect of a peace agreement may be slowed down by divisive individuals or groups who may lose access to revenues generated by the exploitation of these resources if peace were to prevail. Once a peace agreement is reached, natural resource exploitation can also threaten political reintegration and reconciliation by providing economic incentives that reinforce political and social divisions.[50]

Based on this background information on natural resources and armed conflicts, it is possible to analyse the trends of the latter on the basis of resource asymmetries, the geographic arrangement of the latter and the various inter-state realities of a continent that has been ravaged by war and poverty for centuries.

[48] Ilaria D'Angelo, *Materie prime e conflitti: l'indissolubile nodo dell'Africa*, in "L'Indro", 23 June 2017, (2/05/2022), https://lindro.it/materie-prime-conflitti-lindissolubile-nodo-africano/
[49] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1616
[50] Matthew, Brown, Jensen and others, *From Conflict to Peacebuilding The Role of Natural Resources and the Environment*, pp. 8-11

1.2 Natural resources and armed conflict: trends

Natural resources and other environmental factors are linked to violent conflict in ways that most of the time are obscured by more visible triggers such as ethnic discrepancies, political exclusion and poor governance. Specifically, competition to control or gain access to natural resources can contribute to the outbreak of violent conflict.[51]

Petroleum, soil depletion, and tropical forests all possess quite different properties and characteristics (aside from their strategic or economic value) that often play a role in the dynamics of violence and struggle.[52] The geographical location of conflicts in Africa is highly correlated with the presence of resources. In the case of these conflicts, it is essential to focus on the concepts of inequality and concentration of resources and geographical asymmetry. People often speak, as a potential cause of conflicts, of inequality generally in terms of income (dividing the poor population from the rich *élite*). However, income *per se* does not feature prominently in the data. What matters more is political inequality of access to and control over resources and inequality over territory.[53]

The nature of violence may change whether resources involve production or extraction. With extracted resources such as minerals, violence is most likely to take a physical form to achieve territorial or state control, whilst with produced resources such as crops, violence usually takes a more structural form, such as coercive forms of labour or controls over trade.[54]

Once again, as already stated, it is essential to remember that grievances and disputes over natural resources are rarely, if ever, the only driving factor of violent conflict: drivers of violence are most often multi-faceted.

[51] UN Interagency Framework Team for Preventive Action, Renewable Resources and Conflict, p. 14
[52] Nancy Lee Peluso, Michael Watts (edited by), *Violent Environments*, Cornell Univ Pr, 2001, p. 25
[53] MEETmeTONIGHT - Notte dei Ricercatori, “Conflitti e risorse naturali”, Youtube, 6 October 2017, https://www.youtube.com/watch?v=s-cLZq5haSg
[54] Philippe Le Billon, *The political ecology of war: natural resources and armed conflicts*, in "Political Geography", Volume 20, 2001, p. 368

1.2.1 Oil and extractive industries

Extractive industries (EI) - a term used to describe non-renewable resources, such as oil, gas and minerals - challenge both fragile nations and developing states; the resource exploitation of non-renewable raw materials has often been indicated as a key factor in triggering or escalating violent conflicts. These are likely to occur where local communities have been excluded from the decision-making processes following a pattern of power asymmetries, when the economic benefits are concentrated in the hands of a few, when the burdens associated with extractive industries clash with local, social, cultural, religious and environmental norms, or align with pre-existing tensions. The consequences of societies threatened by, undergoing or emerging from natural resource-related violence is self-evident in the lives lost or touched by conflict, and amplified by fractured relationships, weakened institutions and destroyed infrastructure.[55]

High-value resources and extractive industries can contribute to the engagement of a violent conflict when the cost-benefit, risks and responsibilities associated with high-value extractive industries are not shared on an equitable basis; decisions are taken without transparency and without involving local communities and stakeholders; if economic, environmental and social impacts are not properly assessed and addressed. In some cases, the gain from these industries can also be used for financing violence or become an incentive for initiating hostilities in order to capture territory.[56]

The UN Interagency Framework Team for Preventive Action identified the following six causes as the main drivers of EI-related conflicts. Starting from the poor engagement of communities and stakeholders, when marginalised or excluded from the dialogue in the EI development process, they are almost certain to begin to oppose the development. Then, if the benefits are distributed in a manner that seems unfair with respect to the distribution of the costs, risks and responsibilities, then it is likely that those who are disenfranchised or bearing risks and responsibilities without fair compensation will oppose the development, and even rebel. Despite the promise of prosperity often related with the EIs, the impacts on the local economy and the macroeconomic conditions of the nation as a whole can be quite negative; in circumstances where governing institutions are weak or underdeveloped, the consequences of the "resource curse" are often amplified, particularly on communities with the environment as

[55] UN Interagency Framework Team for Preventive Action, *Extractive industries and conflict*, p. 6
[56] Ivi, p. 10

powerful conflict driver. Corruption and diversion of funds to satisfy individual gains in spite of national and community interests can fuel conflict. Too often, the huge revenues of EIs have been kept away from the public interest to satisfy personal gains and, in some cases, to finance armies and violent conflicts. Moreover, the mismanagement of funds is symptomatic of the broader institutional and legal capacities to manage the development of EI for the benefit of the whole country. Lastly, where natural resources have led to a war they can trigger conflict again if in the Peace process the relevant issues were not addressed.[57]

Within the extractive industries, oil is a key material of global power, as it is widely considered the most viable source of energy in the world which is central to the strategic calculations of the world's oil-dependent dominant powers. African oil has assumed crucial importance in the context of a tight global oil market following an increased global demand and the shrinking number of significant oils finds to replace rapidly depleting oil fields across the world. African leading producers include Nigeria, Angola, Sudan, Algeria, Republic of Congo (Brazzaville), Libya, Chad, Gabon, Equatorial Guinea, and Egypt.[58]

Generally speaking, most of the scholars (Massimo Borelli, Philippe Le Billon, Cyril Obi, Michael Klare, Barry Levy and Victor Sidel) agree on the fact that oil is an increasing source and cause of conflict. Wars fought over petroleum and other resources can create concerns by causing morbidity and mortality, damaging societal infrastructure, diverting resources, uprooting people, and violating human rights.[59] Resource endowment asymmetries are the most important: the country that does not have certain resources is the country that, if it borders one that has valuable resources, then it will have an incentive to try to move the border.[60]

There are several reasons why oil in particular triggers and will increasingly trigger conflicts. First of all, oil is a vital resource, a critical source of fuel for transportation and farm machinery, enabling the mechanisation of agriculture, which facilitates increase in food production. Oil is also a feedstock for useful products such as plastics, paints, lubricants, pesticides, and many pharmaceuticals. Another important issue is that global oil supplies will contract. There is debate over when the global production of petroleum will reach a peak, few doubt that such a reversal is likely in the not-too-distant future. There are many projects to develop alternative

[57] Ivi, p. 7
[58] Cyril Obi, *Oil as the 'curse' of Conflict in Africa: Peering through the Smoke and Mirrors*, in "Review of African Political Economy 37", 2010, p. 485
[59] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1615
[60] MEETmeTONIGHT - Notte dei Ricercatori, *Conflitti e risorse naturali*, 2017

transportation fuels, such as advanced biofuels and liquids derived from natural gas, and to improve electric-powered vehicles. However, these projects are not likely to achieve commercial scale by the time oil becomes less available, so competition for the remaining petroleum supply will become increasingly strong. Oil is also a strategic resource, widely considered an issue of "national security," encouraging state intervention, as it is indispensable in modern, mechanised warfare. As we will see in chapter 3, US leaders have frequently stated that sometimes it is necessary to go to war to ensure access to overseas petroleum supplies. If it happened in the past, this is likely to happen again.[61] Oil is an especially valuable resource, the single most lucrative item in international trade. It represents the most important source of wealth in poor and under-developed countries that produce oil; it is thus an incentive for those who wish to enrich themselves by controlling the collection and allocation of resource rents in their countries. In case of overlapping claims, there have been violent confrontations among countries. Declining reserves of petroleum and other resources, population growth, increasing industrialization and modernization of societies, and other factors are increasing the likelihood of petroleum wars and other resource wars.[62]

Concerning inter-state war over oil, we can notice that the geographical resource asymmetries are crucial in determining the conflict risk estimation in terms of frequency and probability of war. Following professor Massimo Morelli's research, we can clearly identify some important trends. Taking pairs of neighbouring countries with natural resources only on one side (thus in a case of asymmetry), the frequency and probability of conflict increases substantially, doubling. Whereas if one looks at neighbouring countries that have no resources, the probability decreases dramatically. These kinds of asymmetries of possession or concentration of resources are also noticeable in civil wars. Areas with a higher concentration of natural resources, in particular with greater inequality in the territory in terms of the presence of oil or other valuable resources, are correlated with areas of conflict within the state. Another determinant of civil conflicts, besides the disparity of resources, is the mismatch between political and economic power on the one hand and military power on the other. About this, we will see in chapter four the example of Angola.[63]

[61] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1617
[62] Ivi, p. 1618
[63] MEETmeTONIGHT - Notte dei Ricercatori, *Conflitti e risorse naturali*, 2017

1.2.2 Other resources

It appears that the equitable distribution of wealth of high value extractive resources such as minerals, metals, stones, hydrocarbons and timber can contribute to the outbreak of a conflict. Whether 'high-value' natural resources contribute to conflicts is in function of global demand and depends largely on their market price. Conflicts also occur over the use of scarce resources such as land, forests, water and wildlife. They occur when local demand for resources exceeds the available supply or when one form of resource use puts pressure on other uses. This can result from physical scarcity or from governance and distribution factors.[64] Moreover, the prolonged situation of war in many African countries demonstrated that war most of the time is no longer a means of conflict resolution or political victory but rather a form of economic accumulation.[65]

In fact, regardless of whether or not natural resources play a role in the outbreak of conflict, they can represent a reason to prolong and sustain violence. Contraband goods such as gemstones, drugs and narcotics do not increase the likelihood of conflict (with the exception of alluvial diamonds in relation to ethnic conflicts and during the 1990s when many wars were funded by these goods) but do prolong the likelihood of the conflicts.[66] Diamonds, timber, minerals and cocoa have been exploited by armed groups, making insurgency economically feasible and also war more likely, increasing the probability of a prolonged conflict.[67] Among these materials, the so-called conflict diamonds arguably played the largest part in reframing analyses of contemporary armed conflicts and conflict termination initiatives, to the point of being defined as "blood diamonds".[68]

The 2012 Guidance Note on Renewable Resources of the UN Interagency Framework Team for Preventive Action identified three main categories of conflict drivers for renewable natural resources (mainly water, cropland, forests and fisheries). The first one is the competition over increasingly scarce renewable resources, which can mainly be caused by demand-induced scarcity, supply-induced scarcity or even, structural scarcity. The second driver is the poor

[64] Matthew, Brown, Jensen and others, *From Conflict to Peacebuilding The Role of Natural Resources and the Environment*, pp. 8-11
[65] Le Billon, *Matières premières, violences et conflits armés*, p. 304
[66] Le Billon, *Resource Wars Reframed*, p. 16
[67] Matthew, Brown, Jensen and others, *From Conflict to Peacebuilding The Role of Natural Resources and the Environment,* p. 11
[68] Le Billon, *Diamond Wars? Conflict Diamonds and Geographies of Resource War*, pp. 345-46

governance of renewable natural resources and the environment, which implies: unclear, overlapping or poor enforcement of resource laws; discriminatory policies, rights and laws that marginalise specific groups; unequal distribution of benefits and burdens from development projects ad; lack of public participation and transparency in decision-making processes. The third and last main driver is the transboundary natural resource dynamics and pressures, with unequal allocation or consumption of transboundary renewable resources; which has impacts on renewable resources caused by infrastructure, industrial development and changed land use in neighbouring countries; migration of traditional livelihood practices or wildlife populations across national borders; illegal exploitation, consumption and trade of natural resources across borders.[69]

The presence of diamonds, oil, or precious woods would therefore provide a particularly fertile ground for armed conflict and its prolongation. As David Keen suggests, economically motivated violence is more likely to occur on the part of rebel groups when substantial revenues can be derived from natural resources that can be exploited with minimal technology and in the absence of large investments or control of the state apparatus and its international legitimacy.[70]

Two explanations provided by scholars of how natural resources may cause conflicts are the so-called "looting" and "grievance" mechanism. According to the former, primary commodities can represent profitable opportunities for emerging rebel groups, who are known for raising money by extracting and selling resources directly, or by extorting money to third parties involved. In the grievance mechanism, resource extraction leads to grievances among the local people who feel they are being insufficiently compensated for the exploitation of their land, environmental degradation, inadequate job opportunities, and the social disruptions caused by labour migration. These grievances can exacerbate into civil wars. The link between resource and conflict is particularly strong for the so-called "point-source" natural resources, which are resources that we can easily find in dense concentrations, such as oil and minerals, rather than forestry which is more diffused throughout the economy. The empirical evidence regarding natural resources and civil conflict is mixed, and sometimes contradictory. On the one hand, some scholars find that export-dependent countries of primary commodities face higher risk of civil war than resource-poor countries, and that this is true for primary

[69] UN Interagency Framework Team for Preventive Action, Renewable Resources and Conflict, pp. 9-11
[70] Le Billon, *Matières premières, violences et conflits armés*, p. 305

commodities of all types – including for instance oil, but also minerals, and agricultural goods. On the other hand, other studies challenge the claim that natural resources invite civil conflict. The studies focusing on conflict duration do not reach consensus either. There is some evidence that demonstrate that civil wars are less likely to end when they happen in countries that depend on primary commodity exports. However, for others primary commodities have no influence on the duration of conflicts. The most solid pattern identified by this literature is that "lootable" commodities that are prone to contraband, such as gemstones and drugs, are linked to the duration of conflict. For instance, as already stated, gems and drugs tend to make wars last longer.[71]

1.3 The importance of the nexus between natural resources and conflicts in power relations

Managing conflicts that are related to natural resources is now more critical than it has ever before. Research in this field is crucial particularly for intervention policies, not only for scholars to understand why conflicts occur but specially to understand where to intervene. The intervention together with peace resolution operations are essential not only for Africa itself, but also and especially for Europe and other continents that are extremely reliant on African resources.

Resource wars nowadays - as underlined by Klare, Sidel, and Levy - have the following disruptive features. First of all, they are often extremely intense because they frequently result from both ethnic or historical grievances, and disputes are often over distribution of or access to vital and/or commercially valuable materials. Then, they occur in remote areas occupied largely by poor and indigenous people, which are the most vulnerable part of a country's population (often forgotten by the local government). As we will see, this is the case especially for oil production, which is concentrated in areas largely avoided, such as deserts, tropical forests and mountainsides. These areas are indeed often inhabited by indigenous peoples and poor people. Governments often allow the use of extractive practices in these areas that would not be permitted elsewhere, because the social and political power of the population whose rights are being violated is not strong enough to take action against the dominant power.[72] The

[71] Bacchetta et al, *World Trade Report 2010*, p. 94
[72] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1616

environment suffers tremendous damages too during these conflicts. Resources can be destroyed or damaged by bombs; war makes the populations migrate into fragile environments where the struggle to survive degrades the resource base; and the institutions designed to manage natural resources may be disrupted or shut down during a war.[73]

Recent and ongoing resource wars in Africa are therefore a matter of human and environmental rights, as they frequently target civilians and violate their human rights through slavery, child labour, rape, kidnapping, and other inhumane practices that cause injury, illness, and death. The desire to maintain or gain control over certain types of resources lead warlords and government officials to force boys and young men into the war process, rewarding them by giving them drugs or women kidnapped and used as sex slaves, employing mass rape as a tactic of intimidation and coercion.[74]

Another significant aspect which is important to bear in mind is the globalised character of what the experts call "new wars": these are conflicts in which it is often difficult to distinguish between criminal and political violence. In fact, as aforementioned, one of the instruments used to control the population are fear and terror, forms of violence undertaken privately for private purposes, and violence acts against civilians by states or politically organised groups, with the result being a more pervasive, and long-lasting type of organised (criminal) violence. Direct battles in the field are now avoided as much as possible, but the consequences often are expulsion, mass killing, forcible resettlement and intimidation are involved: this is why many new wars are characterised by high levels of refugees as well as internally displaced people and why most of the violence is directed against civilians. New Wars are therefore considered to be a mixture of war, organised crime and large-scale violations of human rights.[75] They differ from the past, since they entail a change in the standard definition of war (as of violence between stated or organised political groups for political motives) and organised crime (as of violence carried out by privately organised groups for private purposes). With new wars, there is not anymore a distinction between aggression (both internal and external) or repression, these terms are blurry.[76]

Another reason why now more than ever it is crucial to study the nexus between natural resources and conflicts is that resource competition will likely be an increasingly common

[73] UN Interagency Framework Team for Preventive Action, *Renewable Resources and Conflict*, p. 14
[74] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1616
[75] Bousquet, *War*, p. 102-104
[76] Frynas and Wood, *Oil & War in Angola*, p. 589

cause of armed conflict, since the international supply of many vital resources (such as oil, certain minerals, and arable land) is decreasing significantly. Then, the demand for petroleum and other essential materials will drastically increase because population, urbanisation, industrialization, and incomes are growing in many countries, which will cause competition for access to these resources to intensify. Resource prices will consequently rise, and climate change will decrease the global supply of certain critical resources, especially water and arable land.[77] As a result of rapid economic growth and populations rise, the demands for extractive resources such as oil increase, so will competition for ever scarcer resources, placing enormous stress on the environment with diverse repercussions on society.[78]

Furthermore, it is essential to consider the fact that although Africa has an abundance of natural resources, this has not facilitated the geopolitical, economic and social development of African people. Niger, for example, is one of the poorest countries in the world, yet it is rich in deposits of uranium, gold, iron, coal and oil. Revenues from extractive industries collect wealth and power in the hands of the elite, exacerbating inequality, poverty and levels of corruption. Consequently, many resource-rich nations in the developing countries have not been able to transform Gross Domestic Product (GDP) into improvements in citizens' wellbeing. When mismanaged, natural resources from a blessing can quickly become a curse.[79] More than one-third of the world's civil and interethnic wars take place in Africa, always originating in competition for control of certain resources.[80] In addition to this, according to the Norwegian Refugee Council (NRC) - who every year publishes a list of ten crises most forgotten by politics, media and international donors - the world's 10 most neglected crises are, for the first time, all in Africa. The Democratic Republic of Congo is at the top of the list for two years in a row.[81]

The study published by NRC, although its focus is the displacement crisis, highlights the same issue that this thesis wants to tackle: the importance of addressing from the right perspective

[77] Klare, Levy, Sidel, *The public health implications of resource wars*, p. 1617
[78] UN Interagency Framework Team for Preventive Action, *Extractive industries and conflict*, p. 12
[79] Ibidem
[80] Anonym, *Africa: risorse naturali e realtà geopolitiche*, in "Associazione Camis De Fonseca", September 2021, http://www.fondazionecdf.it/index.php?module=site&method=article&id=4028&id_dossier=15, last accessed 12 July 2022
[81] Jessica Wanless, Helene Michou, Tom Peyre-Costa et al, *The World's Most Neglected Displacement Crisis*, in "Norwegian Refugee Council", June 2022

such complicated conflicts, in order so that we not only don't forget them, but also potentially solve them.

To conclude this section, the literature and the scholars have shown not only that there is a link between natural resources and violent conflicts, but that it is not as simple as it may appear and that until there will be these kinds of clashes it will be necessary to find a proper way to address them.

CHAPTER 2: from Malthus to Political Ecology

2.1 Malthusianism

2.1.1 Introduction to Malthus's model

Thomas Robert Malthus (1766 - 1834) was an English economist, philosopher, demographer and forerunner of modern English sociology. He is well known for his first published work "An Essay on the Principle of Population" in 1798 (which appeared anonymously), where he expressed his theory upon which population growth will always tend to outrun the food supply and that the future of humankind is impossible without strict limitations on reproduction, since the population increases geometrically (exponentially) while food increases arithmetically (in a linear rate):

> Assuming then my postulata as granted, I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the second.[82]

Another pessimistic vision expressed by Malthus in his Essay of 1798 - and strongly emphasised by other scholars - concerns the effects of famines on population control:

> Famine seems to be the last, the most dreadful resource of nature. The power of population is so superior to the power in the earth to produce subsistence for man, that premature death must in some shape or other visit the human race. The vices of mankind are active and able ministers of depopulation. They are the precursors in the great army of destruction; and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence, and plague, advance in terrific array, and sweep off their thousands and ten thousand. Should success be still incomplete, gigantic inevitable famine stalks in the rear, and with one mighty blow levels the population with the food of the world.[83]

[82] Thomas Malthus, *An Essay on the Principle of Population*, London, J. Johnson, 1798, p. 4
[83] Ivi, p. 44

According to his model, the more the years go by, therefore, the greater the gap between population and resource stock will be. Thus, if there is no war, epidemic or other event that can reduce the population size, the result will necessarily be a famine that could last until the population level falls below the available resources. In the first Malthus's 1793 formulation, Eco scarcity was presented as an explicit argument in justification for social policy. In particular, Malthus insisted that since famine and starvation were essential to controlling runaway human populations, such events are "natural" and inevitable.[84]

This pessimistic thinking regarding resource scarcity is commonly referred to as Malthusianism, and it is in clear opposition to Smith's laissez-faire approach to the economic market, the idea that this has the ability to resolve the tension between growing human consumption and the earth's scarcity of resources.

Malthus believed that the endless progress was way too dangerous, since it entailed the inexorable pressures of population growth and the planet's limited capacity to support it. In his point of view, economic growth, international trade and social improvement were only ways to reach overpopulation and, therefore, to trigger starvation, famine, diseases and death. Its pessimism about the ability of economic growth to transcend the planet's natural limitations was as influential in its day and, as we will see, even beyond. For instance, among his adherents Malthus had David Ricardo (1772-1823) and John Stuart Mill (1806-1873). The former shared the Malthusian belief that diminishing natural resources as a result of expanding economic activity would stop both population and economic growth. The latter questioned not simply the feasibility, but the desirability of limitless economic growth. According to him, the problem was not economic growth in the developed world – where material progress was already reaching its apogee – but its distribution and impacts.[85]

Besides his beliefs regarding resource scarcity, Malthus also remains famous for his idea of limiting population growth via population control, an idea that, although not unprecedented, gained much more popularity than previous ones. Malthusianism is thus a political and economic attitude that advocates controlling demography in order to control access over resources.

[84] Paul Robbins, *Political Ecology - A Critical Introduction*, Second Edition, John Wiley & Sons Ltd, 2011, p. 19
[85] Bacchetta et al, *World Trade Report 2010, Trade in Natural Resources*, p. 66

He starts from the assumption that food is necessary to the existence of man, but that at the same time the passion between the sexes is evident and will persist.[86] This natural inequality of the two powers of population and of production on the earth is a pillar of his thinking. Malthus' formulation of the population principle immediately suggests two possible solutions. The behaviour of people may change in such a way as to affect the birth rate, and hence population growth; or there may be a change in the conditions of subsistence production. A third and more fundamental solution is to consider the gap between the two growth rates as an effect of the nature of the economy as a whole. This third possibility implies describing the accounting relationships relating to national income, of which the population function is only one element. These three solutions are not necessarily interchangeable alternatives to be done at the same time. In terms of changing human behaviour, new habits can take hold quickly and last for a long time, as in the case of adopting a new lifestyle or new methods of contraception. The second solution, increasing the rate of subsistence production, is not specific to any one era, but increases in agricultural productivity and food production can be achieved in a relatively short time and sustained over long periods. Finally, the establishment of an equilibrium can be temporary.[87]

Following his studies, Malthus outlined his theory of the "poverty trap" according to which poor families tended to have more children when their economic situation improved even slightly. This had the effect of again lowering the average living standard of the entire family.

According to this "trap", the poor part of the population would be unable to escape its conditions of misery. Moreover, poor families were generally more likely to have a greater number of children because some were always expected to die in the first years of their lives. The solution, Malthus stated, was to encourage the poor to marry later and have fewer children, if any at all. By having children, they would be selfishly sentencing more people to live in poverty and starvation.[88] He did not believe in the efficacy of the "poor laws" instituted by England, and the reason is that the rooting problem still was the insufficient quantity of food available, and that this could not be replaced by money from the government into law-income

[86] Malthus, *An Essay on the Principle of Population*, p. 4
[87] Donald Rutherford, *Les Trois Approches de Malthus Pour Résoudre Le Problème Démographique*, in "Population" 62, no. 2, 2007, p. 254
[88] Radhika Singh, Malthusianism: theories on poverty aid, in "The Borgen Project", September 2015. Available at: https://borgenproject.org/malthusianism-theories-poverty-aid/#:~:text=Malthus%20believed%20that%20the%20population,grow%20at%20an%20exponential%20one [Accessed: 24/08/2022]

families. Subsidies of the poor, according to Malthus, are not useful to alleviate the crisis, since they only serve to reinforce the demographic trend. Population control, rather than reconfiguration of global distributions of power and goods, is the ultimate solution to the ecological crisis. The continued advocacy of an apolitical natural-limits argument, therefore, is obviously implicitly political, since it holds implications for the distribution and control of resources.[89] Also, the new distribution of the money in the society would tend more conspicuously to depress the condition of those out of the workhouses by occasioning a rise in the price of provisions.[90] According to Malthus, the role of poor people is to accept misery as their natural condition, as poverty has the function of keeping the population under control. What emerges from his thinking, is a very low consideration, also from the moral point of view, of the poor part of the population, that in his opinion could not be trusted with birth control and control their sexual instincts.[91]

Malthus may have been pessimistic, but if we look at the years before his analysis, we see that this was mostly in line with the facts: populations increased or decreased depending on circumstances, but across the planet the average person consumed so little that they lived well below the poverty line of today's most deprived nations.[92]

The case of Malthus is relevant to this discussion for evident reasons. The first one is that the international scene is starting to think about the fact that human beings on the planet are disproportionate to the amount of natural resources, and that this gap is destined to lead us towards an apocalyptic dark future. But the turning point is that his theories did not remain in the past. In fact, now more than ever we hear the debate of "we are too many on this planet" "humans are overexploiting the world's resources" by the concept of "overshooting", and this risks dangerously leading to the same cruel and pessimistic Malthus' vision: "blaming the poor", and thinking that there is nothing we can do for them and they are the reason why resources are scarce. The simplistic dialectic that sees the most distressed populations as a problem to be solved not for their own sake, but for the benefit of the Western world that fears for its own safety.

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[89] Robbins, *Political Ecology*, p. 18
[90] Malthus, *An Essay on the Principle of Population*, pp. 26-27
[91] Robertson Thomas, *The Malthusian Moment – Global Population Growth and the Birth of American Environmentalism*, Rutgers University Press, New Brunswick, New Jersey, and London, 2012, pp. 4-5
[92] Charles Kenny, *La Danza della Peste. Storia dell'umanità attraverso le malattie infettive*, Torino, Bollati Boringhieri, 2012, p. 17

Many ecological economists have emphasised the pressure of population on resources. Has humankind exceeded carrying capacity? This is defined in ecology as the maximum population of a given species which can be supported sustainably in a given territory without spoiling its resource base.[93] In the following section we will see who besides Malthus believed that humankind is leading the planet to an overshoot.

2.1.2 Neo Malthusianism

If Malthus started the debate over the marginalisation of the poor and population control - without going much further than that -, the new wave called Neo-Malthusianism, that became prevalent in the 1970s, is more concerned over the fact that overpopulation as well as overconsumption may increase resource depletion and/or environmental degradation will lead to ecological collapse or other hazards. However, the idea survived that the human population cannot continue to grow indefinitely without at some point reaching and exceeding the capacity of the earth.[94] Neo-Malthusianism is perhaps an improved version of the ecological simplicity of Malthusianism, in which social, political and cultural aspects are responsive and adaptive to our contemporary societies (whereas in Malthusianism they are ignored or taken as static).[95]

While demographic and environmental factors have claimed a dominant position in the post-Cold War security discourse, according to the neo-Malthusian conflict scenario, population pressure on natural renewable resources makes societies more prone to low-intensity civil war.[96] After the end of the Cold War, demographic and environmental factors have increasingly been treated and faced as security issues (that we will analyse in depth in the third chapter). According to neo-Malthusians, population growth is still an important source of natural resource scarcity. Societies experiencing such scarcity might perform less in terms of food production and economic development and may have an increased risk of internal armed conflict.[97]

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[93] Juan Martinez-Alier, The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation, Edward Elgar Pub, 2003, p. 47
[94] Henrik Urdal, People vs. Malthus: Population Pressure, Environmental Degradation, and Armed Conflict Revisited, in "Journal of Peace Research", vol. 42, no. 4, 2005, p 418
[95] Guillermo Pulido Pulido, *Las Propuestas Teóricas Y La Evidencia Empírica Entre Cambio Climático Y Seguridad Internacional*, in "Actas XII Jornadas de Estudios de Seguridad", 2020
[96] Urdal, *People vs. Malthus*, p. 417
[97] Ivi, p. 428-31

The neo-Malthusian concern is that countries with rapidly growing populations will experience degradation and scarcity of natural resources such as cropland, fresh water, forests, and fisheries, increasing the risk of violent conflict over these scarce resources. Some argue that demographic and environmental factors have become more important as causes of conflict after the end of the Cold War. Others state that in particular "west Africa is becoming the symbol of worldwide demographic, environmental and societal stress"[98], potentially leading to anarchy and dissolution of nation states in the future.[99] From a neo-Malthusian perspective, therefore, relying on economic and technological development alone to solve the problem of relative resource scarcity cannot be sustained.

Neo-Malthusians thus argue that an abnormal gap between population growth and natural resources availability leads to frustration, insurrection and conflict. The main argument herein is that the physical availability of natural resources is limited and if the gap between demand and availability increases then scarcity, competition and eventually violence will ensue.[100]

Neo-Malthusian ideas regained power in a public way in 1972 with The Club of Rome's "The Limits to Growth" publication. The Club of Rome is a non-governmental, non-profit association of scientists, economists, businessmen and women, civil rights activists, international public leaders and heads of state from all five continents. Attempting to model the impact of a rapidly growing population and economic expansion on finite natural resource supplies, they believed that exponential growth would eventually lead to overpopulation, which in turn would lead to economic and environmental collapse.[101]

Their belief is that humanity is constantly facing threats of systemic collapse on many fronts, saying that "decades of exponential population and consumption growth are now colliding with the limits of the Earth's biosphere, destabilising the foundations of life as we know it". Their vision is that of an interconnected world that has emerged from multiple emergencies with a new way of being human that promotes wellbeing for all in a healthier ecosystem, whilst their mission is to apply holistic, interdisciplinary and long-term thinking to ensure broader societal and planetary wellbeing; to move towards more equitable economic, financial, and socio-

[98] Robert D. Kaplan, The Coming Anarchy. How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet, in "The Atlantic", 1994. Available at https://www.theatlantic.com/magazine/archive/1994/02/the-coming-anarchy/304670/ [Accessed: 27/09/2022]
[99] Urdal, *People vs. Malthus*, p. 418
[100] Bayramov, Review: *Dubious nexus between natural resources and conflict*, p 74
[101] Bacchetta et al, World Trade Report 2010, Trade in Natural Resources, p. 67

political models; ensure an inclusive human dimension to all systems change; and to emerge from emergency.[102]

2022 marks the 50th anniversary of the Club of Rome's landmark report, "The Limits to Growth", first published on 2 March 1972. Key messages of this publication were that the physical limits to growth would exceed within one generation; reaching the limits would inevitably lead to overshoot and consequently system decline; every year action is delayed toward reaching the alternative outcome which decreases the number of options available to avoid overshoot and collapse.[103] They followed Malthus' idea of scarcity of resources: the impact of human society is heavier as the population rises, since the planet is physically limited. They explained through a mathematical model the exponential growth system, also from the saving and economic perspective, but especially through birth and death rates.[104] According to them - as for other neo-Malthusians scholars - economic growth does not always result in an improvement in overall quality of life: "the process of economic growth, as it is occurring today, is inexorably widening the absolute gap between the rich and the poor nations of the world"[105] and that "the basic behaviour mode of the world system is exponential growth of population and capital, followed by collapse"[106].

They were not only talking about the scarcity of food, but also about non-renewable resources. In their publication, they cite the First Annual Report of the Council on Environmental Quality of 1970:

> Even taking into account such economic factors as increased prices with decreasing availability, it would appear at present that the quantities of platinum, gold, zinc, and lead are not sufficient to meet demands. At the present rate of expansion ... silver, tin, and uranium may be in short supply even at higher prices by the turn of the century. By the year 2050, several more minerals may be exhausted if the current rate of consumption continues.[107]

[102] Club of Rome, 2022, available at https://www.clubofrome.org/strategy/
[103] Donella H. Meadows, Dennis L. Meadows, Jørgen Randers and William W. Behrens III, *The Limits to Growth*, Potomac Associates – Universe Books, 1972, pp. 23-24
[104] Ivi, pp. 25-36
[105] Ivi, pp. 43-44
[106] Ivi, p. 142
[107] Ivi, pp. 54-55

From their investigation they conclude that given the present resources consumption rates and the projected increase in these rates, the great majority of the currently important non-renewable resources will experience an increase in prices 100 years from now.[108]

Among other scholars moderating the neo-Malthusian arena, there has been Thomas Homer-Dixon (born in 1956), perhaps the most prominent proponent of the neo-Malthusian hypothesis in linking environmental change and conflict, one of the field's most influential contributors. He writes about public policy issues, concerning the relationship between society and the natural world. He also deals with the causes of violent conflict, failures of economic systems, and the impacts of technologies and increasing complexity on our world. He mainly contributes to the debates over the relationship between population growth, resource scarcity, economic prosperity, and conflict, identifying - in his book "The Environment, Scarcity, and Violence" (1999) - three traditional positions in this debate: the neo-Malthusians, who emphasise the limits that finite resources place on growth and prosperity; the economic optimists, who see few, if any, such limits; and the distributionalists, who focus not on the stock of resources and the alleged limits to growth they may imply, but on the effects that various distributions of wealth and power can have on economic growth and well-being.[109]

The entire edifice of his argument is based on a notion of environmental scarcity, which has three causal forms: degradation, increased demand and unequal resource distribution. The presence of any of these elements can contribute to civil violence through resource capture and/or ecological marginalisation of the vulnerable layer of the population.[110]

Homer-Dixon distinguishes between different sources of resource scarcity. According to him, population growth is an important source to demand induced scarcity. If a resource base is constant, the availability of resources per person will diminish as an increasing number of persons have to share it. Such scarcity can also arise from an increase in demand per capita. Homer-Dixon argues that large populations in many developing countries are highly dependent on four key resources: fresh water, cropland, forests, and fisheries. The availability of these resources determines people's day-to-day well-being, and scarcity of such resources can, under certain conditions, lead to violent conflict.[111] Also, in his publication "On the Threshold:

[108] Ivi, p. 66
[109] Simon Dalby, *Environment, Scarcity and Violence*, in "Global Environmental Politics", 2, 2002, p. 100
[110] Peluso and Watts, *Violent Environments*, p. 12
[111] Urdal, *People vs. Malthus*, p. 419

Environmental Changes as Causes of Acute Conflict", he identifies seven major environmental problems might contribute to conflict within and among developing countries, such as: greenhouse warming, stratospheric ozone depletion, acid deposition, deforestation, degradation of agricultural land, overuse and pollution of water supplies, and depletion of fish stocks.[112] Growing scarcity of renewable resources can therefore contribute to social instability and civil conflict.

According to him - and this is a huge improvement from Malthus' point of view - economic growth does not always entail a societal improvement. In fact, he wrote that it is wrong to assume that as long as we have economic growth we do not have to worry about environmental and demographic problems: often, rapid economic growth only enriches powerful *élites*, and in many developing or underdeveloped countries, growth is achieved by over-exploiting environmental resources like forests and soils.[113]

About population growth, Homer-Dixon follows Malthus' lead, saying that it is the major cause of resource scarcity. Over time a given amount of food, water or other materials might have to be divided among a greater number of people. The final cause is change in the distribution of a resource within a society. Such a shift can concentrate supply in the hands of a few, subjecting the rest to extreme scarcity.[114]

Another important contribution of his book "The Environment, Scarcity, and Violence", is the focus on the role of knowledge and ideas, or lack thereof, in explaining a society's ability to cope with and adapt to environmental scarcity. He argues that "a society must be able to supply enough ingenuity at the right places and times" to cope successfully with scarcity. Both technical and social ingenuity are required. Homer-Dixon points to an "ingenuity gap" in some societies that are therefore vulnerable to the effects of climate change and environmental degradation.[115]

Another essential scholar in the Neo-Malthusian scenario is Robert Kaplan (born in 1952), who published in 1994 his article "The Coming Anarchy" which vividly exemplifies, beyond

[112] Thomas F. Homer-Dixon, *On the Threshold: Environmental Changes as Causes of Acute Conflict*, in "International Security", vol. 16, no. 2, 1991, pp. 88-89
[113] Thomas F. Homer-Dixon, *Is Anarchy Coming? A Response to the Optimists*, "Globe and Mail", 10/05/1994, (last accessed 25/08/2022)
[114] Thomas Homer-Dixon, Jeffrey H. Boutwell and George W. Rathjens, *Environmental Change and Violent Conflict*, "Scientific American", 1/02/1993, p. 40, (last accessed 24/08/2022)
[115] Simon Dalby, *Environment, Scarcity and Violence*, p. 100

academic models, this neo-Malthusian and catastrophist vision of international security, in which ecological and identity conflicts generate civil wars in less developed areas. In this context, civil conflicts such as those in Syria, Mali or Darfur are deeply explained by a growing relative scarcity of natural resources, caused by climate change, population growth and increased economic consumption of resources.[116] In particular, he describes West Africa as:

> [...] the symbol of worldwide demographic, environmental, and societal stress, in which criminal anarchy emerges as the real "strategic" danger. 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 are now most tellingly demonstrated through a West African prism. West Africa provides an appropriate introduction to the issues, often extremely unpleasant to discuss, that will soon confront our civilization.[117]

Africa, in his point of view, is a "dark continent" overpopulated, undernourished and driven to barbaric acts of violence by irrational spirit power which will inevitably collapse beneath the weight of environmental change, becoming an issue of national security. Moreover, Kaplan explicitly connects the Malthusian issue in his discussion of Africa to matters of national security, where a clear external threatening dimension of crime and terrorism is linked to the policy practices of security and strategic thinking.[118] He believed in the ineluctable connection between environmental degradation, population growth, resource scarcity, and the proliferation of "small wars", and for these reasons he feared the poor and of their claims to resources. Nancy Peluso and Michael Watts (2001) defined "The Coming Anarchy" resurgent Malthusianism.[119]

He believes that Homer-Dixon successfully integrated and linked the two spheres of military-conflict studies and the study of the physical environment and agrees with him that environmental scarcity will inflame existing discrepancies and affect power relationships.

We can safely say that until the 1980s at least, scholars following Neo-Malthusian ideas blamed overpopulation as the cause for environmental and resource scarcity. A famous author who extensively wrote about this is Paul Ehrlich, particularly in his two publications "The

[116] Pulido, *Las Propuestas Teóricas Y La Evidencia Empírica Entre Cambio Climático Y Seguridad Internacional*
[117] Kaplan, *The Coming Anarchy*
[118] Simon Dalby, *The Environment as Geopolitical Threat: Reading Robert Kaplan's 'Coming Anarchy*, in "Ecumene", vol. 3, no. 4, 1996, p. 493
[119] Peluso and Watts, *Violent Environments*, p. 6

Population Bomb" (1968) and "Population, Resources, Environments: Issues in Human Ecology" (1972).

Basically, he classified countries into two groups: those with rapid growth rates, and those with relatively slow growth rates. The first group includes what are known as the "underdeveloped countries" (UDC). The second group consists of the "overdeveloped countries", so as modem. industrial nations, which consume a disproportionate amount of the world's resources and are the major polluters.[120] He stated that underdeveloped countries will inevitably witness an unprecedented population-food crisis with the unavoidable conclusion of mass starvation, for which it is too late to take action. But overpopulation is also present in countries such as the US, without food shortages but with environmental deterioration and increased difficulty in obtaining resources.[121]

This author seems to understand the social problem of the marginalisation of the poor, in facts he declares:

> I wish I could tell you that in the face of this dilemma the United States is doing everything it possibly can to help the less fortunate people of our globe. Quite the contrary; in many ways we have been a major factor in pushing them into deeper misery. We have cooperated in a "rich man's club" of nations which has controlled the world trade situation to the great detriment of the UDCs.[122]

Having said that, in both the aforementioned publications, the solution he proposes is always that "the people of the UDCs will be unable to escape from poverty and misery unless their populations are controlled" restoring a balance between birth and death rates.[123] He spends a huge part of his book talking about birth control in all its forms (ch.9), family planning and population control (ch.10).

Citing Malthus "The power of population is infinitely greater than the power in the earth to produce subsistence for man", he envisaged only two solutions to the population problem: the birth rate solution (in which we find ways to lower the birth rate) and the death rate solution, (in which we find ways to raise the death rate). He adds that the problem could have been

[120] Paul R. Ehrlich, *The Population Bomb*, New York, Ballantine Books, 1968, pp. 6-7
[121] Ehrlich, *The Population Bomb*, p. 3
[122] Ivi, p. 23
[123] Paul R. Ehrlich, Anne H. Ehrlich, Population, Resources, Environments: Issues in Human Ecology, Second Edition, San Francisco, W.H. Freeman, 1972, pp. 1-2

avoided by population control, in which mankind consciously adjusted the birth rate so that a death rate solution did not have to occur.[124] So, as for Malthus, famines and plagues are an important periodic contributor to high death rates, restoring order.

2.1.3 Resource scarcity and resource curse

Neo-Malthusian scholars mostly agree on two wide concepts: resource scarcity - also called "ecoscarcity" - and the resource curse.

In Malthus' age, the concept of scarcity was simply synonymous with shortage of food.[125] In fact, the Malthusian approach focuses its rhetoric on the concept of scarcity of resources, in which scarcity is explained as an imbalance between finite supplies (of natural resources) and infinite demand (of the global population). According to the Oxford English Dictionary, "scarcity is insufficiency of supply; smallness of available quantity, number, or amount, in proportion to the need or demand".[126] In other words, scarcity's definition is mostly based on the interaction between supply and demand. Despite this broad definition, scarcity is interpreted differently by different scholars.

Homer-Dixon (1994), envisaged that:

> Within the next fifty years, the planet's human population will probably pass nine billion, and global economic output may quintuple. Largely as a result, scarcities of renewable resources will increase sharply. The total area of high-quality agricultural land will drop, as will the extent of forests and the number of species they sustain. Coming generations will also see the widespread depletion and degradation of aquifers, rivers, and other water resources; the decline of many fisheries; and perhaps significant climate change. If such "environmental scarcities" become severe, could they precipitate violent civil or international conflict.[127]

[124] Ehrlich, *The Population Bomb*, p. 17
[125] Michael Perelman, *Marx, Malthus, And The Concept Of Natural Resource Scarcity*, in "California State University", 1979, p. 80
[126] Oxford English Dictionary, 2016
[127] Thomas F. Homer-Dixon, *Environmental Scarcities and Violent Conflict: Evidence from Cases*, in "International Security", Vol. 19, No. 1, 1994, p. 5

According to Homer-Dixon, the decrease in quality and quantity of renewable resources, population growth and unequal access to resources, inevitably lead to increased environmental scarcity, causing the economic productivity to decrease while increasing migration. The states being weakened by these crises, enter in social effects such as ethnic conflicts, *coups d'états* and deprivation conflicts.[128]

Through his research on environmental scarcity and violent conflict, he deduced that the former causes the latter, which tends to be persistent, diffuse, and sub-national. This frequency will probably increase in the next decades as scarcities rapidly worsen worldwide. According to him, the degradation and depletion of environmental resources is only one source of environmental scarcity; two other important sources are population growth and unequal resource distribution. Scarcity often has a toughest social impact when these factors interact. He outlines that if environmental scarcity becomes more severe, some societies will have a progressively lower capacity to adapt, in particular by causing decreasing capacity of the state to create markets and other institutions that promote adaptation.

> Countries experiencing chronic internal conflict because of environmental stress will probably either fragment or become more authoritarian. Fragmenting countries will be the source of large out-migrations, and they will be unable to effectively negotiate or implement international agreements on security, trade and environmental protection. Authoritarian regimes may be inclined to launch attacks against other countries to divert popular attention from internal stresses.

He believed that all of these changes are matters of international security, and therefore they need to be addressed by security scholars.[129]

It is often claimed that resource abundance does not always lead to sustained economic growth and development for the countries concerned, and that in fact it can have the opposite effect, a phenomenon called resource curse - also known as the paradox of plenty - which is defined by the Natural Resource Governance Institute (NRGI) as "the failure of many resource-rich countries to benefit fully from their natural resource wealth, and for governments in these countries to respond effectively to public welfare needs" (2015). According to this theory, resource-rich countries - instead of having improvements - tend to have higher rates of conflict

[128] Ivi, p. 31
[129] Ivi, pp. 39-40

and authoritarianism, and lower rates of economic stability and economic growth, compared to their non-resource-rich neighbours.[130]

About the ecoscarcity issue, for Malthusian proponents, this is nowhere a more serious problem than in the underdeveloped countries, where growth rates and absolute numbers of people remain the highest in the world. According to this line of reasoning, the so-called third world is the cause of its own misfortunes.[131]

By reading neo-Malthusians scholars such as Paul Ehrlich, in particular "Population, Resources, Environments: Issues in Human Ecology", it is clear that the historical moment that they were living in influenced their vision about population and ecoscarcity. The first aspect is the Cold War: Ehrlich talks about the possibility of a mass extinction due to nuclear weapons. Is it possible that these scholars envisaged so much a dark future for mankind due to the global threat of nuclear war during the Cold War? Evidence leads us to say that this was the case.

The second event that clearly influenced these thoughts during the 1970s and 1980s is the picture called "the blue marble", one of the most famous photographs of the earth seen from space, captured on 7 December 1972 by the crew of Apollo 17. This, together with the context of the Cold War, for sure influenced some scholars' opinion about the limits of the earth, the fact that we only have one planet that we need to protect at all times. This led Ehrlich to the question "What is the capacity of the Earth to support people?".[132] Another question is, how has our perception of the environment changed since the first spacecraft showed us images of a small globe, finite in size, whose resources - however extensive they may be - are themselves finite? This was the question posed in the mid-1960s by Kenneth Boulding, according to whom the first photographs of the Earth taken from space contributed to definitively undermining the illusion of living in a virtually limitless, borderless world - a world where environmental resources are infinitely available to mankind, who need not worry about their future availability and the polluting effects of their exploitation.[133]

[130] Natural Resource Governance Institute, *The Resource Curse - The Political and Economic Challenges of Natural Resource Wealth*, 2015
[131] Robbins, *Political Ecology*, p.14
[132] Ehrlich, *Population, Resources, Environments*, p. 59
[133] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 20

2.2 Political ecology approach

2.2.1 Introduction to political ecology

The term political ecology entails a range of definitions. It was first coined by Frank Thone in an article published in 1935, and then used by the anthropologist Eric Wolf in an article entitled "Ownership and Political Ecology" (1972) in which he introduced the idea that:

> The local rules of ownership and inheritance are thus not simply norms for the allocation of rights and obligations among a given population, but mechanisms which mediate between the pressures emanating from the larger society and the exigencies of the local ecosystem.[134]

A review of the term from its early use to its most recent manifestations shows important differences in emphasis. Some definitions stress political economy, while others point to more formal political institutions; some stress environmental change, while others emphasise narratives or stories about that change.[135] Political ecology is indeed a transdisciplinary research field - which arises from the rejection of the Malthusian ideology of the rising impact of the human population on the earth - that addresses interrelations between nature and society, focusing on contentions and struggles over land and natural resources. An essential point of departure are power asymmetries and social inequalities and many scholars in the field pursue a kind of emancipatory engagement with subalterns or marginalised people whose livelihoods depend on the local resource base. Political ecologists also engage, from the beginning of the 1970s onward, on issues as mining, nature conservation, plantations, and various forms of industrial undertakings tend to encroach on and appropriate the land and resources of such communities. Political ecology is especially influential within the academic fields of anthropology and geography and has a lot in common with other social science and humanities fields preoccupied with questions about how humans shape and are shaped by the environment.[136] In particular, we witnessed the emergence of a "Third World Political

[134] Eric Wolf, Ownership and Political Ecology, in: "Anthropological Quarterly", vol. 45, no. 3, 1972, p. 202
[135] Robbins, *Political Ecology*, p. 14
[136] Bengt Karlsson, *Political Ecology: Anthropological Perspectives*, in "International Encyclopedia of the Social & Behavioral Sciences", second edition, Vol 18, 2015, p. 350

Ecology" in the 1980s as a reflection of the impending need for an analytical approach integrating environmental and political understanding.[137]

Political ecology studies the complex interaction between economics, politics, technology, social tradition and the natural environment, showing how the environment influences and is influenced by the economy and society. Therefore, it differs from apolitical ecological studies in the politicisation of environmental issues and phenomena. Instead, according to Robbins (2012):

> Apolitical ecologies, regardless of claims to even-handed objectivity, are implicitly political. It is not so much that political ecology is "more political" than these other approaches to the environment. Rather it is simply more explicit in its normative goals and more outspoken about the assumptions from which its research is conducted.[138]

Philippe Le Billon, on his part, defines the political ecology as "as a radical critique against the apolitical perspective and depoliticising effects of mainstream environmental and developmental research and practice".[139]

Political ecologists such as Nancy Peluso and Michael Watts declared that:

> We reject automatic, simplistic linkages between increased environmental scarcities, decreased economic activity, and migration that purportedly weaken states and cause conflicts and violence.

By saying that, they wanted to critique the school of environmental security and find alternative ways of understanding the connections between environment and violence.[140]

Five are the dominant narratives in the Political Ecology perspective. The first one is the degradation and marginalisation thesis, according to which environmental degradation is shown in its larger political and economic context and is not anymore blamed only on marginal people. Then, the conservation and control thesis: efforts at environmental conservation sometimes fail as a result and are shown to have pernicious effects. Third, the environmental conflict and exclusion thesis, where environmental conflicts are shown to be part of larger

[137] Raymond L. Briant, Sinéad Bailey, *Third World Political Ecology*, Taylor & Francis e-Library, 2005, p. 1
[138] Robbins, *Political Ecology*, p. 19
[139] Le Billon, *The political ecology of war*, p. 563
[140] Peluso and Watts, Violent Environments, p. 5

gendered, classed, and raced struggles and vice versa. Fourth, the environmental subjects and identity thesis: political identities and social struggles are shown to be linked to basic issues of livelihood and environmental activity. Lastly, the political objects and actors thesis: political and economic systems are shown to be underpinned and affected by the nonhuman actors with which they are linked.[141] In particular, they underlined how unequal power relations are often linked to conflicts over access to, and the use of, diverse environmental resources. This interpretation has long been a central issue in political ecology working in African contexts, who sought to explain questions of environmental control and contestation.[142]

Political ecology asks questions as who holds what? Who does what? Who gets what? They ask questions concerning property, which is fundamental to understanding questions of resources and conflict, then the questions about who works in a society between the *élites* and the poor, and lastly who benefits from the profit gained. They engage with the cause of conflicts not only as an expression of contested incompatibility between resource users, but also stressing the importance of uneven power relations and political struggles within environmental degradation processes and struggles over natural resources.[143]

According to political ecologists, we have to understand resources as social processes (embodying values, desires, needs, and capacities) as well as material substances. It is important to avoid falling into the trap of environmental determinism, such as the argument that some resources - and some countries, by virtue of their resource endowment - are inevitably conflict-prone (resource curse). Another point that distinguishes political ecology is the fact that they reject using the "security" lens. Studies of resource wars would benefit from "thick" historical and geographical contextualisation, as a means of deconstructing the politicised narratives of threat and insecurity often associated with resource wars.[144] At the heart of political ecology research is the notion that politics should be "put first" in trying to understand how the human-environment interaction may be linked to the spread of environmental degradation.[145]

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[141] Robbins, *Political Ecology*, pp. 21-23
[142] Bryant L. Raymond, *Power, knowledge and political ecology in the third world: a review*, in "Progress in Physical Geography", vol. 22, n. 1, 1998, p. 85
[143] Philippe Le Billon and Rosaleen Duffy, *Conflict Ecologies*, in "Journal of Political Ecology", Vol. 25, 2018, p. 242
[144] Le Billon, *Resource Wars Reframed*, p. 1
[145] Raymond, *Power, knowledge and political ecology in the third world*, p. 80

Concerning resource wars, Philippe Le Billon countered the Malthusians by asking whether the resources themselves are generating and fuelling the wars: are resources the real issue, or is the problem rather with the context of resource exploitation? As already stated in the first chapter, resources are therefore both materially and socially constructed, and are also understood as subjects influencing social relations. He therefore concludes that:

> Armed conflicts and natural resources can be directly related in two main ways: armed conflicts motivated by the control of resources, and resources integrated into the financing of armed conflicts. Although few wars are initially motivated by conflict over the control of resources, many integrate resources into their political economy.[146]

Political ecologists have also contributed to theories of resource access and control in relation to conflicts and various forms of violence, where "access" is the ability to derive benefit using all possible means and an *ensemble* of powers. These connections between natural resources and violence imply analyses of violence within different processes. The first one is the "commodification", namely the process that makes things become resources or how commodities are defined by their exchange value. Then, "fetishisation" of how imaginative aspects of resource production and consumption affect power relations. Lastly "representation" of places in which these processes are imagined and concepts such as war and violence are mobilised to convey meaning. These perspectives relied upon the analysis of commodity chain analysis to fill in site-specificity and multiscale interconnections between resources and wars. In its most simple form, this approach follows resources from their point of production until their point of consumption and disposal.[147] Therefore, for political ecologists, the consequences of environmental degradation on society (including conflict) are always a social issue, and environmental factors are considered as context (or consequences) rather than cause.[148]

A political ecology approach therefore requires engagement with the two perspectives most commonly adopted: that resource scarcity (mostly of renewable resources) causes conflicts, versus that resource abundance (mostly with respect to non-renewable resources) causes conflicts.[149]

[146] Le Billon, *The political ecology of war*, p. 580
[147] Le Billon, *Resource Wars Reframed*, p. 21
[148] Le Billon and Duffy, *Conflict Ecologies*, p. 240
[149] Le Billon, *The political ecology of war*, p. 564

Neo-Marxism (in the late 1970s and early 1980s) was at its most influential in the social sciences at a time when many political ecologists sought a radical theory to inform their contextual analyses. For many political ecologists and scholars who wrote on the third world, neo-Marxism offered a means to link local social oppression and environmental degradation to wider political and economic concerns relating to production questions. Political ecologists resorted to neo-Marxism as a way of avoiding the perceived apoliticism of work by many cultural ecologists and neo-Malthusian writers.[150]

According to the Marxist analysis of society, it is not the shortage of resources that generates the conflicts, but the abundance. If there are a lot of resources to be exploited in capitalist logic it generates conflicts: when we talk about the transformation of nature we are talking about a work process. Marx was indeed the first political economist who tried to theorise the process of the capitalist system as a historical system.

It must be said that at the local level, some outcomes were as predicted by Malthus. As populations grow, average incomes and consumption fall. It seems, however, that it was only in times of crisis, sometimes linked to climate change, that food shortages were an insurmountable constraint to population expansion, so we can say that land shortage was certainly not the problem. What kept population levels low and dispersed them was the high mortality rate due to infections.[151]

John Bellamy Foster, an American political ecologist, in his publication "The Vulnerable Planet", provides an analysis of Marx's ecology. He explains that Marx was a great critic of Malthus, because according to Marx capitalism has always been global and it was causing England's social class division at the time of the Industrial Revolution. To understand capitalism, it is important to know that capital is not exactly money: capital is a social relation that defines the connection between the classes that own property (*bourgeoisie*) and the people who work. Capitalism is based on the pyramidal hierarchy of exploitation. According to Marx, the worker's salary does not correspond to all the value created during the working hours, but the salary corresponds to the economic value created during them; this difference is the surplus, the surplus value. To make the concept clearer, capitalism exploits labour, but also nature, because capital cannot reproduce itself without the exploitation of nature as a process of labour,

[150] Raymond, *Power, knowledge and political ecology in the third world*, p. 81
[151] Kenny, *La Danza della Peste*, p. 35

extraction of value from nature.[152] Marx blamed the system of the creation of wealth (measured as exchange-value) under capitalism, which is achieved via the exploitation of labour, the extraction of surplus-labour from human nature, resulting in an immiseration of the working class.[153]

 [154]

In the publication by Paul Robbins "Political Ecology" (2012), this image by Paul Banton is shown: wildebeest crossing the Mara River in Kenya. The migration of wild animals across the region refers back to a fully humanised and highly political environment, the consequences of human action without a graphic representation of the humans. This supports their thought around human responsibility: most of the time it remains unseen even though it causes tremendous damages. They fight against two points, the first one being the idea that nature is only a resource to be exploited, and the second one being the role nature as a sink for our waste, a place where waste is taken from and returned to.

2.1.2 Resource abundance and causes of conflicts

Most accounts of "resource wars", dominated by socio-biological and geopolitical explanations of struggles over resources, have focused on resource scarcity only in terms of the material

[152] John Bellamy Foster, *The Vulnerable Planet*, New York, Monthly Review Press, 1994, pp. 62-73
[153] Daniel Faber and Allison Grossman, "The Political Ecology of Marxism", in: *Capitalism Nature Socialism*, Routledge, Vol. 11, No. 2, 2000, p. 73
[154] Robbins, *Political Ecology*, p. 12

aspects of resources and failed to take into account the broader material and social dimensions. The neo-Malthusian account of environmental conflict was supporting depoliticized concepts such as the one that environmental scarcity naturally triggers conflicts, generally ethnic-based.[155] These approaches which persist in neo-Malthusian interpretations of contemporary resource wars, have an overly simplistic view of resource wars, both in terms of human nature (for instance, soldiers only motivated by greed) and geography (for instance, regions being inevitably conflict-prone because of resource abundance or scarcity). These issues became particularly relevant at the end of the XX century with the apparent proliferation of the so-called resource wars: armed conflicts allegedly motivated and fuelled by resources such as oil, minerals, and timber.[156]

Critics of a model of "environmental wars" have also highlighted the importance of unequal power relations in local societies and the global political economy, particularly in the oil and mining sectors, but also for rent-seeking cultures. Rooted in local histories and social relations, violence is therefore site-specific, while being connected to broader processes of material transformation and power relations.[157]

While the integration of resources into the course of armed conflict is relatively well documented and widely agreed upon, the same cannot be said of resources and the causes of conflict. While the availability of resources may provide elements of economic motivation and military capability, it does not explain the causes of conflict *per se*. Many relatively resource-rich countries do not face perpetual warfare, and armed conflict remains the exception rather than the rule, therefore it is safe to say that the availability in nature of any resource is not in itself a predictive indicator of conflict. Certain trends, however, can be observed among these countries, especially those that are economically and politically dependent on them. In other words, beyond the factor of availability of resources, the level of dependence and the institutional context of the countries concerned matter. An analysis of the relationship between raw materials and armed conflicts must therefore be placed in a historical perspective of the world economy and the economic and political development of the latter. A quantitative analysis of conflict factors indicates that a relative dependence on commodity exports is correlated with a higher risk of war. Looking more generally at the availability of resources, rather than the level of dependence, political scientist Indra de Soysa finds that an abundance

[155] Le Billon and Duffy, *Conflict Ecologies*, p. 244
[156] Le Billon, *'Resource Wars Reframed'*, p. 9
[157] Le Billon, *Matières premières, violences et conflits armés*, p. 303

of renewable resources in poor countries and of non-renewable resources in all countries increases the likelihood of armed conflict. In contrast, a shortage of renewable resources does not seem to be associated with a higher risk of armed conflict. It should be recalled, however, that this simple dichotomy between renewable and non-renewable resources to explain these relationships - especially between resources and conflicts of different scales, such as water micro-conflicts and international oil conflicts - does not cover the diversity of relationships between resources and conflicts, nor the causes and forms of the latter.[158]

Beyond the Malthusian and Neo-Malthusian standpoint of "scarce resource war" stands the second basic argument of "abundant resource war", according to which tt is not simply shortage but also abundance and processes of environmental rehabilitation or amelioration that are most often associated with violence[159], so that "abundant resources equals more conflicts".[160] According to this theory, this means that when wealth depends on the control of the state or of the territory, the competing groups won't cooperate or will even use violence to control revenues.[161] The political ecology approach rejects the simplistic association that conflicts are most frequently associated with absolute scarcity of natural resources. In other words, it rejects the notion that the likelihood of conflict is inversely proportional to the quantity of resources (whether through depletion, increased degradation, more uneven capture or allocation, or rising demand): there is no such thing as a simple and direct causal relation between resource scarcity and conflicts.[162]

According to political ecology, the scarcity of natural resources and raw materials are complex phenomena that can be analysed differently from social and political perspectives. However, they believe that technical and popular understandings of scarcity tend to be simplistic, since there has been the tendency to direct attention to the lack of supply of resources due to natural forces rather than look at human-induced use practices and at socio-political considerations. Why does this matter? These inappropriate causes of scarcity are likely to lead to wrongful solutions, and important implications arise through these conventional and sometimes problematic framings of scarcity. The first one, concerning the scarcity of essential goods, is often used to argue the need of the markets and institutions to mediate the transactions of scarce or "economic goods" (such as water and land) which are made the objects of property. Two,

[158] Ivi, pp. 311-12
[159] Lee Peluso and Watts, *Violent Environments*, pp. 5-6
[160] Le Billon, *The Geopolitical Economy of Resource Wars*, p. 23
[161] Ibidem
[162] Le Billon, *Resource Wars Reframed*, p. 14

scarcity entails much thinking around violence arising through competing claims around scarce resources. Scarcity, therefore, is not seen as the result of the resource-grabbing elites getting away with resource appropriation and thus enhancing environmental degradation and neglecting the interests of the poorer groups.[163]

According to the abundant resource wars argument, commodities and raw materials are easily and heavily taxable, since they are essential and everyone needs them, and therefore they are attractive to both the *élites* and their competitors. The availability of these abundant resources would therefore represent the goal of state or territorial control thereby increasing the risk of conflicts driven by economic greed, while providing armed groups with the 'loot' necessary to purchase military equipment. Such armed conflicts tend to be commercialised and are characterised by both the integration of trading in natural resources into their economy and a move from politics towards private economic agendas. Furthermore, a country's natural resources endowment influences both its political economy and type of governance.[164]

It must be said that, for the purpose of this dissertation, both the resource abundance and resource scarcity perspective fail to take into account the socially constructed nature of resources and fail to explain why an abundance or scarcity of valuable resources is not a necessary or sufficient factor of conflict.[165] It seems that neither the pessimists nor the optimists offer a complete or satisfactory answer. They represent just a theoretical interpretation of the outbreak of armed conflicts over natural resources. But certainly, what Malthus and his successors failed to take into account is the economy's ability to face and adapt to crises, and the extent to which technology and innovation have managed to overcome seemingly insurmountable resource and environmental problems. Some scholars even think that through technology we could overcome increasing shortages of natural resources. The problem is that, most of the time, this is true only when the shortage affects the rich part of the world population, while entire African countries are left to starve to death. About that, the classical economists start from the assumption that an economy's potential is fixed, that the real issue is to allocate resources more equally and efficiently, and that, because of resource limitations, economic growth and living standards will sooner or later reach an equilibrium or plateau has so far been proved wrong. Another proof that Malthusian predictions were wrong is that the planet's

[163] Richard Peet, Paul Robbins, and Michael Watts (Edited By), *Global Political Ecology*, Routledge, First Edition, 2010, pp. 372-73
[164] Billon, *The political ecology of war*, p. 364
[165] Ivi, p. 365

population is over seven times larger today than it was two centuries ago, and yet the average age of life has risen a lot. People live healthier and materially richer than those of all but the most privileged and wealthy in Adam Smith's Day. Even if that is unfortunately true especially in the developed countries, it is still relevant. Another variable that the pessimists did not take into account is that as income and educational levels rise, people tend to modify their behaviour, decreasing the size of families, limiting certain kinds of consumption, and investing more income in preserving natural resources and protecting the environment. However, what Adam Smith and his successors often underestimated is the scope for market failure and the extent to which existing markets are undeveloped or incomplete. Robert Solow (1974) claimed that because every natural resource has a potential substitute in the marketplace there can be no problem of depletion, leading to the conclusion that "Exhaustion is just an event, not a catastrophe". The only problem here is that the natural resources most threatened with exhaustion today, such as the atmosphere and the oceans, are those who have no economic market. The greatest issue seems to be that human nature tends to underestimate future needs. Current markets for natural resources are by definition incomplete if only because future generations cannot participate in them.[166]

The view that population pressure and resource scarcity can cause conflict was also contested by cornucopians. Cornucopianism is the idea that technological progress can keep up with provision of material for mankind. It relies on the belief that there is enough matter and energy on the Earth to provide for the population of the world, appears adequate to give humanity almost unlimited room for growth, and for this reason they belong to the "resource optimists. In fact, they claim that most debated natural resources are not really scarce in a global context, and that we are not going to experience a resource crisis even despite population growth. If some resources are diminishing, humankind is able to cope with these challenges through market mechanisms that are believed to reduce the demand for scarce resources through higher pricing. Furthermore, natural resource scarcity may even trigger technological innovation, making scarcity ever less likely in the future. The point made by cornucopians is that it is the abundance of valuable natural resources, rather than scarcity, that leads to violent conflict, since then economic gain from rich natural resources (for instance gems, tropical timber, oil and so on) may be regarded as an incentive for armed conflict or as a means to finance warfare.[167]

[166] Bacchetta et al, *World Trade Report 2010*, pp. 67-68
[167] Urdal, *People vs. Malthus*, p. 419

Having clarified what political ecology is and where it stands, we find that this approach, extremely committed to the study of wars and conflicts, can help define peace and studies. First, as we saw in this section, the political ecology approach helps reconceptualize scarcity, abundance and dependence through historically-grounded analyses in which scarcity is not the only determining factor leading to conflicts. Second, political ecology approaches expand the range of relations and actors involved in conflict processes, recognizing the multi-faceted character of many environmental and resource-related conflicts. Third, this perspective takes into account a broader dimension of violence, which does not only include war and conflicts, but also other forms of violence, not considered by mainstream geopolitical perspectives. Fourth, political ecology defines resources and the environment as complex socio-material objects reflecting practices and discourses. Lastly, it explains how materials become resources or commodities according to their use and exchange values.[168]

2.2.3 Overcoming the concept of "curse"

The enquiry of the World Trade Organisation in its World trade report of 2010 questioned the validity of previous studies of the resource curse hypothesis, based on doubts about the measures of resource abundance, the failure to take into account other variables that are linked with resource abundance in cross-country regressions and the failure to assess the impact of resource depletion over the sample period.

The first critique concerns how sensitive the resource curse is in measuring resource abundance: using net natural resource exports per worker to measure resource abundance, we find that it has a positive effect on growth, and that any negative impact on growth relates to the high export concentration that is typical of resource exporters. On the other hand, others argue in favour of alternative measures of resource abundance to replace the commonly used output- and export-related variables which are prone to endogeneity problems and can lead to distorted estimates. Resource abundance is significantly associated with both economic growth and institutional quality but, contrary to the predictions of the resource curse hypothesis, greater resource abundance can lead to better institutions and faster growth. The second critique is about the issue of omitted variables, indicating the omission of one or more variables correlated

[168] Le Billon and Duffy, *Conflict Ecologies*, pp. 247-48

with resource abundance, which biases the regression coefficients in the cross-sectional work. This critique may also help to explain why some studies find evidence of a resource curse, while others do not. The study concluded that the empirical literature does not reach a consensus on whether natural resource abundance leads to slower or faster growth. What does seem clear, however, is that the literature has become increasingly distant from the initial consensus on the existence of a "resource curse" and towards a more positive view of the impact of natural resource abundance on economic growth.[169]

Resource curse studies focused particularly on oil endowment, which, as we saw, represents a crucial material in Africa. Defining it a curse would mean blaming it for the onset, duration and intensity of armed conflict, proving a statistical correlation. In the first chapter we saw that indeed the presence of oil plays a massive role in that. But how is the resource curse constructed and reproduced and whose interests does it serve? The "oil curse" defines oil in terms of a central role in increasing the risk of violent conflict, poor economic growth, or acting as a disincentive for peace. Policy and media have strengthened this idea, even through movies such as "Blood Diamonds" (2006).[170] Cyril Obi (2010) believes that:

> The pathologies of an oil curse therefore thrive on a determinate relationship between aspects of oil endowment and negative outcomes, a position that simplifies what is in reality a far more complex relationship that is neither inevitable nor natural.[171]

According to him, oil endowment is not the curse, but at the same time oil is cursed by the high premium placed on it by globalised capitalism fed by the greed for non-renewable resources by the world's industrial powers, and often at huge environmental and social costs to its victims. Some resource-rich countries such as Norway and Canada escaped the resource curse due to their politics, class relations, economic power and control of their resources, lacking interventionism and predatory local and transnational forces. Given this situation, the challenge is the need for a grounded understanding of the historical, socio economic and political conditions and structures. Those countries who experience oil as a curse are mainly the majority - who are poor and whose livelihoods are alienated and threatened by the political economy of globalised capital - and the depredations of a (trans)national *élite*.[172]

[169] Bacchetta et al, *World Trade Report 2010*, p. 95
[170] Obi, *Oil as the 'curse' of Conflict in Africa*, pp. 483-84
[171] Ivi, p. 489
[172] Ivi, p. 491

2.2.4 Beyond the perpetual crisis

Malthus' thinking permeated in every aspect of modern society, including in the literature. Aldous Huxley was an English writer and philosopher who became famous particularly for his novel “Brave New World” (1932). This science-fiction novel is of the dystopian (or utopian, depending on your point of view) genre that partly takes its cue from Malthusian rhetoric by narrating themes such as the development of reproductive technologies to forge a new model of society in which man lives in a dramatic existential limbo. Humans are no longer viviparous as reproduction is rendered extrauterine. If read from a Malthusian perspective, this novel could almost be considered utopian, and society would be ideal as it is free of worries, poverty and wars. In truth, it seems openly a criticism of Malthusian thought almost in a parodic key (the book even mentions 'Malthusian exercises'). Although Malthus certainly did not envision or promote this kind of society, it is interesting to note how artistically and over decades, see centuries, his words have influenced people so much.[173]

The future predicted by Thomas Malthus, Thomas Homer-Dixon and Robert Kaplan is still thankfully far from our horizon. It is indeed true that some resources are scarce and that the exacerbation of climate change and global heating is increasingly challenging societies, trade and politics. It is also true that we are facing another stressful crisis around natural resources, commodities and raw materials: the changing scenario of the importance of African commodities from the end of the Covid-19 crisis until the current and persisting situation of Russia’s aggression to Ukraine.[174] The categories most impacted by this crisis are: energy (oil and gas), derived products (as fertilisers) and food (especially cereals), whose prices are likely to remain elevated in the short to medium term.[175] Analysing this event using the political ecology lens, we can argue that the discussion over scarcity versus abundance of resources is far from being over.

[173] The reference here is Aldous Huxley, *Il Mondo Nuovo*, Mondadori, 2021
[174] By the time this dissertation was being written, Russia’s invasion of Ukraine had been going on for 7 months
[175] Pan African Chamber of Commerce and Industry, *Impact of Ukraine war on commodities and Africa: possible policy responses and opportunities*, 10.05.2022, available at: https://www.pacci.org/

Sometimes indeed, as in the context of the Russian war in Ukraine and how it is affecting access to gas, the resources are there but we want to break free from autocratic countries and become energy independent, also focusing on renewable resources.

In other cases, we are not able to distribute resources. According to the World Inequality Report, in 2021 each adult earned an average of 167000 euro per year, while possessing wealth averaging 72900 euro. But these averages unmask huge disparities between and within countries. The richest 10% of the world's population earns an average of EUR 87000 per year, while an individual in the poorest half earns only EUR 2800 per year. If we look at wealth, the inequalities become even more pronounced. The poorest half of the planet barely possesses anything at all, reaching about 2% of the world's wealth. By contrast, the richest 10% own 76%.[176] Many people today, like Malthus in his time, are convinced that economic inequality is so widespread as to seem inevitable. Others, however, such as Nobel Prize-winning economist Joseph Stiglitz, argue that this is not only the product of precise political choices, but that in the long run it damages the productivity of the economy.[177]

Moreover, the World Food Programme (2020) informs us that one-third of food produced for human consumption is lost or wasted globally. This data clearly reveals that global hunger and inequalities isn't about a lack of food (nor resources), and overpopulation isn't about not having enough food for everyone: all the food produced but never eaten would be sufficient to feed two billion people. That's more than twice the number of undernourished people across the globe. In brief, right now, the world produces enough food to nourish every person on this planet.[178] The European population, who represents only 7 per cent of the global population, spends a lot of other people's resources. To maintain our current lifestyle, we need 2.8 Earths every year. Just think: the Indians, who are more than twice the size of us, use just 0.70% of it. In most cases we clearly see that resources are there, but we do not know how to manage them.[179]

Around the question "who is really overpopulated" the publication by Robbins shows us this simple yet effective graphic. Comparing the per capita consumption of resources and

[176] Lucas Chancel, Thomas Piketty, Emmanuel Saez andGabriel Zucman (coordinated by), *World Inequality Report 2022*, in "World Inequality Lab", 2021
[177] ISPI, June 2022
[178] Anonim, *5 facts about food waste and hunger*, in: "World Food Programme", 2.06.2020
[179] Raffaele Crocco (editor in chief), *Atlante delle Guerre e dei Conflitti nel mondo*, 9th edition, Trento, Terra Nuova, 2019, p. 17

production of waste and considering that India is three times larger than the United States in terms of population, it still consumes a comparatively tiny quantity of key resources and produces a fractional amount of waste.

Resource	*India*	*United States*
Meat (kg, 2002)	5	125
Paper (kg, 2005)	5	297
Water (m^3)	633	1,687
Energy (kg oil equivalent, 2005)	514	7,921
Carbon emissions (tonnes, 2005)	1	20

[180]

In theory, Africa, home to 60% of the world's arable land, would have the potential to meet not only its own food needs but also those of the rest of the world. Agriculture remains one of the continent's most important economic sectors, as it employs the majority of the population and accounts for 14% of Sub-Saharan Africa's GDP, but it is an agriculture that penalises the majority of the rural population, forced onto marginal land, to the benefit of large transnational interests and the wealthier sections of the population (especially urban). In practice, increasing urbanisation, deforestation, desertification, progressive loss of biodiversity, inequality and widespread poverty make nature a disputed resource exploited at a rate that has become unsustainable. In the absence of participatory processes and democratic institutions capable of helping to eliminate poverty and inequality, natural resources can become a 'curse', on which the appetites of groups within countries and international interests converge, fomenting conflicts and armed wars, sometimes by proxy.[181]

Another point against Malthusianism is made by countries where birth rates are decreasing year after year. It is the case of Italy, where ISTAT (the national institute for statistics) warns about the general ageing of the population. They predict that the decrease in births, and the consequent increase in the average age of the country, is directly proportional to the decrease in GDP.[182]

[180] Robbins, *Political Ecology*, p. 17
[181] Zupi, *In Africa, guerre sempre più dimenticate*
[182] Carlo Marroni, *Istat: «Con 400mila nascite all'anno siamo un paese da 30 milioni di abitanti»*, "Il Sole 24 Ore", 3.10.2021. Available at: https://www.ilsole24ore.com/art/istat-con-400mila-nascite-all-anno-siamo-paese-30-milioni-abitanti-AEfClTl

This might be seen as a contradiction, because if we continue to blame global overpopulation while truly believing that this is the underlying problem of resource scarcity and climate emergency, then we can deduce two issues. The first one is that national governments, by encouraging some choices, think exclusively of their own nation's interests 'at the expense' of global welfare (even though according to political ecology overpopulation is not the problem). The second thing we can deduct from this is that always thinking only of the economic aspect leads to non-solutions to real, current and pressing problems.

Data clearly shows that overpopulation is a social concept used by the élite who is not interested in finding solutions for the starving part of the world. This led Paul Robbins (2012) to the inevitable question: who is really overpopulated? Using as source the World Resources Institute, he highlighted the comparative per capita consumption of resources and production of waste. What he found out was against the Malthusian mechanism of "blaming the poor": India, which is three times larger than the United States in terms of population, consumes a comparatively tiny quantity of key resources and produces a fractional amount of waste. Therefore, the poorest are actually those who globally use the least resources.[183]

Meanwhile, the neo-Malthusians, concerned about the planet's carrying capacity, focus on the wrong threats. For them, food shortages and worldwide famine caused by overpopulation and lack of resources will be our doom. But, as true as it is that the threat to dwindling food supplies is a problem that must necessarily be addressed, if we do not switch to more environmentally sustainable production cycles as soon as possible, pestilence remains the most immediate problem. And since for much of history it has been the lack of appropriate technology (rather than land to cultivate) that has forced peoples into endemic poverty, it is reasonable to assume that, by funding and supporting technological progress, we could enable well over nine billion people to live on Earth in peace.[184] In fact, the epidemiological disaster that Malthus predicted, which predicted the drift of the human population, has not yet come true. In his defence, it is imperative to point out that, despite all the health challenges we have faced in the post-industrial era, the progress made in the fight against infectious diseases has changed the world. Setbacks such as the one represented by Covid-19 will continue to occur, but it is nevertheless

[183] Robbins, *Political Ecology*, p. 17
[184] Kenny, *La Danza della Peste*, p. 199

true that deaths from cardiovascular ailments such as heart failure and stroke are now far more frequent than deaths from all infectious diseases combined.[185]

The whole point of this analysis, beyond the political ecology approach, is that the Malthusian interpretation - apart from being proved wrong by several studies - does not provide real solutions (except for birth control, which is of dubious morality and difficult applicability) but only highlights problems, and by doing that it reduces the chances to improve the current global situation on natural resources, conflicts and poverty.

From this section we can clearly conclude that the allocation of resources is a choice, just as it is a choice to blame overpopulation as the cause of the so-called resource scarcity.

[185] Ivi, p. 129-30

CHAPTER 3: the US and Europe

3.1 The US security approach

3.1.1 Defining environmental security

As we saw in the previous chapter, Malthus's influence went way beyond what he could ever imagine. In particular, neo-Malthusian ideas reached the US Government during the 1990s. The concepts that made these theories reach such a high level of governance were the ones of environmental security and of resource scarcity.

Since the end of the Second World War, successive governments at the helm of the American superpower have almost always linked the duty to defend the values of freedom, justice and democracy from the threats posed by the Nazis, the Communists or the Taliban, with the need to have direct control, and as much control as possible, over natural resources: it is these that are ultimately the material foundations of American prosperity and freedom.[186]

But in order to understand this link better, it is important to analyse the very essence of the term "security". What was a threat to security and what is a threat now? Is security a negative or positive concept? How is this security taken into practice?

Some authors of "Concepts in World Politics" saw security through a political ecology approach, stating that it is a political construction in specific contexts:

> Our starting point in the tradition of conceptual history is that any meaning (of security) is historically contingent and changeable, as well as closely tied to social relations of power and their alterations.[187]

Following this line of reasoning, the concept of security changes according to the socio-historical context we live in, and for this reason it can, and it will change throughout the years and, as we are about to see, it is indeed true.

Some scholars see security as something positive, referring to it as a positive factor, as feeling safe from harm or danger, which corresponds with its everyday meaning as something

[186] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, pp. 21-22
[187] Holger Stritzel and Juha A. Vuori, *"*Security*",* in: Felix Berenskoetter, *Concepts in World Politics*, London, SAGE Publications, 2016, p. 42

positively value-loaded. Others, as in the Cold War context - which as we have seen is a crucial point of this dissertation's analysis - linked security to the probability of states posing a threat or being able to deter enemies on the basis of their material capabilities.[188]

We can therefore state that the major difference between the positive and negative perception of security concerns its usage. In the former case, we think of security as in its everyday use, so in a basic, non-expert understanding, and in this case the more security, the better. In the latter case instead, from the international politics point of view, security is understood in terms of a negative concern, a possible danger, an impellent threat. So, for states and security experts, security is ultimately a negative concern, linked to potential unpredictable risks and vulnerability. It is essential to understand that since security is politics, not only in bureaucratic terms but also as a classificatory practice that always leads to social and political consequences. For this reason, the way politicians talk about security and how they offer security measures tend to promise much more than can actually be achieved: the day-to-day understanding of security from the non-expert point of view suggests a degree of certainty that in reality it is impossible to achieve with any security measure. Security speeches are designed to provide a sense of security and defeat danger, something that, as we all know, can ever totally be realised. Security discourses thus conceal this inevitable postponement of certainty, giving the concept of security as stable, knowable and, in fact, insurable. Since security arguments contain a threat, they in fact reproduce insecurities. Anthony Burke observes that security can never escape insecurity, since its very meaning depends on the production of images of insecurity.[189]

Until the end of the Second World War, the preferred term used by the army was "defence" in a sense of response to an "attack". Security allowed the promotion of "defence" against intangible threats which an even more tricky concept, since, as such, national security can justify drastic and extraordinary measures, potentially unaccountable, such as military intervention, political assassination and war. It was also a political tool of legitimation. The term security, in particular "national security", evolved much more during the Cold War context as a way to explain the relationship between the US and the rest of the world.[190] With the beginning of the Cold War, in fact, security studies in the US were increasingly concentrated on strategic studies. The series of strategies associated with national security were reduced to the mere technicalities of military strategy, in particular involving the nuclear threat.

[188] Ivi, pp. 43-44
[189] Ivi, p. 46
[190] Ivi, pp. 47-48

The fact that security has been reduced to such an obscure strategy has diverted attention and focus from the value of security itself, making it less concrete than the true reality of weapons. Describing the world as full of armed enemies everywhere, strategic discourse makes the condition of absence of peace fairly normal. It follows that the mainstream discourse of national security normalises danger, threats and risks, particularly the risk and the fear of the eternal danger of armed aggression from the outside. This process makes this risk natural, implying that violence is a natural aspect of human nature and political behaviour that we have to accept as status quo since it cannot be eradicated. Security is a word of power, a speech act that operationalises state monopolisation of responses to a challenge once it is labelled a security issue. National security is therefore the product of relatively recent historical circumstances, being neither a timeless nor a universal truth.[191]

We also witnessed how the concept of security, especially in the US, reached its strongest moment after the 11/09 twin towers attack in New York and how in the last years, worldwide, the concept of security has been associated with the protection against the Covid-19 pandemic.

Beyond the mere (but still complex) concept of security, we witnessed the rise of the "environmental security" perspective, a brand new threat, which refers to the area of research and practice that addresses the linkages among the environment, natural resources, conflict and peacebuilding.[192] In fact, most threats to the environment such as pollution, contamination, natural resource depletion, or climate change, cannot be contained within national borders and their hazardous effects can harm farming, fishing, and herding practices that sustain human life. The idea behind the environmental security approach is that together with poor governance and environmental neglect, these challenges affect the political stability, human security, and the global economy, making environmental security a pillar of national security. Following the neo-Malthusian analysis, these threats and their consequences can increase the risk of instability and conflict, requiring security institution involvement.[193] According to some scholars, it might be more accurate to use the term "environmental insecurity", as the

[191] Barnett, *The meaning of environmental security*
[192] Matthew, Brown, Jensen and others, *From Conflict to Peacebuilding The Role of Natural Resources and the Environment*, p. 7
[193] George E. Katsos, *The U.S. Government's Approach to Environmental Security*, in "Joint Force Quarterly 89", 2018, pp. 130-34

vulnerability of people to the effects of environmental degradation, including the way this degradation affects the welfare of human beings.[194]

Long ignored by those national security strategies concerned with the global availability of mainly industrial resources, the threat of rapid environmental degradation and its effect on local societal populations led, from the 1970s onwards, to a redefinition of the concept of security in relation to natural resources. This concept of "'environmental security" reflects not only a Malthusian conception of resource-population relations, but also ideas of global interdependence - such as the environmental limits to growth illustrated by discussions of global heating. From this perspective, political instability and armed conflict reflect socio-ecological problems whose causes are rooted, according to the authors, in unbridled population growth or poverty resulting from exploitative relationships that give rise to devastating environmental practices and conflict-prone economic disparities. Incorporated into the concept of 'human security', this perspective also emphasises the security interests of individuals rather than states, particularly among the poor in Third World countries.[195]

Some scholars defined environmental security as a range of concerns that can be organised into three general categories of concern. The first one about the negative impact of human activities on the environment; the second one about the direct and indirect consequences of various forms of environmental change triggering, intensifying or generating the forms of conflict and instability relevant to conventional security thinking; and the third one about the insecurity individuals and groups experience due to environmental change.[196]

A particular issue concerning environmental security is the absence of agreement on the problem that it is intended to address. In fact, there are two different ways of understanding the problem. The first is that of national security as the threats to national security that arise from environmental degradation, and the second one as the human impacts on the security of the environment itself.[197] In both cases, the risk is that of using the acts against aggressive expansion in the name of security – from terrorism to resource nationalism – to justify and legitimise the necessity of this acts of pre-emptive aggression.

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[194] Barnett, *The meaning of environmental security*
[195] Le Billon, *Matières premières, violences et conflits armés*, p. 301
[196] Jerome C. Glenn, Theodore J. Gordon, and Renat Perelet, *Defining Environmental Security: Implications for the U.S. Army*, Atlanta, Army Environmental Policy Institute, 1998, p. 17
[197] Barnett, *The meaning of environmental security*

This model of the American researchers is defined as “casual” effect of cause-effect: there is this structural shortage (for which they do not explain why, in their opinion it is simply natural) which leads to three analytical moments which are: scarcity, social effects and conflicts. This idea of scarcity needs to be explained: understanding the economic logics, model of capital accumulation and how this interferes with specific forms of power. The decrease in productivity that leads to insurgencies is a very simple deterministic point of view. It's a model that helps us understand what's happening in the developing world, not in the first world. These analyses can be instrumental, in order to allow Western countries to get their hands on developing countries.

3.1.2 The US Government's approach

In his publication of 2012, Thomas Robertson describes clearly the history of Malthusianism giving a lot of attention to the US Governments through history. It is essential to clarify that Malthusianism’s wave grew on both the right and the left, and even among environmentalists, and the discourse over overpopulation and resource scarcity has been dominant in each presidential term starting from the 1960s. Whether these issues were addressed sincerely for humanitarian reasons or from the concern about international affairs it is still important to note that politics were influenced by Malthusians ideas. For sure, at least from the political point of view, it was conceived as more urgent the issue of poverty and war rather than the environmental aspects.[198]

As the Cold War began, many Americans perceived the developing nations (which at that time were called “third world nations”) birth rates as crucial to the US national security.[199] What they mainly feared was overpopulation as a threat to their new wealthy life standards, in the US - with what some environmentalists defined the Chinification of the United States - as well as the other countries overseas, in Asia, Africa and South America.[200]

In this moment, particularly in the US, we start to see concretely the consequences of Malthusian philosophy into action when, in order to contain population growth, we see both the rise of women independence (through abortion campaign, the use of birth control, the new

[198] Thomas Robertson, *The Malthusian Moment*, Rutgers University Press, 2012, pp. 8-9
[199] Ibidem
[200] Ivi, p. 9

thinking of women's role in the family) and the abuse committed by the government and physicians against them. An example provided by Thomas Robertson is:

> In the name of fighting overpopulation, thousands of people, often poor and minority women, were unwillingly sterilised by doctors and other health practitioners, both within the United States and overseas.[201]

This was one of the dark sides of the implementation of certain programs which were following the Malthusian lead.

President Johnson certainly did not change the previous paradigm, stating that "Next to the pursuit of peace, the really great challenge of the human family is the race between food supply and population" and that the US should really fear from this.[202]

Moreover, during the 1960s, but particularly with President Kennedy, we see a rise in the fight against communism. The idea was that in poor and underdeveloped countries, where poverty and overpopulation were a constant struggle, there was the fear that communism would take over. Here is when the concern about overpopulation and resource scarcity was at its highest: population and resource imbalances threatened the US national security with apprehension about the rise of communism in the developing countries.[203] It is sad to see how politicians and scholars at this point were not really interested in the sociological or humanitarian aspects of birth control and development aid, but were more interested in the risk that the Communists make of hungry people in their drive to conquer territories. This is also the justification that presidents from Eisenhower to Nixon used to justify the American involvement in other countries' affairs and to have more involvement overseas (what some scholars called the "domino theory").[204] The United States showed as well how oil can represent a huge influence on any country and its foreign policy, particularly towards the domination of the global production and distribution of oil. This also contributed to the plan of containment of the Soviet Union and the prevention of communist control of this valuable resource.[205]

Besides that, there were indeed some positive externalities such as the development aid to third world countries, as during Kennedy's mandate who really emphasised the fight against

[201] Ivi, p. 10
[202] Robertson, *The Malthusian Moment*, p. 85
[203] Ivi, p. 86
[204] Ivi, p. 89
[205] Adrian Gonzalez, *Petroleum and its Impact on Three Wars in Africa: Angola, Nigeria and Sudan*, in "Journal of Peace, Conflict and Development", 2010, p. 59

international poverty, even if always with the aim of winning against communism.[206] But while economic development programmes were difficult to implement, concern about population growth increased exponentially and the scarcity of natural resources was linked to national security.[207]

On president H.W. Bush's side, we see the same pattern again: the interrelation of the issues of population growth and resource scarcity as driving key factors of national insecurity. He stressed the theory that the earth is composed of finite resources, until the point where he blamed overpopulation as "a prime cause for increased automobile traffic deaths, drug addiction, broken marriages, alcoholism, crime, homosexuality, suicides, venereal disease and heart attacks."[208]

It has been glaringly obvious as well where the US government stands on security issues throughout the 20th and 21st centuries, but in the case of environmental security, it was made even clearer with the decision to invite Robert Kaplan to the White House, since the Clinton administration found "the coming anarchy" astonishing, and soon it became a model for a sort of green thinking during the 1990s. In particular, President Clinton on the 29 June of 1994 addressed to the National Academy of Science Invoking Kaplan's article as well as Homer-Dixon's work, referring to them as "the beacons for a new sensitivity to environmental security". The same year, the Director of Central Intelligence (James Woolsey) and the Secretary of the Defence (William Perry), were undertaking Kaplan's and Homer-Dixon's philosophy by singing the praises of "an aggressive environmental program because it is critical to the defence mission", saying that environmental degradation caused by resource scarcity and population growth was enriched within the National Security Council of the US government. In this way, Kaplan's polemical and apocalyptic vision marked the rise of environmental security as a fill to an historic vacuum within US history.[209]

> It is time to understand The Environment for what it is: the national-security issue of the early twenty-first century. The political and strategic impact of surging populations, spreading disease, deforestation and soil erosion, water depletion, air pollution, and, possibly, rising sea levels in critical [...] will be the core foreign-policy challenge from which most others will ultimately emanate, arousing the public and uniting assorted

[206] Ivi, p. 94
[207] Ivi, p. 87
[208] Ivi, p. 164
[209] Peluso and Watts, *Violent Environments*, p. 4

> interests left over from the Cold War. [...] The environment, I will argue, is part of a terrifying array of problems that will define a new threat to our security.[210]

This 'state' discourse subordinates American security to general environmental security. Using this vision and purpose, the US, and in particular the Clinton administration concluded that:

> We [the Clinton Administration] believe that environmental degradation is not simply an irritation but a real threat to our national security.
>
> (Madeline Albright, April 21, 1994, cited in ECSR 1955: 81)

This “green security” approach contributed to fuel the concept of resource scarcity through a deep fear of the poor and of their claims to resources, despite radical changes in the world since Malthus's time, and in particular he made re-emerge the cultural and historical tensions that were temporarily suspended during the Cold War.[211] In fact, as the environmental security literature did, they made efforts to link conflicts to environmental degradation, using resource scarcity and climate change as an imminent, persistent but invisible threat. They felt threatened by Homer-Dixon's dark vision of environmental scarcity, which predicted the incidence of increasing violence. In fact, as a response, the Clinton administration established a senior Director for Global Environmental Affairs, an office of Deputy Under Secretary of Defence for Environmental Security, and the post of National Intelligence Officer for Global and Multilateral Affairs.[212]

For these reasons, during the 1990s the CIA, the Department of Defence, together with the US Army established environmental strategy and policy centres as part of a larger effort to "green" themselves.[213] The role of the army in this was essential to prevent the instability - “Preparing for Tomorrow’s Fight” - and acting before it became serious. The general plan was therefore more in the way of adaptation instead of mitigation, using also military campaigns activities. Environmental degradation was therefore seen as a positive thing for military business.[214]

The same vision about resource scarcity is shared by the United Nations Environment Programme in their policy paper of 2009:

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[210] Kaplan, *The Coming Anarchy*
[211] Peluso and Watts, *Violent Environments*, p. 7
[212] Ivi, p. 10
[213]Ivi, p. 11
[214] Katsos, *The U.S. Government’s Approach to Environmental Security*

> As the global population continues to rise, and the demand for resources continues to grow, there is significant potential for conflicts over natural resources to intensify in the coming decades. In addition, the potential consequences of climate change for water availability, food security, prevalence of disease, coastal boundaries, and population distribution may aggravate existing tensions and generate new conflicts.[215]

In their opinion, the change in the security landscape requires a radical shift in the way the international community engages in conflict management. Particularly, the establishment of the UN Peacebuilding commission in order to "address environmental risks and capitalise on potential opportunities".[216] Following the lead of the resource scarcity discourse, they believe that if the risks won't be addressed, the outcome would be an ever-ending cycle of violence.[217]

Another point on what some scholars would define as a rather aggressive concept of the US securitization concerns the US war against terror (since 9/11) and the US dependence on foreign resources as oil. As regards the former, we can identify a pattern where the US government used terrorism threat in order to justify military protection. This threat requires the securitization of the global space in its entirety as a preventive measure against the risk of attacks: the uncertainties and contingencies of the future are experienced as a permanent and pervasive risk in the present. This threat of a "subjective" type of violence leads to the global expansion and extension of objective and systemic violence, which is less evident.[218] About the US dependence on foreign oil, the current discourse of energy security embodies a larger project, a structural transformation of the world energy market and the militarization of global space, justified by imminent threats to global energy security. These elements of energy security are deeply connected, and they exist around tensions between questions of US "homeland security" and the security of the global energy market. It is important to focus on the US because it's a country where concerns about energy security in relation to terrorism and resource nationalism dominate the public discourse.[219] Energy security exists in a broader context of overall security in international relations and in a world of increasing interdependence where energy security will depend much on how countries manage their

[215] Matthew, Brown, Jensen and others, *From Conflict to Peacebuilding, The Role of Natural Resources and the Environment*, p. 5
[216] Ivi, p. 6
[217] Ivi, p. 28
[218] Peet, Robbins and Watts, *Global Political Ecology*, pp. 325-26
[219] Ivi , p. 326

relations with one another, whether bilaterally or within multilateral frameworks.[220] Security concerning energy resources is therefore a global question.

Historically thinking, Europeans tend to blame poverty and scarcity on overpopulation rather than Americans, who tended to see the world as a place of abundance, so it is remarkable that so many Americans ever grew so concerned about population growth.[221] What we saw so far allows us to partially blame the Cold War for making Malthusianism so attractive, since it led the public opinion to fear that poverty-induced political instability would draw the US into another World War. The fear was not just about the imbalanced quantity of resources available, but also about the quality of resources that the Earth would provide.[222] The wave of criticism has never ceased to point out how this kind of thinking can lead to discriminatory policies, practices and discourses. For some, publications such as The Population Bomb are "a theoretical hammer in the hands of angry, frightened, and powerful racists, as well as over the heads of black people, as the ultimate justification for genocide." Indeed, among the African American critique there was the feeling of frustration due to the fact that Malthusians (and the politicians who believed in his theory) were blaming others (particularly the poor population) while overlooking their own tremendous resource consumption. They believed that "Overpopulation is a white man's problem. In his limited space, he squanders an extremely disproportionate share of the world's resources."[223] As neo-Malthusianism spread among international organisations and government leaders, it offered economic support to the cause of the rising population growth, rewarding governments in poor countries that enacted population control while sounding no alarms when those measures became coercive.[224]

3.2 The point of view of the European Union

About natural resources and conflicts, the European Union declares that it envisages a new security challenge:

[220] Ivi, p. 329
[221] Robertson, *The Malthusian Moment*, p. 211
[222] Ivi, p. 222
[223] Ivi, p. 179
[224] Chelsea Follet, *Politicians' Support for Population Control Is Dangerous*, "Cato Institute", 13.09.2019

> Conflict over natural resources is likely to pose significant threats to European security, and the European Union therefore needs to elaborate a comprehensive strategy to meet and overcome these threats. This strategy should combine existing instruments and approaches more effectively, while also finding new ways to balance the imperatives of access to natural resources, regulation of markets and conflict prevention, mitigation and resolution.[225]

The approach here seems more moderate and less aggressive than the US's, since they envisage a better understanding of natural resource-related security and conflict challenges, including an analysis of current policies and of the link between resource conflict and climate change. It seems that the EU, far from the neo-Malthusian extremely pessimistic view, tackles the issue of increasing population pressure not as an insurmountable problem, but simply as a problem to be solved through concrete actions. Moreover, they see the role of natural resource development in poverty reduction in developing countries, and even in this respect they talk about security.[226] They don't see security as a mere national issue because the EU is not a country, but a supranational political and economic union comprising 27 Member States and, furthermore, the EU seems to extend the issue beyond European territory. What emerges is also that it seems that the EU is more focused on the energy transition and on tackling environmental problems such as pollution and preserving the environment rather than on resource scarcity and overpopulation.[227]

We see the rise of the discourse as well on ecological modernisation within the European Union, responding to the prominent de-modernisation arguments in the 1980s, which asserted that dealing with environmental problems required a fundamental rethinking of our modern ways of life. The well-known 1972 report "The Limits to Growth" had emphasised the existence of limits to industrial and social expansion.[228]

It seems though, that also the EU takes for granted the fact that there is an actual resource scarcity and an inevitable connection with conflicts. For the institution, it is clear that natural resources contribute to fuelling violence and crimes and that the main natural resources have

[225] Nicholas Garrett and Anna Piccinni, *Natural Resources And Conflict: A New Security Challenge For The European Union*, in: "Stockholm International Peace Research Institute", 2012, p. 1
[226] Ibidem
[227] Amanda Machin, *Changing the story? The discourse of ecological modernisation in the European Union*, in "Environmental Politics", 2019
[228] Ivi, p. 210

been used to finance crime and, moreover, they agree on the fact that climate change and demographic pressures may exacerbate the scarcity of natural resources.[229] Until now, the EU tried to deal with these so-called security and conflict challenges by a series of initiatives created to ensure access over natural resources, to fight against climate deregulation and, more recently, to increase and grant market stability. Nevertheless, the recent EU policy fails to take into account the multidimensionality of the issues related to natural resources, and the result of that has been the struggle to align and coordinate mechanisms to address them. As just said, the natural resource–security link was recognized in the development of EU policy instruments such as trade and aid tools, while the security dimension - in the strong American way - is often neglected. In fact, the EU may be securing favourable terms of trade to access resources at the expense of efforts that it is deploying in other fields through development and security interventions. These contradictions will also affect the EU's credibility as a normative power committed to the pursuit of an international order based on good governance, democracy, the rule of law and the protection of human rights.[230]

On the other side, for some aspects we see some similarities between Europe and the US, for instance when it comes to migration. Malthusian believes in some cases fuelled the anti-immigration policies and discourses, meaning that a part of European society who fears less access to natural resources is more likely to fear immigration as well. This is more the case in countries with social instability and low welfare, while countries with higher redistribution of income are associated with warmer attitudes towards the incoming population.[231] Sentiment over immigration, following Malthusian tradition, are somehow dictated by environmental concerns of the European population. Moreover, the fears of power cuts and energy availability (things that we are experiencing nowadays) are indeed jointly prevalent across the population with their attitudes towards immigration.[232]

Among all the political and economic reasons there can be behind the measure concerning border control, the author of "The Plague Cycle" points out that it is even possible that our intuitive response to infectious diseases has shaped the nature of our societies to the extent that the more infectious diseases are present in a given area, the more its inhabitants fear foreigners,

[229] Garrett and Piccinni, Natural Resources And Conflict: A New Security Challenge For The European Union, p. 2
[230] Ivi, p. 8
[231] Paula Puskarova and Ivana Dancakova, *Malthus is still breathing: Environmental concerns and attitudes towards immigration in Europe*, in "Mondes en développement", 2018, p. 68
[232] Ivi, p. 78

tend to close themselves off and react more violently towards others.[233] This is what might have happened during the very first period of the Covid-19 pandemic, when the stress and the fear of being infected by others was at an all-time high.

3.3 Unexpected crisis

As already mentioned in the previous chapter, from February 24th, 2022, a new war started to threaten Europe directly and thereby Africa.[234] This war in the European continent generated resource scarcity, but not according to the neo-Malthusian definition we discussed in the previous chapter. It is not a war fought over natural resources nor caused by resource scarcity; it did not generate resource scarcity because of overpopulation or some sort of epidemics: it is a territorial aggression, with the sole purpose of annexing territories of another sovereign state. Even if this war is about politics, the global repercussions are indeed the decrease or inaccessibility of certain resources: the consequences are the same that Malthus envisaged, but the causes aren't physical or environmental. This is a completely new scenario that has taken the whole world by surprise. The main categories affected by this conflict were the energy sector (as for oil and gas), the derived products (such as fertilisers) and food (in particular some cereals and sunflower oil). Besides the global importance of Russia's and Ukraine's resources and raw materials - which is not the focus of this dissertation - it must be said that, according to both the European Union, the African Union and the US, this war is likely to trigger an unprecedented food crisis, fomenting unrest and protests with repercussions in the rest of the world.[235] This kind of crisis in the European continent is something that Malthus and his successors failed to consider in the world stability scenario, but the political ecology as well did not predict. Up to this moment, it seems that the only point was proving whether or not it was possible for humankind to avoid war fought over natural resources, whether induced by scarcity or abundance. However, the field literature from both sides did not envisage a future where the access over resources would depend not on the availability of resources themselves, not on global population growth, but on a country's willingness to make concessions on them. We can choose both sides to blame: on one side we have an autocratic nation with unpredictable behaviour who, in order to achieve his goals of conquest, has no moral scruples, and on the other side we have countries or groups of countries (as for the European Union) that for decades

[233] Kenny, La Danza della Peste, pp. 88-89
[234] At the time this thesis was written, Russia's invasion of Ukraine was still in progress
[235] PACCI, *Impact of Ukraine war on commodities and Africa*

chose to remain energetically dependent on an autocracy instead of focusing on the process of energy independence - that is starting now that maybe is too late - which it is convenient not just from the geopolitical point of view, but also from the ecologic point of view.

What this war made clear is that a shift to greener and diversified energy sources reduces reliance upon supplies of natural gas coming from Russia and is indeed necessary as Russia continues to be actively manipulating the gas market.[236] For these reasons we can deduce that, when our eminent President of the European Commission Ursula von der Leyen made a statement on energy in Brussels, 7 September 2022, we saw a way out of this. Starting from the REPowerEU program to invest on renewable energy sources as our energy insurance for the future, there is in part a proof against the dramatic Malthusian vision. We can state that we are not living through an endemic resource scarcity - particularly when it comes to energy resources - but a temporary lack of willingness and means to transit to safer and cheaper energy solutions. Everything is pointing to renewables as the only way to face this temporary resource scarcity.

Another point in favour of the fact that wars are not caused by a scarcity of resources, but actually cause a decrease in available resources, is given to us by the case of the First World War. At the outbreak of the First World War, all countries involved in the conflict were convinced that the war would not last long. Consequently, no government was seriously concerned with the problem of supplying the army and the civilian population in the long term. On the contrary, the war soon became a long and exhausting positional war. After the entry into the war, domestic grain production immediately began to suffer from the lack of manpower and work animals, and for this reason the national governments were obliged to reduce the quantity of meat and grain per head, because simply there was literally not enough for everyone, since all the manpower was busy fighting the war. Despite this, the limited consumption required of the population to sustain the war effort was not enough to provide the soldiers with enough food, and they often faced the hard life on the battlefield without adequate nutrition. The same happened with oil, which was essential in the battlefield and so the common use by civilians was limited.

[236] Machin, *Changing the story? The discourse of ecological modernisation in the European Union*, p. 211

3.3.1 The position of Africa

Even when conflicts are not being directly fought in Africa, there are still ways in which they can directly and irreversibly affect an entire continent. The Ukraine war is a perfect example of the power asymmetries that are generated from these conflicts.

It must be said that Africa in this case is at the same time a collateral victim and potential gainer. On one side we have an already starving continent, with many countries heavily dependent on food and energy imports from Russia; on the other side, we have African countries such as Algeria, Angola, Cameroon, Republic of Congo, Egypt, Equatorial Guinea, Libya, Mozambique, Nigeria, Senegal, Sudan, and Tanzania that produce fuel and gas and that should be benefiting from the resulting increase of prices.[237] We can say that European countries are increasingly relying on Africa's energy and critical raw materials, particularly for those who were previously imported from Russia and/or Ukraine.[238]

Analysing deeper this crisis thanks to the study conducted by the Pan African Chamber of Commerce and Industry, it is clear that Africa, at least in the very first period of the war, had a trade deficit with Russia around certain categories of resources: cereals, mineral fuels, general commodities, natural gas and fertilisers. The latter in particular caused both a sudden price surge and a drop in agricultural production. At the same time, however, the same continent that was blamed by neo-Malthusians as Robert Kaplan, in our current situation could have two positive externalities: the first one is a rise in the potential for intra-African trade in natural gas, and the second one the opportunity to increase exports to Western countries including Russia.[239] The EU in particular is increasingly interested in some critical raw materials and gas for which Africa is a major supplier. Among these critical materials that the EU desperately need are: palladium (which is used mainly to create car devices), vanadium (used in the steel industry), phosphate rock (for animal feed), aluminium, cobalt, natural graphite (used to create batteries) and titanium.[240]

However, this study is of course written from the African perspective, so it warns about the possible negative externalities that could come up from this new trade mechanism. It underlines that these opportunities are not without risks and, if not well managed, can lead to

[237] PACCI, *Impact of Ukraine war on commodities and Africa*, p. 1
[238] Ivi, p. 16
[239] Ivi, pp. 8-11
[240] Ivi, p. 12

environmental degradation, increase in local and regional conflicts, in governance issues and resource curses.[241]

It is also essential to underline how the public discourse made Ukraine completely take over news and media, overshadowing even more the endless and cruel wars that have been harassing the African continent for decades. Even before that, conflicts in Africa were not really on the front page of the newspapers - unless they had direct repercussions on the western world - but from February 2022 it got even worse, and seldom has the display of selectivity been more striking. This is not a critique of the global compassion of the Ukrainian people, which are indeed worthy of all the help, support and compassion we can have. This dissertation is aiming more to underline the power asymmetries lying beside every sort of conflict, suggesting the fact that "media mustn't forget Africa's conflicts as Ukraine dominates headlines". One fact highlighted by a journal article is that "people expect such stories out of Africa and they have compassion fatigue". This is probably due to the fact that westerners feel closer and more involved in the Ukrainian conflict, they relate more to this kind of events also because until now we were seeing our continent under the light of "fortress Europe" and it was unthinkable to envisage such kind of misfortunes in one of our neighbouring country.[242]

To conclude this section about the repercussions of Ukraine war on Africa, we can state that:

> The war in Ukraine has highlighted the immense gap between what is possible when the international community rallies behind a crisis, and the daily reality for the millions of people suffering far from the spotlight.[243]

Different crises trigger different international responses and different resource scarcity, but clearly what happens globally is completely different from what Malthus and his adherents had foreseen.

[241] Ivi, p. 16
[242] Kate Barlett, *Media mustn't forget Africa's conflicts as Ukraine dominates headlines*, "Mail & Guardian", 5.04.2022 (last accessed 27.10.2022)
[243] Wanless, Michou, Peyre-Costa et al, *The World's Most Neglected Displacement Crisis*, p. 4

CHAPTER 4: Africa

4.1 Overall African situation

As has been pointed out in previous chapters, the focal spot of this thesis is the fact that wars that should draw our attention are not only in Europe; Africa has countless ongoing acts of violence. Added to this is the price of the Russian-Ukrainian conflict on the already fragile economy of the African continent.

With a population of 1.34 billion inhabitants (the youngest on earth), 30 million square kilometres of territory abundant in natural resources and 54 countries divided in 5 major regions (Northern, Western, Central, Eastern and Southern), Africa is the second and most populated continent.[244]

The history of the African continent has always been traced by continuous challenges that beset it. From the slave trade that began between the 16th and 19th centuries to modern challenges including the covid-19 pandemic and climate disruption, it seems there has not been a single moment of peace. For the purpose of this dissertation, we must take into account particularly ongoing wars (except for Angola, which represents a focal point in the history of conflicts over African natural resources), knowing that this is not the only event type faced in the continent: riots, violence against civilians, explosions and remote violence, protests, battles are on the daily agenda. Frequent subevents that the African population faces are: mob violence, armed clash, air and drone strike, grenades, suicide bombs, sexual violence and attacks against civilians.[245] There is a common thread linking many of the countries in Africa: it seems that wherever there are natural resources in abundance, these have only brought war and suffering. The phosphates of the Western Sahara, like the diamonds of the Ivory Coast and Liberia, have proved to be a curse for the local populations; the case of Nigeria itself, as we will see, seems to confirm this sad paradox.[246]

The Italian publication of 2019 "*Atlante delle Guerre*" shows that countries at war (in Africa) are Cameroon, Chad, Libya, Mali, Niger, Nigeria, Central African Republic, Sudan,

[244] Pan African Chamber of Commerce and Industry (PACCI), *Africa's Economy In a Snapshot 2022*, p. 6
[245] Regional Overview: Africa 29 October-4 November 2022, published on ACLED website
[246] Anonym, *Approfondimento: la Nigeria e le guerre del petrolio*, in "Overland". Available: https://overland.org/approfondimento-la-nigeria-e-le-guerre-del-petrolio/ [Accessed: 29/12/2022]

Democratic Republic of Congo, Somalia, Western Sahara, South Sudan. Crisis situations, on the other side, are present in Algeria, Burkina Faso, Burundi, Ivory Coast, Ethiopia/Eritrea, Uganda, Zimbabwe.[247] According to Acled there are 12 countries that have exceeded the threshold of 1,000 deaths due to armed violence from 1 January 2021 to 8 April 2022: Nigeria (10,584), Ethiopia (8,786), Democratic Republic of Congo (5,725), Somalia (3,523), Burkina Faso (2,943), Mali (2,344), South Sudan (2,160), Central African Republic (1,801), Sudan (1,342), Niger (1,324), Mozambique (1,276), Cameroon (1,141).[248] From this analysis it emerges that the majority of these conflicts are internal and not inter-state, but with the influence of other countries concerning the access over resources and investing directly in the area of interest.

It is always difficult to try to summarise the complexity of the causes that lead to conflict situations, especially with reference to the situation of the 54 independent states that make up, with their structural differences, the African continent. However, there is no doubt that behind many wars in Africa there is the issue of land control, environmental destruction, the power of the few and the poverty of the majority. More generally, at the heart of many problems that affect Africans is the issue of the unsatisfactory governance (i.e., the articulated and democratic system of decision-making that determines political decisions) of land and the vast natural resources associated with it, on which the livelihoods of the majority of the African population are based.[249]

Besides conflicts between different ethnic groups - which are often described by the media as the main cause of conflicts in Africa - there is the practice of land grabbing, often perpetrated by powerful actors such as states or multinational corporations to the detriment of vulnerable communities. It is no coincidence that among the 10 countries most affected by this practice, most are in Africa: Democratic Republic of Congo, South Sudan, Mozambique and Liberia. Land grabbing creates a chain reaction of crises: agri-food, environmental (reducing soil biodiversity) as well as serious violations of the human rights of entire communities. The role of external players remained even during post-colonialism, largely certainly due to the fact that borders were drawn almost with a ruler, which was a big mistake by the big international players and had an extremely negative impact. Predatory contemporary states include the

[247] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, p. 37
[248] Degl'Innocenti, *Non solo Ucraina*
[249] Marco Zupi, *In Africa, guerre sempre più dimenticate*, in "Mondopoli", 23.11.2022. Available: http://www.mondopoli.it/2022/11/23/in-africa-guerre-sempre-piu-dimenticate/ [Accessed: 1st January 2023]

United States, Great Britain, the Netherlands, emerging countries (BRICS) such as China, India and Brazil, and some oil states such as the United Arab Emirates. China in particular is increasingly playing a leading role on the Continent. It is now clear that the investments are not leading to widespread prosperity, in fact, the scissor of economic inequality tends to widen. The areas most affected by the phenomenon are West Africa and the Sahel. In Nigeria, the worst peaks, with five people who, together, have more wealth than the entire state budget.[250]

Today's incongruities and inequities in the distribution of power over nature (human, animal, plant and mineral) are mostly the result of relatively recent historical trends in human history - colonisation, political de-colonisation and economic recolonisation of non-European countries - but they should not be simplistically reduced to a separation between "First Worlds" and "Third World"', as they involve contemporary societies across the board, and everywhere produce forms of marginality in which anthropologists are particularly interested. Indeed, it is from these contexts that in some cases new forms of cultural resistance and hybridisation and new socio-environmental articulations emerge.[251] Several economists, such as Daron Acemoglu and James Robinson, authors of the well-known analysis "Why Nations Fail" strongly believe that the impact of colonial diseases might explain a huge part of the now existing gaps between rich and poor nations. The reason would be that in places where settlers were in danger of dying in a short time from infections, institutions were set up that allowed small elites to quickly grab money. These institutions survived decolonisation and fostered the emergence of inequalities that later festered. Harvard economist Nathan Nunn has shown that "the poorest African countries today are those from which the largest number of slaves were taken".[252]

The history of the conditions of political-economic and environmental vulnerability of certain populations and regimes is also very important. Paradoxically, environmental and resource wars are not exclusively related to ecological degradation, as is most often mentioned in these analyses, but rather to a transformation of the socio-ecological landscape, whether positive or negative.[253]

Africa has an abundance of natural resources. The table underneath shows what percentage it holds of the global deposits of the most sought-after minerals. Of coltan, indispensable in any

[250] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, pp. 40-41
[251] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 7
[252] Kenny, *La Danza della Peste*, p. 64
[253] Le Billon, *Matières premières, violences et conflits armés*, p. 302

digital device, it holds as much as 80% of the world's reserves. But this has not facilitated the geopolitical, economic and social development of African populations.

Natural resources mined	% of African reserves in relation to world reserves
Copper	97 %
Coltan	80 %
Cobalt	50 %
Gold	57 %
Iron	20 %
Uranium and Phosphates	23 %
Manganese	32 %
Vanadium	41 %
Platinum	49 %
Diamonds	60 %
Oil	14

[254]

Another decisive point around African history is its endowment of oil and its submerse effects on war and conflict: in the African continent are present numerous oil-rich, war-torn countries, whose future has been severely impacted upon as a result of this natural resource.[255] Many post-cold-war civil wars reinforced this theory, such as in Sierra Leone, Liberia, Côte d'Ivoire, Republic of Congo, Chad, the Democratic Republic of Congo, and the insurgency in Nigeria's oil-rich Niger Delta region. These wars were specifically labelled according to the natural resources for which the conflict was taking place: conflicts over 'diamonds', 'oil', 'timber' or 'cocoa'.[256] About oil, it is fascinating to notice that Africa holds only a modest part (less than 10%) of the world's known oil reserves (while the world's largest oil reserve is in Venezuela, home to around 18% of the total crude oil on earth), but still has assumed critical importance in the context of a tight global oil market in the wake of increased global demand. number of significant oil finds to replace rapidly depleting oil fields across the world. African leading oil producers include Nigeria, Angola, Sudan, Algeria, Republic of Congo, Chad, Libya, Equatorial Guinea and Gabon.[257] With regard to the granting of contracts, the transfer of natural resources by the state in favour of transnational oil companies, represents a form of "accumulation through expropriation". These concessions outline the conditions under which

[254] Anonym, *Africa: risorse naturali e realtà geopolitiche*
[255] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, p. 60
[256] Obi, *Oil as the 'curse' of Conflict in Africa*, p. 484
[257] Ivi, p. 485

capital has access to land - or exclusive economic zones at sea - for purposes of production and accumulation.[258]

Besides oil, another "trigger" resource in Africa is diamonds, which raises the question of whether there is a diamond curse as well. Diamond producing countries that have experienced wars during the 1990s include six of the eight most diamond-dependent countries in the world, all of them in sub-Saharan Africa, with Angola, Sierra Leone, and the Democratic Republic of the Congo being the countries reported to be most affected by recent diamond wars.[259] Behind the marketing slogan of "diamonds are the girls' best friend" there is the real history of diamonds are also the "best friends" of belligerents which bring ruin to countries such as Angola, D.R. Congo, or Sierra Leone. However, the role played by diamond extraction and revenues in contemporary African conflicts not only it is not unique nor recent, but on the contrary is inscribed in the long succession of extraction of "resources" bringing together networks of local elites, transborder commercial agents, and global markets, to export slaves and economically valuable resources (such as rubber, timber, coffee, minerals, petroleum, or diamonds).[260] In general, we can state that mining concessions allow the state to accumulate the rents obtained through the exploitation of resources.

Studies show that there is little evidence that the so-called diamond wars directly emerged from lived experiences and social relations in diamond mining areas, but besides that it is true that the diamond sector was frequently facing conflicts and other forms of violence, especially between (and within) local communities, migrant workers, companies, and authorities. The diamond sector also contributes to increased hostilities both financially (because diamonds are a source of revenue) and discursively (diamond-related grievances as sources of rebellion justification).[261]

We will now divide the African continent into the five aforementioned regions in order to classify geographically the problems related to natural resources and the so-called "resource wars". Among these five regions, one is not taken into consideration during this dissertation: Northern Africa. This is because North Africa is an economically prosperous area, generating

[258] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 51
[259] Le Billon, *Diamond Wars?*, p. 350
[260] Le Billon, *The political ecology of war*, pp. 555-556
[261] Le Billon, *Diamond Wars?*, p. 365

one-third of Africa's total GDP and the conflicts that its countries are facing are not directly linked to natural resources.[262]

The underlying question is: how are conflicts, asymmetric power relations, land rights and cultural belief systems connected?

[262] PACCI, *Africa's Economy In a Snapshot 2022*, p. 7

4.2 Western Africa: Nigeria

In the West Africa region are 16 countries: Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo.[263]

Nigeria is one between the most important case studies when it comes to the relationship between conflicts and natural resources, since it is the United States fourth largest exporter of crude oil but at the same time is facing an ever-worsening militant situation in the region of the Niger Delta, home to at least a quarter of Nigeria's total petroleum output. The nation suffered decades of national government corruption, bad governance, unemployment, insecurity, and a total indifference to poverty reduction, which have all become key conflict triggers that underlie much of the anger and resentment in the Delta. Historically speaking, in fact, the people in the Niger Delta have always been at the mercy of greedy outsiders who plunder their natural resources without giving them anything in return, from the days of slavery to the present day, proving the theory according to which resources are not scarce but they are desired by the elite who doesn't care about the civilian population. Besides this, not only do the inhabitants have to live in extreme poverty but they also have to suffer the depreciation due to environmental degradation caused by oil spillage. Not surprisingly, the World Wildlife Fund considers that it is one of the most polluted places on earth.[264] The Niger delta is a very complex ecosystem that hosts one of the highest concentrations of biodiversity in the world; most of Nigeria's oil reserves are located in its subsoil. The inhabitants of the delta live in extreme poverty despite the great wealth produced here, while their land becomes uncultivable due to pollution or is expropriated and given to foreign corporations. The resentment of the people of the delta has found violent expression in the armed struggle: the Movement for the Emancipation of the Niger Delta tries to block oil extraction by sabotaging pipelines, attacking mining infrastructure and seizing the personnel of foreign corporations; clashes with the Nigerian army are the order of the day.[265]

Just as Nigeria is a patchwork of ethnicities, languages and religions, it has as well different reasons for fighting. In the North-East (Borno State and neighbouring states) clashes and attacks are always due to the presence of Islamic terrorists. In the Middle Belt, tensions and

[263] PACCI, *Africa's Economy In a Snapshot 2022*, p. 17
[264] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, pp. 67-68
[265] Anonym, *Approfondimento: la Nigeria e le guerre del petrolio*

violence are caused by the clash between farmers and farming communities. And again, in the Niger Delta - the oil region - guerrilla activity by rebel groups fighting the domination of the extraction companies continues, while sporadic episodes of rebellion and consequent repression occur in Biafra, due to claims of independence. But that is not all. A further worrying element is the general growth of crime, more or less organised, throughout the country, especially in the large and overpopulated cities (such as the megalopolis Lagos) which make the country very dangerous to live in. In fact, the Global Terrorism Index 2018 study shows that Nigeria is the African country where terrorism has hit the most, ranking third in the world after Iraq and Afghanistan. A good sign is that the election on 23 February 2019 - which led to Muhammadu Buhari's second term in office - also took place peacefully and without any particular contestation. It means that the days of continuous coups and military regimes are far behind us. This does not mean, however, that Nigeria's problems are few and far between, nor easy to solve. Nodes that, in one way or another, have many roots in its colonial history. Nigeria is a federation of states created in 1914 by the British colonialists who, at the end of the colonial era, drew its borders according to their own interests. Although Nigeria is the leading oil producer on the African continent and the eighth in the world, it is a poor country and - as is often said - its wealth has turned into a sort of curse: 70% of its inhabitants live below the poverty line, life expectancy is 53 years, more than a third of the population is illiterate, 42% have no access to drinking water, and infant mortality under the age of five is at a record 143 per thousand. Yet, the country is rich in natural resources: oil and petroleum products (which account for 95% of exports) natural gas, tin, iron materials, coal, limestone, niobium, lead, zinc. In agriculture, it has good ground for cocoa, groundnuts, palm oil, maize, rice, sorghum, millet, cassava, yam and rubber. The country raises and exports cattle, sheep, goats, pigs. The extreme heterogeneity of cultures, economies, history, languages, climatic-environmental realities and religions makes it difficult to develop a strong sense of national identity. Nigeria is considered one of Africa's giants not so much for its economic strength as for its population concentration - now approaching 200 million inhabitants in a relatively small territory - and for its crude oil reserves, for which it ranks among the world's top ten producers and contends for the African record with Angola. It is in the last twenty years, with the advent of democracy, that the country's main contradictions have erupted. The first of which is the oil issue: in the face of the enormous revenues from crude oil extraction concessions (which constitute the largest exported commodity, 80% of tax revenues and 40% of GDP), the vast majority of the Nigerian

population (70%) lives on less than one euro a day, and the Niger Delta, the country's oil-producing area, is one of the poorest regions.[266]

Of course, the Nigerian conflict raised the issue of resource curse, with the conclusion that in this case oil blocks democracy by promoting corruption and violent conflict. Again, this theory is quite limited, and it does not take into account all factors, including well-established grievances in the Delta region which were present way before oil became a significant factor in the Nigerian economy. It was rather the oil elites who fuelled conflicts between groups.[267]

The transnational nature of extractive oil actors operating in oil-producing areas such as the Niger Delta points out the issue that the global political economy plays a defining role in power and social relations around oil and its curse,[268] and this proves at the same time that wars, violence and conflicts exist when there is an abundance of resources that might degenerate in a resource curse. Thus, local people have justifiable anger at the inequalities attributed to the oil economy which has led numbers of people from the communities in the oil region to protest against the exploitation of what they see as “their" oil - even if the constitution provides that all oil is owned by the Federal Government - without benefit to them or compensation for the damage done to their lands and livelihoods. What is clear is that unless the government and the oil companies change their basic attitude towards the population in the Niger Delta, conflict and litigation are bound to remain.[269] Since these 'benefits' remain, for the most part, vague or unfulfilled promises, it is not surprising that the discontent of the people living in the mining areas can lead to protests or sabotage actions against those who, locally, are more often perceived as usurpers than benefactors.[270]

Moreover, as long as the oil keeps burning, as long as foreign company employees are held hostage in this area and as long as oil platforms are attacked, exporting black gold from Nigeria, which has the largest petroleum reserves, will remain an endless fight. Indeed, the volatility of oil regions like Nigeria are one of the key reasons that oil prices have risen so dramatically worldwide.[271]

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[266] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, p. 64-65
[267] Obi, *Oil as the ‘curse’ of Conflict in Africa*, p. 490
[268] Ivi, p. 487
[269] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, pp. 69-70
[270] Rossi e D’Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 25
[271] Follath, *The Coming Conflict: Natural Resources are Fuelling a New Cold War*, in “Spiegel International”

Nigerians will vote in 2023 within a context of economic, environmental, and security challenges. The Armed Conflict Location & Event Data Project (ACLED) stresses that many regions are confronted with general and perpetual insecurity. The northern states are marked by long-standing conflicts, with violent jihadist groups, criminal gangs, and other armed groups engaging in deadly attacks against local communities. In the south, civil unrest continues against the backdrop of ongoing violence between farmers and herders as well as insurgent campaigns. Additionally, as campaigning for national and state elections approaches, large rallies could heighten existing security challenges and exacerbate partisan and factional tensions. Taken together, ongoing instability across Nigeria is likely to affect the conduct of the upcoming elections.[272]

4.3 Central Africa: Central African Republic and Democratic Republic of Congo

The Central African region has nine countries: Burundi, Cameroon, Central African Republic, Chad, Congo Republic - Brazzaville, Democratic Republic of Congo, Equatorial Guinea, Gabon, and São Tomé & Principe. Oil is the main export, but this area is rich in other resources such as copper, wood, cocoa, bananas, and diamonds. The huge number of hydrocarbons (oil and gas) and minerals (diamond, copper, iron, manganese, cobalt, etc.) make it one of the richest regions of the continent, but unfortunately this wealth is not evenly distributed among the population, as we will see with the two case study.[273]

4.3.1 Central African Republic

The Central African Republic (CAR) is among the poorest and most underdeveloped states in the world, yet - but this is also the case for many other African countries - it was provided with a vast amount of different raw materials, both soil and subsoil. Not only timber from the forests that cover a large part of the territory, but also diamonds, gold, oil, uranium. Goods that are interesting for international powers, which not surprisingly vie for the support of the local

[272] ACLED Nigeria Election Violence Tracker. Available at: https://acleddata.com/nigeria-election-violence-tracker/
[273] PACCI, *Africa's Economy In a Snapshot 2022*, p. 34

government: France and China, but also Iran (interested in uranium) and the new entry Russia are the main players, often acting with the local support of Chad and Sudan. Certainly, the presence of foreign powers is making the pacification of the country more difficult and the start, at last, of a new peaceful season. The commission of enquiry of the Central African Republic's parliament described gold mining in the Bozoum area as an ecological disaster. The mining operation in the absence of protection would in fact have ended up poisoning the Ouham river and endangering the health of local communities, the poorest. The conclusions of the investigation recommended 'an immediate stop' to the activities of four gold mines operated by Chinese companies. According to the committee, it is possible that the mining concessions were obtained illegally or that there are tax irregularities. The report points out that an average monthly production for each site of between 400 grams and one kilogram is incompatible with the declared daily costs. The investigation also came about thanks to reports from Carmelite missionary Aurelio Gazzera, who had long denounced the environmental damage and illegal trade in gold. On 27 April 2019, the cleric had been stopped by soldiers engaged in checking the mines, because he was taking photos documenting the havoc. Crime and the clandestine trade in diamonds (the country's second largest export item) add to the already dramatic internal situation in Central Africa.[274] Despite the fact that many neo-Malthusian theories often tend to attribute the cause of the many wars in Africa to ethnic-religious discrepancies, in the case of the Central African Republic, the reasons for this war are attributable neither to ethnic rivalries nor, even less, to religious issues. These factors have in fact had little if any relevance in the Central African Republic's past.[275]

The ecosystem of armed groups remains fundamentally open for three main reasons. First, in a political space characterised by extreme poverty and the inversion of the social contract, the business conflict model of armed groups is very attractive, even to political actors and communities seeking protection and livelihoods. It is a self-sustaining model as insecurity becomes an economic resource. Secondly, while the relationship between government and armed groups is often portrayed antagonistically, it actually contains areas of cooperation. Third, the actors who should contain and combat this business model of conflict, namely

[274] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, p. 68
[275] Anonym, *Repubblica Centrafricana*, in "Atlante delle Guerre e dei Conflitti nel Mondo", 11/11/2021. Available: https://www.atlanteguerre.it/conflict/repubblica-centrafricana/ [Accessed: 27/12/2022]

foreign powers and peacekeepers, are pursuing a policy that tacitly or explicitly encourages it.[276]

4.3.2 Democratic Republic of Congo

While formally the Democratic Republic of Congo is no longer at war, the east remains prey to hundreds of armed groups, many of which are local gangs linked to the control of a territory and its resources. However, there are also more structured militias, often backed by foreign interests, that destabilise certain areas.

DR Congo is one of the richest countries in the world in terms of natural resources, which is why it is a battlefield and a land of conquest for the wildest appetites. Yet this is not enough to explain the conflict that has dragged on for twenty-five years now. A perverse interweaving of greed, corruption, illegality, malapolitics and ethnicism creates an explosive mix that is difficult to solve. The fulcrum is still the dispute for control of the rich territory, particularly in the East, on the border with Burundi, Rwanda and Uganda, but it goes beyond the mere exploitation of subsoil resources: it is truly a geopolitical battle with no holds barred. In the foreground, DR Congo and its uncomfortable neighbours, but in the background the great powers, the United States and France on the one hand, China on the other, are moving. At the beginning of 2021, the European regulation governing the purchase of '3tg' throughout the EU came into force: companies are bound by due diligence, i.e., the duty to ascertain the origin of minerals. If the place of origin is at risk, like the DRC, the importer is obliged to indicate the mine, place of processing and taxes paid. Still unregulated is the mining and marketing of cobalt, the blue gold, essential among other things for the electric mobility of the green revolution.[277]

The use of rare minerals involves the exploitation of deposits that - as in the case of coltan - are not infrequently found in conflict zones. Their extraction is therefore by no means a politically neutral action. Thanks to its special physico-chemical properties, coltan lends itself to the production of miniaturised electronic components, just like those that are part of the latest

[276] Ibidem
[277] Anonym, *Repubblica Democratica del Congo*, in "Atlante delle Guerre e dei Conflitti nel Mondo", 11/11/2021. Available: https://www.atlanteguerre.it/conflict/repubblica-democratica-del-congo/ [Accessed: 27/12/2022]

generation of mobile phones, reducing their weight and size. However, the main deposits of this mineral are found in Africa and, above all, in the Democratic Republic of Congo on the border with Rwanda. This African region has been a conflict zone for several years. The local repercussions in the Democratic Republic of Congo Are devastating: the country is extremely rich in raw materials, but continually ravaged by violent conflicts in which the question of access to and management of resources continues to play a decisive role in the very outcome of the conflict.[278]

The DR Congo is at the same time "a geological scandal" for what it fights over because of the inordinate abundance of raw materials it possesses both on the ground and underground, and a political and social scandal that the very riches of raw materials are the constant cause of wars, violence, tensions and immense suffering of the population. The country constantly faced an uninterrupted series of conflicts - national, regional, local - that has lasted since 1994 onwards (but even before that, during all the years of mobutism, from 1965 to 1997, clashes and insurrections had been frequent). The issue is always the hoarding and control of its natural riches: diamonds, coltan, gold, cobalt, copper, niobium, but also precious timber, a heritage of biodiversity, the vastness of arable land. An immense heritage that has always triggered international appetites and internal power struggles. Once the phase of election-related tensions is over all the old hotbeds of guerrilla warfare remain, to which new 'low-tension' conflicts are being added: in the regions of Kasai, Ituri and North Kivu (where there is also an ongoing Ebola epidemic), South Kivu, and Katanga. Not to mention the repression and violence of the many armed gangs and the government army. DR Congo seems to be one of the worst 'damned places on the planet', with no peace and no indicators of improvement in the living conditions of its inhabitants.

The problems are still unresolved. The hotbeds of guerrilla warfare persist, as does the climate of generalised violence, the plundering of resources and the extremely high levels of corruption. In this bleak picture, the data presented by the DR Congo are, consequently, very negative: 71% of the population lives below the poverty level, infant deaths under the age of five are 94.3 per thousand births, average life expectancy is 57.7 years, and almost a quarter of Congolese over the age of 15 are illiterate. Moreover, only 28.7 percent of the Congolese have access to adequate health services and 52.4 percent to drinking water. On the environmental side, too, the situation is worrying. In the Congo Basin Forest alone (the second largest on the

[278] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 23

planet after the Amazon) 11.4 million hectares have been cleared (end of 2018 figures), and a study published in Science advances that two-thirds of the trees have been cut down to make way for small agricultural plots. Another serious problem is land grabbing, i.e. the grabbing of land by foreign companies and large multinationals: DR Congo is the country most affected by this phenomenon (just as Africa is the continent that suffers the most). According to Land Matrix, agreements have been signed with foreign investors for more than 5.2 million hectares of land (the second largest African country in terms of arable land is Mozambique, with about 3 million hectares), which make up 20% of DR Congo's territory (more than half of which is forest).[279]

4.4 Eastern Africa: South Sudan

The 14 countries of the Eastern African region are South Sudan, Sudan, Comoros, Djibouti, Ethiopia, Eritrea, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, Tanzania, and Uganda.[280]

South Sudan is the world's youngest state and for this reason its place in international and regional balances is yet to be defined.

South Sudan was born on 9 July 2011 following a referendum. Two years later, in December 2013, it plunged into one of the bloodiest civil wars ever seen. Initially, the opposing fronts were those of President Salva Kiir and his former deputy Riek Machar, respectively from the Dinka and Nuer ethnic groups, the most numerous in South Sudan. These war fronts remain the main ones, to which are added other ethnic groups and control of portions of territory throughout the country. When Sudan was united, the main wealth, namely crude oil, had an outlet, the Port Sudan terminal on the Red Sea and the Khartoum Regime's pipelines that transported it. Today, South Sudan risks being an oil bubble in the middle of Africa without terminals, investments, equipment and technology to exploit that enormous wealth, since oil represents 98% of the budget of the State. This is the main economic stake of the war, to which is added the water resources of the Blue Nile and the precious teak wood.[281]

[279] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, p. 72
[280] PACCI, *Africa's Economy In a Snapshot 2022*, p. 44
[281] Anonym, *Sudan del Sud*, in "Atlante delle Guerre e dei Conflitti nel Mondo", 10/11/2021. Available: https://www.atlanteguerre.it/conflict/sudan-del-sud/ [Accessed: 28/12/2022]

It takes terminals, investment, equipment, technology to exploit that enormous wealth. Who will provide them? This is the main economic stake of the war. The interests of regional powers (Uganda, Kenya, Sudan) clash and confront each other on this issue and, in many cases, try to influence the outcome of the conflict. The other major issue at stake is the water of the great river Nile on which a game is being played between all the powers overlooking its basin, starting with Ethiopia, which has built the great Rebirth Dam on the Blue Nile that will change the flow of water towards Egypt, a country that cannot give up the precious water that, since the time of the pharaohs, has fed the civilisations that have succeeded one another in this region. Born with a referendum in 2011 and only two years later engulfed by civil war, the country has many unfinished accounts: internal ones disrupted by the conflict between factions and those concerning the question of its borders with its northern neighbour, Sudan, but also with Uganda where borders and possession of oil sites are in dispute. All knots pregnant with tension and possible new conflicts. Its young memory is already full of horrors. As for the country's economic situation, it is totally dependent on oil. 85% of the crude oil reserves, with the splitting into two of Greater Sudan, remained in the south and the extraction capacity is about 350,000 barrels per day. But the only usable oil pipelines, built before independence, are those running through the north. The dispute over the 'right of way', for which Khartoum demanded a hefty price, led the southern government to stop extraction from January 2012 until March 2013, when it resumed following a new agreement with Khartoum. But that year, without any cruder oil revenue, plunged the already impoverished country into a deep economic crisis, which was one of the preconditions for the outbreak of civil war in late 2013. The issue has never been definitively settled since then, and social indicators reflect this. South Sudan, which has an annual population growth of 3.83% (2017 estimate) and a fertility rate per woman of 5 children, has a life expectancy of only 56 years and an infant mortality rate (under 5 years) of 92.6 children per thousand births. Illiteracy (over 15 years) is 69% while only 5 out of every 100 children have completed primary school. HIV prevalence is also high, reaching (2016 estimates) 2.7 per cent. Access to adequate health services is very low and that is to less than 7 percent of the population while access to drinking water is only 58.7 percent which means that almost half of the Sudanese population drinks contaminated water.[282]

After eight years of war, South Sudan is in the hands of a military elite that controls the resources and massacres the population. What at first could be described as a Dinka-Nuer conflict is now no longer just that. Somalisation of territory is what characterises this war.

[282] Crocco, *Atlante delle Guerre e dei Conflitti nel mondo*, p. 88-89

Armed groups control portions of territory and only ideally refer to the two main warring parties. A war within a war then, which is not so easily defined. One finds more and more villages attacked without knowing by whom and why, with those extreme forms of violence typical of this conflict: mass killings, including women and children, mutilation, rape.[283]

4.5 Southern Africa: Angola

The Southern African region is made of 10 countries: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe. These countries have strong economies based mainly on services and industry, including construction.[284]

In this section we will examine the significance of the political economic situation of two valuable resources (oil and diamonds) for the course of the Angolan conflict, which exemplify to the fullest text of Angola's duality of wealth and misery.

The history of Angola's resources endowment, wealth, exploitation and conflicts has a long history dating back over 500 years, from colonialism until the modern industrial economy and it concerns mostly two types of goods: oil and diamonds, in particular globally scarce diamonds. Despite all this, can Angola's situation be characterised as resource war? The usual definition of resource war is that of "an armed conflict waged to control valuable natural resources". It is important to bear in mind that even though resource control may be among the driving factors of a conflict, wars are extremely complex and cannot simply be reduced to this connection.[285]

Angolan war broke out immediately after decolonisation, also achieved after a conflict fought with Portugal, the Angolan War of Independence (1961 - 1974) together with a military coup in Portugal (1974) which led the Portuguese colonial government to leave. A bitter and seemingly interminable civil war replaced the war for liberation from Portuguese colonisation. In January 1975 the three independent rebel groups signed the Alvor agreements, which provided for a joint interim government between the three groups and the creation of an integrated national army. These three groups were the Popular Movement for the Liberation of

[283] Anonym, *Sudan del Sud*
[284] PACCI, *Africa's Economy In a Snapshot 2022*, p. 61
[285] Le Billon, *The Geopolitical Economy of Resource Wars*, p. 21-22

Angola (MPLA), the National Union for the Total Independence of Angola (UNITA), and the Front for the National Liberation of Angola (FNLA). Unfortunately, the agreement rapidly collapsed, leading each party to pursue a hegemonic agenda which resulted in a full-scale war between the factions, and at that point the MPLA seized control, engaging the other factions whilst declaring the birth of the People's Republic of Angola in November 1975. The civil war, from 1975 until 2002, was essentially a power struggle between two liberal factions, the Popular Movement for the Liberation of Angola and the National Union for the Total Independence of Angola.[286]

The 27 years of Angolan civil war were a combination of violent dynamics within the country to which a strong intervention by foreign powers contributed as well. In particular throughout the early part of the confrontation, until the fall of the Soviet Union, the strategic and economic importance of the area, as well as other African territories, in the confrontation between the two major blocs of the Cold War remained evident. The conflict became a confrontation between the US and USSR together with their respective allies, who provided strong military assistance to the warring parties.[287]

In Angola, the oil boom has made the situation even more difficult for those who lived in the mining areas and struggled to survive. Between 2007 and 2008, the value of Angolan oil exports exceeded one hundred billion dollars. All sources analysed around the subject of Angola agree on the fact that despite all its oil and diamond deposits, and despite its considerable resource endowment, the country is situated at the bottom of every development index (the fifteenth most underdeveloped country), and the World Bank highlights that approximately 70% of the population live on less than 2 dollars a day, while one in four children die before their fifth birthday.[288] [289] [290] This might in part prove the resource curse thesis, but as we already saw this interpretation is not only unhelpful to the investigation, but even leads to the exclusion of the hand in man from the act of destroying entire geographical areas and with them entire communities. Moreover, in Angola the war and crisis were used by the elites

[286] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, pp. 63
[287] Philippe le Billon, *Angola's Political Economy of War: The Role of Oil and Diamonds*, in "African Affairs", Vol. 100, No. 398, 2001, pp. 61-64
[288] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, p. 62
[289] Frynas and Wood, *Oil & War in Angola*, p. 587
[290] Billon, *Angola's Political Economy of War*, p. 57

to justify economic underdevelopment, corruption and lack of accountability of political institutions.[291]

It's true that, according to the resource curse theory, oil revenues gave concrete means to directly finance war making at the same time peace a distant prospect, but it is also true that oil companies influenced Angola's political economy in a much more straightforward way. They directly financed the government's clientelist network, serving business interests through promoting rational business strategies.[292]

The majority of Angolans still live in poverty, and of these, 28% live in extreme poverty in the overgrown slums of the derelict capital city, while the country is the second largest sub-Saharan oil producer and the fourth diamond producer by value.[293] The distribution of the costs and benefits of Angolan oil production is unequal. Corruption, pollution and conflicts are not mere externalities that flow uncontrolled from the Angolan oil sector. These are a reflection of a calculated patronage network, exemption from environmental regulations and state-sponsored violence, in other words, tools that the ruling party in Angola - the Movimento Popular de Libertação de Angola - uses, strategically, to accumulate oil wealth and to maintain control over this resource. Oil production has contributed to Angola's outstanding economic growth (oil accounts for 95% of Angola's exports), however, it does not account for the extreme economic inequality in a country where four million people - a quarter of the population - live on less than a dollar per day. The 'resource curse' theory, although proven correct in some respects, tends to obscure the agency of the state by treating oil as a mythological force that weakens state institutions and corrupts governments. The 27 years of conflict have ruined the Angolan economy, with the exception of the island oil sector, which operates mainly offshore. Capital does not flow evenly in Angola; on the contrary, it leaps into the exploitable spaces, and flies over the non-exploitable areas. This phenomenon causes clearly visible contrasts in the extractive areas.[294] The MPLA also used its position to steal oil revenues in order to expand the party's influence and reward its most loyal allies. Between 1997 and 2002, $4.2 billion from oil revenues 'disappeared' from state vaults and reappeared in the personal accounts of some MLA leaders in Luxembourg, the Cayman Islands and Switzerland. The missing portion exceeded the amount spent on social services during that same period by about $800,000. Once

[291] Frynas and Wood, *Oil & War in Angola*, p. 596
[292] Ivi, p. 598
[293] Philippe le Billon, *Angola's Political Economy of War*, p. 57
[294] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 49

the scandal came to light, the workers of humanitarian organisations that were responsible for feeding one million malnourished Angolans criticised the government for refusing to contribute to a basic needs fund estimated at $233 million, a sum equivalent to three weeks' revenues from oil extraction.[295]

The 'resource curse' theory tends to obscure the agentivity of the state by treating oil as a mythological force that weakens state institutions and corrupts governments. If oil were truly a 'cursed resource' it would take a sorcerer to solve its ills. By recognising the MPLA as a capable and resolute agent, this section therefore seeks to foster the politics of accountability needed in Angola to reform the right to access and distribute the benefits obtained from resources, and to prove that in Angola, economic and social inequality is not a by-product of a curse but is the result of carefully managed patronage networks.[296]

Cabinda is the northernmost province of Angola but is separated from the rest of the country by a small strip of the Democratic Republic of Congo. Many Cabindans believe that oil is the reason behind the territory's annexation to Angola in 1975 and its subsequent militarisation in 2002. They attribute a myriad of ills to oil: physical insecurity, failed promises of development, inadequate environmental ordinances, and even the loss of agricultural crops. For them, Cabinda's wealth of natural resources is like a curse.[297]

With regard to diamonds, on the other hand, Angola has two types: as alluvial deposits and as kimberlite deposits, the former necessitating relatively little input for exploitation and the latter requiring a high level of investment. Just as oil is key to the government, diamonds have a unique and essential role within UNITA's political and military economy. One thing that makes the diamond market different from the oil market is that they are more difficult to integrate in a formal trade economy controlled by the state, and for this reason since the late 1970s they have been an important source of revenue for UNITA. Another thing that makes the diamond sector different is that unlike the oil industry it employs a large labour force that also includes many migrant workers.[298] The diamond sector benefited not only UNITA and foreign companies, but also army generals and members of the MPLA elite, without helping the local struggles, but rather worsening them.[299]

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[295] Rossi e D'Angelo, *Antropologia, Risorse e Conflitti Ambientali*, p. 52
[296] Ivi, p. 50-54
[297] Ivi, pp. 49-50
[298] Billon, *Angola's Political Economy of War*, p. 67
[299] Ivi, p. 70

Also, foreign firms and individuals contributed actively in supporting the war in Angola, in order to obtain oil and high-value minerals. This happened for instance with the British firm Lonrho, under the control of Tiny Rowland, who provided direct financial and logistical assistance to UNITA. Glencore, an Anglo-Swiss multinational mining and commodities trading company, facilitated oil-backed loans for the purchase of arms. The final goal of all these deals was to gain access to oil resources.[300]

In addition to firms such as Lonrho and Glencore, there was also the involvement of private security firms, international arm traders and private individuals with connection to defence industry or foreign security services, which were all very competitives.[301]

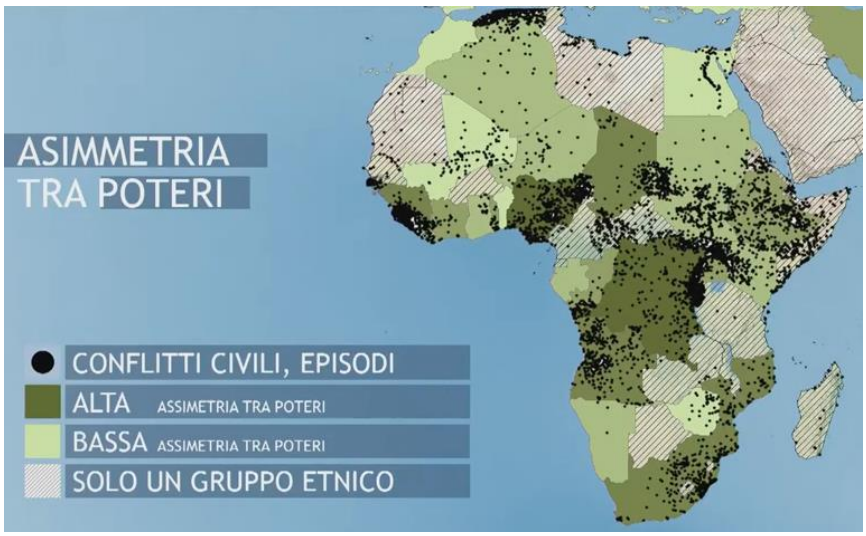
According to Philippe Le Billon, more resources lead to more war, and consequently to more suffering for the people. Indeed, while commentators from outside Angola see in a positive light the great economic potential of the country "blessed by the wealth of its natural resource endowment", the population cannot but question this blessing by the contrast between this wealth and the poverty and despair of most Angolans.[302]

The Angolan example is perfect to describe the process whereby conflicts occur precisely in areas marked by such strong inequality of control over resources compared to military inequality.

Areas with high inequality in the concentration of resources (orange areas) are highly correlated with the incidence of conflict (black dots on the map). But in civil wars what really matters is

[300] Frynas and Wood, *Oil & War in Angola*, p. 599
[301] Ivi, p. 600
[302] Le Billon, *The Geopolitical Economy of Resource Wars*, p. 21

political inequality, whether those in power want to distribute resources by exploiting minorities or democratically. In a context of civil war, governmental decisions and the type of democracy matter. The mismatch between political-economic power on the one hand and military power on the other counts. Angola gives an idea of this mismatch: in areas where the majority ethnic groups are more displaced (thus having greater political-economic inequality) than the dominant group in the government area. In these areas, mismatch is at its highest, which has led to the prolonged civil war in the country. This evidence is not just for Angola, but it can be extended all over the African continent: areas with great asymmetry between powers overlap with areas most affected by conflicts.[303]



[303] MEETmeTONIGHT - Notte dei Ricercatori, *Conflitti e risorse naturali*

In the map above, we see the graphical representation of the area with high power asymmetry (dark green) and the incidence of conflicts (the black dots) and as aforementioned, the trend is the same in Angola as well as in all the African continent.[304]

Another important interaction between inequalities is the comparison between political inequality in terms of mismatch and inequality in terms of income. In contrast to the inequality of political power over the control of resources, inequality in terms of income does not seem to have much influence on the triggering of conflicts. Thus, inequality in terms of resource concentration and the exploitation of minorities remain influential. When we look at the additional variable of the interaction between resource concentration and political and military mismatch, we see that this interaction certainly generates closely related conflicts.[305]

For ages Angola's economy relied on the extraction of raw materials and resources, starting from slaves until oil and diamonds in more modern times. Without a solid industrial base, such wealth can only come from the direct implication in the natural resources sectors, or indirectly via the state which distributes natural resource revenues. In Angola, the state was and still is in a position where it could easily monopolise wealth, having a particularly narrow social base but yet has to sate the voracious demands of an albeit, small parasitic state bourgeoisie.[306]

Globalisation as well has to do with conflicts. People only think about the economic repercussions of it, instead it also has an impact on the conflict map. With more access to free markets, state gains increase, so from the perspective of inter-state wars, the incentive for war decreases: if two states gain much more than before from the possibility of trade, then the opportunity cost of inter-state war increases. But civil wars become more likely, because the availability of greater gains from trade in gains-from-trade means that the pie to be divided within the country increases: any mismatch is exacerbated, as are grievances.[307]

We just analysed partially the Angolan case, but we could continue talking more and more about the drive for accumulation, destructive dependency, policies of inequality, drive for pollution, abuse of power that pervade this part of the world.

We can conclude that, in the case of Angola's conflict, the availability of resources sustained large-scale military capacities and the political order of both UNITA and MPLA. The location

[304] Ibidem
[305] Ibidem
[306] Frynas and Wood, *Oil & War in Angola*, p. 596
[307] MEETmeTONIGHT - Notte dei Ricercatori, *Conflitti e risorse naturali*

and concentration of oil and diamonds provided means for each contender to sustain a strong and military influence. So, if oil and diamonds are not the only motivation that led to conflict, it is true that the availability, spatial distribution, and political economy of these resources have been crucial in the course of the war.[308] Certainly, as the famous saying goes, "when the blood flows in the streets, it's time to do business", the war in Angola provided major business opportunities to specific interest groups. In fact, the militarisation in many Angolan regions, together with the isolation from the outside society and weakness of the civil society, enabled some governors to turn their provinces into private lands for exploiting business opportunities.[309]

It is clear from this analysis that the situation in Nigeria, Angola, the Central African Republic, the Democratic Republic of Congo and South Sudan is serious, as they are among the poorest countries in the world where, however, the elites hold all the state wealth, obtained in most cases through the exploitation of environmental resources and to the detriment of the population. This information suggests that if it were really as the neo-Malthusians think, then they would fight for more than just oil and diamonds. It is further proof that the ruling elites only think of their own financial interests, and that these conflicts are not the desperate need to conquer the bare minimum to survive a famine, but rather the attempt to grab as much wealth and power as possible. On the other side, there are people dying every day from the consequences of these actions.

[308] Billon, *Angola's Political Economy of War*, p. 79
[309] Frynas and Wood, *Oil & War in Angola*, p. 597

CONCLUSION

The aim of this thesis was to highlight the relevance of the relation between natural resources and conflicts with the focus on the African continent, by providing an overview of significant cases. The discussion started defining and classifying different types of natural resources and different types of conflicts, trying to understand how the two categories end interacting. We saw how depending on the natural resources we have different interactions and not every resource leads to war, and also that raw materials are not natural resources in itself, but they become it depending on how groups and elites define them. Resource war, in fact, begins with a particular group that controls the resource and an aggressor that wishes to seize control over said resource. Following these concepts, the second chapter focused on the difference between neo-Malthusianism and political ecology and their opposite vision around the issue. On one hand we have the pessimistic and apocalyptic vision of neo-Malthusians: the idea of the demographic threat, which was translated into political effects. According to them (Malthus in particular), the fact that the poor part of the population was dying was not necessarily a bad thing, because it was necessary to have natural "checks" like disasters in order to balance people and food resources. We saw that one of the theories to explain environmental crises is Malthus: according to him, population grows geometrically (exponentially) while food arithmetically. This was proved wrong on many different levels as things did not happen as he had planned and the proof is that we produce much more of what we need, but the resources are out of balance. The focus was as well on deconstructing the concept of “resource curse”, so as to highlight the power disparities between the ruling elite and the population and not taking for granted that some countries are in a conflict situation. The danger of this theory is that it can and it is used to blame someone, in particular the poor, that have nothing to do with these crises and, on the contrary, are the ones who suffer the most from them. It is not the scarcity of resources that generates conflicts, but the abundance. If there are many resources to exploit in capitalist logic, this generates conflicts. To be more precise, both the resource abundance and resource scarcity perspective fail to take into consideration the socially complex nature of resources, and in so doing, they fail to explain as well why an abundance or scarcity of valuable resources is not a necessary or sufficient factor of conflict.[310]

[310] Le Billon, *The political ecology of war*, p. 565

After that, in the third chapter we analysed how the Malthusian thought - directly or indirectly - permeated in the US and in Europe. In particular, it was a way in which the United States spoke about the transformations in Africa. From Kaplan publication on, American foreign policy changes. The whole series of environmental and security problems in Africa started to become part of American policy, because they were destabilising the existing political order. Environmental processes are beginning to be read mainly through a US security lens of migration and conflict: the transformation of the environment, the processes of transformation are linked to the security vision of an aggressive environmental programme as a defence strategy to avoid destabilising the US political order. This led to considering the environment as a fundamentally security issue, shaping international relations. On the other side, in Europe, we are having a war that is not fought over natural resources but which has repercussions on resources worldwide, in particular in Africa.

In the fourth and last chapter, we addressed the issue of natural resources and wars by analysing several case studies all over the African continent, showing how Malthus's theory cannot be considered accurate, and that in reality conflicts are not caused by unbridled population growth but rather by the presence of resources defined as strategic in areas of high mismatch and inequality in access to resources. This process often only increases inequality, even to the case of Nigeria where five people together hold more wealth than the entire state budget.

Thanks to Philippe Le Billion’s analysis, we observe that there are two crucial types of resource war. The first is a scarce resource war where people will fight each other to survive. To put it in a more sophisticated way, resource poor societies are confronted by the prisoner of resource rents by the elite and are unfit to acclimatise to the failure of resources. Philippe Le Billion's alternate type of resource war is the abundant resource war. Then again a more sophisticated approach argues that a wealth of resources can affect a lower republic, poor profitable growth, and greedy geste by contending elites. He goes on to stress that dominant resources and its control by the state leaders will lead to little stopgap for those outside state patronage to ameliorate the quality of their lives or gain a decent standard of living. In fact, “the more hardly are the rights held, the less equal the society will be. ” This will produce growing frustration amongst marginalised groups and the general crowd, who could conclude that violence is the only option open to them in order to change their situation. Brutality also becomes a system of maintaining control for the governing body, which will produce and sustain profitable patterns of resource exploitation and wealth distribution. He concludes that these resource wars are conflicts in which violence, or the trouble of it, becomes a natural part of the political frugality

of resource exploitation, and the African wars easily punctuate this alternate resource proposition in practice.[311]

Some resources are undoubtedly scarce, but we are really far from the apocalypse envisaged by Malthus. At the same time, we cannot blame him, since he was living during a very hard time for human history, when still modernity was far away and a lot of people were dying from infectious diseases. Also, the resource scarcity we are facing should make us reconsider the developed world's consumption habits, since often we only hide behind the rhetoric of scarcity because we are unwilling to give up our lifestyle, and also because it would be very complicated to think of a fair system of redistribution of wealth and natural resources.

Among the most debated and studied resources we saw of course oil. Thus, as the case studies of chapter 4 illustrate, oil has played an important role in war and conflict on the African continent, impacting differently depending very much on the context of the country it is in. Firstly greed, not only from within the government but also from individuals connected to the state who wish to purchase black gold for their own interests, will cause them to turn their backs on the needs of wider society, which could benefit from this oil revenue and achieve an enhanced quality of life through public investment. For example, in Angola, a derisory percentage of GDP was estimated to have been spent on education, health, social security and housing. Secondly, bad governance and accountability mechanisms allow multinational oil corporations and political administrations the ability to avoid political scrutiny on oil expenditure which will lead to growing levels of societal discontent. Overall, oil has had and will continue to have a decidedly decisive role in any future wars on the African continent which contain this material. Oil can fund military campaigns, prolong war, shatter peace initiatives and cause untold suffering and misery on civilian populations. Its potential positive effect on national development has been lost in a myriad of greed, corruption and poor governance whilst its effect on war is all too clear.[312]

The reported studies show that oil and diamonds are neither the cause nor the only motivation for natural resource conflicts, but the availability, spatial distribution, and political economy of these resources have played a crucial role in the course of these conflicts worldwide.[313]

[311] Gonzalez, *Petroleum and its Impact on Three Wars in Africa*, pp. 61-62
[312] Ivi, pp. 77-79
[313] Billon, *Angola's Political Economy of War*, p. 79

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