

INTERNATIONAL MIGRATION,  
COVID-19, AND ENVIRONMENTAL  
SUSTAINABILITY

# CONTRIBUTIONS TO CONFLICT MANAGEMENT, PEACE ECONOMICS AND DEVELOPMENT

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**INTERNATIONAL  
MIGRATION, COVID-19,  
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SUSTAINABILITY**

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INVESTOR IN PEOPLE

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# FOREWORD

Demographic transformations occur in different countries globally in the context of migration from these countries and their acceptance by people in the receiving countries. Famine, poor healthcare, ethnic conflicts and lack of economic benefits in many of the developing countries drive people to migration. Ecological degradation, insecurity, inequality and plutocracy also force populations to migrate. Many social ills, like human trafficking and unethical behaviors that emerge out of emigration and acceptance of people in the receiving countries, are fraught with various problems. The same phenomena are present in internal migrants and returning migrants, and they often face tremendous challenges, including assimilation both in the receiving and returning societies. In addition, management education in all countries is more geared to maximise pragmatic returns rather than social values and ethics.

Some of the characteristics are put together in papers on the role of artificial intelligence, data mining and data analysis. This volume refers to the people and their hopes, aspirations and interaction with other parts of the world leading to conflict situations between cultures and human values. Disasters, economic degradation and socio-economic deterioration in developing countries have been accentuated by the new phenomenon of COVID-19. This volume is also dedicated to millions of people who have perished or been affected by the pandemic globally, including my beloved sisters.

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I would also like to express my heartfelt appreciation to doctoral candidate Liyang Dong from State University of New York at Binghamton for her exceptional secretarial and editorial assistance. I am grateful to all the presenters for their cooperation and patience for the long process. I am relieved to finish this book project after months of planning, operation and execution of this academic endeavour and facing financial challenges.

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# CHAPTER 1

## MIGRATION IN RELATION TO ECOLOGICAL DEGRADATION AND THREATS BASED ON IEP'S ECOLOGICAL THREAT REPORT

Steve Killelea

### ABSTRACT

*This chapter presents research and analysis on the Institute for Economics and Peace's (IEP's) index in the Ecological Threat Report (ETR). In the analysis, 178 countries are examined at the sub-national level, accounting for 99.9% of the global population. The estimate consists of five indicators that aggregate to yield an index of ecological threats. These five indicators are water risk, the prevalence of stunting, the impact of natural disasters, projected population growth and projected temperature rise. The ETR is a tool that can be used to identify the countries that are at the highest risk of ecological threats. The index identifies that 30 countries facing the highest level of ecological threats as well as low levels of resilience are home to 1.26 billion people. At the end of 2020, in these 30 countries, 68% of the total people were forcibly displaced beyond their borders. As these 30 countries suffer collectively from the highest ecological threats and without the reversal of ecological degradation, displacement is very likely to continue. Without urgent development, ecological threats will continue to create humanitarian emergencies and will likely increase without a sustained effort to reverse the current trend.*

**Keywords:** Climate change; ecological threat; migration; conflict; water risk; prevalence of stunting; projected population growth; displacement

## AN INTRODUCTION TO THE ETR

The increase in population growth, water stress, food insecurity, frequency and ferocity of natural disasters and unprecedented temperature will have a significant effect globally. Currently, the global displacement numbers are at their highest on record.<sup>1</sup> The continuation of extreme ecological events is likely to converge with humanitarian crises, leading to increased displacement.

The IEP developed the ETR in an attempt to find which countries are at the highest risk. The ETR analyses 178 independent states and territories, assessing threats relating to food risk, water risk, rapid population growth, temperature anomalies and natural disasters to develop an index of ecological threat.<sup>2</sup> The index covers over 2,500 sub-national administrative units or 99.9% of the world's population and then ranks the countries by the severity of ecological risks and the intensity of the risks. This ranking is then combined with national measures of socio-economic resilience to determine which countries have the most severe threats and lowest coping capabilities. IEP identifies 30 countries that are most likely to degrade into conflict or suffer from societal collapses.

Many ecological threats exist independently of climate change. However, man-made climate change will have an amplifying and increasing effect, causing further ecological degradation and pushing some countries through violent tipping points. (ETR, 2021)<sup>3</sup>

The consequence of which could be mass displacement.

'Countries with high population growth are amongst the most ecologically degraded' (ETR, 2021) and are resource scarce.<sup>4</sup>

The combination of weak socio-economic resilience, extreme ecological risk and rapid population growth can result in societal collapse.<sup>5</sup> The report uses IEP's Positive Peace framework<sup>6</sup> to identify countries without enough socio-economic resilience to adapt to or cope with these future shocks. Positive Peace has a strong statistically significant relationship to peace, and this framework has proven successful in forecasting substantial falls in peace. (ETR, 2021)

Positive Peace is a proxy for socio-economic resilience, and the attributes of Positive Peace allow for higher levels of adaptability. This includes better water management, more efficient agricultural systems and the capability to import food when local production is insufficient.

The main finding from the 2021 ETR is that a cyclic relationship exists between ecological degradation and conflict. It is a vicious cycle whereby degradation of resources leads to conflict, and the ensuing conflict leads to further resource degradation.<sup>7</sup> Breaking the cycle requires improving ecological resource management and socio-economic resilience. The resilience and adaptability of the socio-economic system, referred to as the societal system, will generally determine the outcome. Based on current trends, future prospects are not encouraging. Both undernourishment and food insecurity have been steadily rising since 2015.<sup>8</sup> This is the reversal of a long-established trend where undernourishment had been improving. (ETR, 2021)<sup>9</sup>

'The factors causing this are complex; however, high population growth, lack of potable water and increasing land degradation are clear contributors.<sup>10</sup> Based on the current number of undernourished people and allowing for population

growth, the report projects the number of undernourished people to rise by 343 million people by 2050, to 1.1 billion. This is a 45% increase.<sup>11</sup>

The 2021 ETR identifies three clusters of ecological hotspots that are particularly susceptible to collapse:

- The Sahel-Horn of Africa belt, from Mauritania to Somalia.
- The Southern African belt, from Angola to Madagascar.
- The Middle East and Central Asian belt, from Syria to Pakistan.

The 30 countries facing the highest level of ecological threat are home to 1.26 billion people' (ETR, 2021) and are called hotspot countries. 'These nations combine low socio-economic resilience with medium to extremely high catastrophic ecological threat' (ETR, 2021) scores. 'The number of people displaced by conflict has been steadily rising. At the end of 2020, 34 million people had been forcibly displaced from their home nations' (ETR, 2021) and another 61 million people were displaced within their home country. 'Of this total, 23.1 million people or 68% came from these 30 hotspot countries. Without a reversal of ecological degradation, these numbers are likely to increase.<sup>12</sup>

More positively, the 2021 ETR identifies 46 countries that face low ecological threat levels, with another 35 exposed to very low threats. Eighty-nine per cent of these countries have high Positive Peace scores. These countries also have low population growth. In 2021, their combined population is 1.96 billion people, and by 2050, this figure will slightly increase to 2.18 billion people. These countries are mainly located in Eastern and Western Europe, North America and South America' (ETR, 2021).

In 2020, nearly 170 countries closed their borders, either partially or completely due to the COVID-19 pandemic.<sup>13</sup> This trend continued into 2021, however to a lesser extent. This severely affected the refugee movement and resettlement. In 2020, according to the United Nations High Commissioner for Refugees (UNHCR), the number of refugees resettled or naturalised was the lowest on record.<sup>14</sup>

Only 250,000 refugees returned home compared to the pre-COVID average of 670,000 returnees. In Europe, Turkey hosted the largest number of refugees at 3.9 million, followed by Germany at 1.5 million and France at 550,000. (ETR, 2021)<sup>15</sup>

The 2021 ETR 'analyses and proposes a number of policy recommendations to improve the efficiency of interventions and break the vicious cycles that exist in many parts of the world' (ETR, 2021).

Identifying the countries that are at the highest risk to ecological threats provides a substantial evidence base for evaluating the allocation of financial resources to adapt mitigation programs and activities. Measuring the scale of threat has important implications for assessing its effects on many issues such as food security and displacement, both in the short and long run.

This chapter is organised as follows. The subsequent section gives a background to Positive Peace. This is followed by the interlinkages between conflict, resilience and ecological threats and then a section on the ETR and forced displacement. The final section concludes the chapter.

## POSITIVE PEACE—THE MEASURE OF RESILIENCE

Positive Peace is defined as the attitudes, institutions and structures which create and sustain peaceful societies. These same factors also lead to many other positive outcomes which society feels are important. Higher levels of Positive Peace are statistically linked to higher GDP growth, better environmental outcomes, higher measures of well-being, better developmental outcomes and stronger resilience.<sup>16</sup>

Positive Peace as a term was first introduced in the 1960s by sociologist Johan Galtung and has historically been understood as qualitatively based on idealistic or moral concepts of a peaceful society.<sup>17</sup> The distinguishing feature of IEP's work on Positive Peace is that it is empirically derived. Statistical analysis and mathematical modelling were used to identify the common characteristics of the world's most peaceful countries. It therefore forms an important evidence base to understand the conditions that create peace. This empirical approach to the construction of the index means it is free from pre-established biases or value judgements.

This process allowed for the development of the Positive Peace Index (PPI), which consists of eight pillars, each containing three statistical indicators. This provides a baseline measure of the effectiveness of a country's capabilities to build and maintain peace. It also provides a measure for policymakers, researchers and corporations to use for effective intervention design, monitoring and evaluation.

To construct the PPI, nearly 25,000 national datasets, indexes and attitudinal surveys were statistically compared to the internal measures of the Global Peace Index (GPI) to determine which factors had the highest statistical correlations. Indicators were then qualitatively assessed, and where multiple variables measured similar phenomena, the least significant were dropped. The remaining factors were clustered using statistical techniques into the eight pillars of Positive Peace. Three indicators were selected for each pillar, which represent distinct but complementary conceptual aspects. The index was constructed with the weights for the indicators being assigned according to the strength of the correlation coefficient to the GPI Internal Peace score.

Not only is Positive Peace statistically linked to peace, but it is also linked to many other attributes that societies consider important. The countries that score well in Positive Peace have higher per capita growth, better performance on measures of well-being and happiness, better outcomes on ecological sustainability and measures of resilience, among others. Therefore, it can be said that Positive Peace creates an optimal environment for human potential to flourish.

Positive Peace can be used as the basis for empirically measuring a country's resilience – its ability to absorb, adapt and recover from shocks, such as climate change or economic transformation. It can also measure fragility and help predict the likelihood of conflict, violence and instability. Resilience is a fundamental tool for countries facing ecological threats. First, it provides a country with the capacity to cope with ecological shocks, minimising their negative impact on the population and economic structure. Second, it facilitates the recovery or rebuilding of the socio-economic system in the aftermath of an ecological shock.

## CONFLICT, RESILIENCE AND ECOLOGICAL THREATS

Conflict and ecological threats tend to interact and reinforce one another. Often, conflict arises as a result of competition for natural resources. In turn, the conflict itself destroys lives, livelihoods and governance, further depleting a region’s ecological resources.

The main finding from the 2021 ETR is that a cyclic relationship exists between ecological degradation and conflict. It is a vicious cycle whereby the degradation of resources leads to conflict, and the ensuing conflict leads to further resource degradation. Overall, 19 of the 20 countries with the highest ETR score are among the world’s 100 least peaceful countries as measured by the GPI. These countries include Afghanistan, Yemen, Somalia, Niger, Burkina Faso and Pakistan. Fig. 1 displays the average ETR score by level of peacefulness, as measured by the 2021 GPI. As peacefulness deteriorates, the ETR score tends to worsen. As a result, the very high and high peace countries tend to have a better ETR score than medium, low and very low peace countries.

The impact of ecological degradation on conflict is highlighted by the strong overlap between the countries with the highest levels of conflict, as measured by another major IEP research product, the GPI, and those with the worst ecological degradation.<sup>18</sup> In all, 11 of the 15 countries facing the worst ecological threats are currently in conflict, and another four are at a high risk of substantial falls in peace. Examples include Afghanistan, Yemen, Somalia, Niger, Burkina Faso

As peacefulness deteriorates as measured by the GPI, the ETR score tends to worsen.

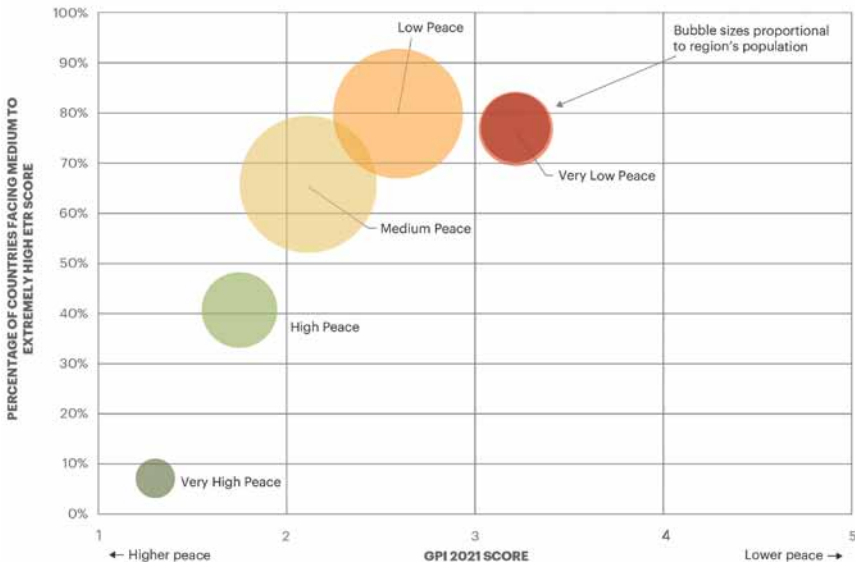


Fig. 1. ETR Score by Peacefulness - ETR Score Versus GPI Score, 2021.

Source: IEP

and Pakistan. Given the significant link between ecological fragility and conflict, addressing water availability, food security and high population growth in countries mired by conflict will improve prospects for lasting peace. Highly resilient countries have the best ability to manage their natural resources while still catering for their socio-economic needs.

No country with a high level of peace has an extremely poor ETR score, underscoring the relationship between ecological fragility and conflict. On the other hand, 80% of the countries with the worst ETR scores are also among the world's least resilient. This indicates that these nations may not be able to mitigate the impacts of their rapidly changing environment.

Population growth and resource scarcity are intrinsically linked with conflict in sub-Saharan Africa. According to the Africa Centre for Strategic Studies, 11 of the 12 African countries in conflict in 2018 were experiencing food insecurity.<sup>19</sup> Conflict leads to the destruction of farming and other economic infrastructure, negatively impacting food production. Conversely, conflict can also arise as a result of competition and scarcity, such as the clashes between farmers and pastoralists over land and water resources. In regions with higher levels of socio-economic resilience as gauged by Positive Peace, competition for resources tends to take place non-violently, as the parties contend through the legal and political systems. However, countries with low levels of Positive Peace often result in the contending parties resorting to physical conflict to assert their holdings over resources.

Adverse changes in the natural environment can lead to increased social tensions and civil unrest if societies do not have the necessary levels of resilience to deal with these threats. Similarly, conflict and uncontrolled population growth have well-documented negative impacts on the environment. These two dynamics of increasing resource scarcity and conflict can create a vicious cycle where one increases the likelihood of the other, leading to societies failing. While natural disasters may be relatively uniform across peace levels, how a country manages the disasters and their consequential impact differs. Countries that suffer from multiple issues, such as widespread violence, terrorism or political instability, may find it more difficult to prepare for disasters and therefore, the threat is heightened.

The ETR shows that ecological threats and climate change pose serious challenges to global development and peacefulness. The adverse impacts will disproportionately affect the world's poorest and most vulnerable countries and create spill-over pressures on neighbouring countries through mass movements of people and resource extraction.

## **SUB-SAHARAN AFRICA AND THE SAHEL**

In 2020, the number of food-insecure people rose by 318 million relative to the previous year. The vast majority of this increase occurred in three regions: South Asia, sub-Saharan Africa and South America, where the numbers of food-insecure people rose by 128 million, 86 million and 40 million, respectively.<sup>20</sup> Sub-Saharan Africa has the highest prevalence of food insecurity, with 66% of the population deemed food insecure.<sup>21</sup> Sub-Saharan Africa also has the lowest societal resilience of all regions as measured by the PPI.<sup>22</sup>

By 2050, sub-Saharan Africa's population is projected to be 2.1 billion, a 90% increase from today's levels.<sup>23</sup> Such rapid population growth is unsustainable and could translate to hundreds of millions of additional food-insecure people over the next few decades. Eleven countries in the region are expected to double their population between now and 2050. The three countries with the largest projected increases in population are Niger, Angola and Somalia, where the populations will increase by 161%, 128% and 113%, respectively.<sup>24</sup> The Sahel is especially vulnerable. The region faces many converging and complex challenges such as civil unrest, weak institutions, corruption, high population growth and lack of adequate food and water.<sup>25</sup> These issues have formed a vicious cycle whereby ecological degradation and population growth have increased the likelihood of conflict and facilitated the rise of Islamist insurgencies.<sup>26</sup>

In the Sahel, conflict spans national borders. These conflicts, in many ways, are the result of deteriorating living conditions, increasing poverty and weak governance. The Sahel operates with low levels of Positive Peace, with all countries ranking in the bottom half of the PPI<sup>27</sup> rankings. In particular, countries in the Sahel hold especially low ranks in the Positive Peace Pillars, Low Levels of Corruption, Good Relations with Neighbours and Equitable Distribution of Resources, highlighting important barriers for socio-economic development. While the Sahel operates with low levels of Positive Peace, there has been a small improvement of 2.6% in its overall PPI score in the last decade. Senegal recorded the largest improvement since 2009, at 7.4%, followed by Guinea and The Gambia at 6.4% and 5.4%, respectively. In all, 8 of the 10 countries deteriorated in Low Levels of Corruption between 2009 and 2021, with the largest deteriorations recorded by Niger, Senegal and Cameroon. Improvements were recorded on the Sound Business Environment, Free Flow of Information and Equitable Distribution of Resources Pillars due to multiple initiatives supporting micro-businesses and poverty alleviation in the area.

Technology has been a driver of the improvement in the Free Flow of Information Pillar, with many programs by the Sahel Alliance and the Organisation Internationale de la Francophonie (OIF) promoting digital literacy among the region's youth. However, 8 of the 10 countries in the Sahel deteriorated on the attitude domain of Positive Peace, including the four countries with the worst ETR scores—Niger, Burkina Faso, Nigeria and Mali. These four countries also deteriorated on the GPI between 2009 and 2021.

Despite some improvements, the region's Positive Peace levels remain low by international standards. Without concerted efforts and substantial development in all the pillars of Positive Peace, it is difficult to see the Sahel's resilience levels improving enough to shield it from ecological threats in the future potentially causing displacement both internally and beyond a country's border.

## **FORCED DISPLACEMENT**

The ETR studies closely the relationship between climate, societal resilience, ecological threat, internal and external conflict, persecution and other factors.

Due to the interrelated relationship between these factors, in most instances, there is no effort made to assign a primary cause of forced displacement.

IEP uses UNHCR's definition of forcibly displaced people. This encompasses refugees, asylum-seekers, internally displaced people (IDPs), Palestine refugees under the United Nations Relief and Works Agency for Palestine Refugees' (UNRWA) mandate, and Venezuelans displaced abroad. The following defines each category:

Refugees under UNHCR's mandate: A refugee has been recognised under the 1951 Convention relating to the status of refugees to be a refugee.

Asylum-seekers: An asylum seeker is seeking international protection, but whose claim for refugee status has not yet been determined. Not every asylum-seeker will ultimately be recognised as a refugee, but every refugee was initially an asylum-seeker.

Venezuelans displaced abroad: People are leaving Venezuela for many reasons—violence, insecurity, fear of being targeted for their political opinions (whether real or perceived), shortages of food and medicine, lack of access to social services, and being unable to support themselves and their families. By the end of 2020, almost 4.9 million Venezuelans had left their homes, travelling mainly towards Latin America and the Caribbean. It is the biggest exodus in the region's recent history and one of the biggest displacement crises in the world. They stay in their host countries under a wide range of legal statuses.<sup>28</sup>

Palestine refugees under UNRWA's mandate: Anyone whose normal place of residence was in Mandate Palestine during the period from 1 June 1946 to 15 May 1948 and who lost both home and means of livelihood due to the 1948 Arab-Israeli war qualifies as a Palestine refugee. This includes their children who are living in the camps.

IDPs: IDPs have been forced to leave or abandon their homes and have not crossed an internationally recognised border.

At the end of 2020, the total forcibly displaced people are categorised as follows:

- 48 million people were displaced internally.<sup>29</sup>
- 5.7 million people were Palestine refugees under UNRWA's mandate.<sup>30</sup>
- 5.1 million were asylum seekers.
- 20.7 million were refugees under UNHCR's mandate.
- 3.9 million were Venezuelans displaced abroad.<sup>31</sup>

At the end of 2020, 82.4 million people were forcibly displaced globally – the highest number on record.<sup>32</sup> In 2020, approximately 1 in 94 people globally were forcibly displaced compared to 1 in 161 in 2000. Low and very low peace countries account for 91% of the people forcibly displaced from conflict and violence worldwide.

At the end of 2020, 68% or 23.1 million of the total forcibly displaced people living outside their home country came from hotspot countries – meaning countries with catastrophic ecological threats and low societal resilience as defined by the ETR.<sup>33</sup> The total number of forcibly displaced people has increased each year for the last nine years. At the end of 2020, approximately two in three people