

ASIA PACIFIC CENTRE - RESPONSIBILITY TO PROTECT

CLIMATE CHANGE AND ATROCITY CRIMES: THE CHALLENGE IN THE PACIFIC



Asia-Pacific Centre for the
Responsibility to Protect

Acknowledgements

This report was prepared by Asia Pacific Centre for the Responsibility to Protect APR2P Centre team; Neal Simpson, Nikki Marczak, Alex Bellamy, Arna Chancellor and APR2P Centre interns Emily Dart, Marina Riley, Shangyue Lin, Mehar Mehar and Kate Sisley.

The Asia Pacific Centre for the Responsibility to Protect which is located at the School of Political Science and International Studies at the University of Queensland.

First Published November 2020

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Asia Pacific Centre for the Responsibility to Protect

School of Political Science and International Studies

The University of Queensland

St Lucia Brisbane QLD 4072

Australia

Email: r2pinfo@uq.edu.au

<https://r2pasiapacific.org/>



**THE UNIVERSITY
OF QUEENSLAND**
A U S T R A L I A

INTRODUCTION

Climate change is set to be the defining political problem of this century, forcing us to reconsider our relationship with the environment and how we interact with it in social, cultural, economic and political contexts. There is growing recognition that without radical change in the next few years, the effects of climate change could have an adverse and irreversible effect on many, if not all, people around the world. Rising sea levels, erratic weather patterns, more intense natural disasters, rising temperatures and dwindling resources are likely to affect the lives of people who rely directly on the environment to survive, such as farmers, pastoralists and fishers. Given the interconnectedness of global trade networks, that impact will flow on to those without a direct link to environment-based lifestyles. It means climate change is a global problem, needing a collective acknowledgement and concerted effort in order to prevent the worst case scenarios.

In the context of a changing environment, issues of land and resource management are becoming critical areas. The issue of land and the resources within and around it has long been related to conflict, given its links to community identity, culture and livelihood. The role of land in social, economic and political contexts of different communities, and how these communities interact, can inflame dormant tensions or conflict. The impact of climate change on land, resources and communities is a developing policy issue, with academia and various branches of the United Nations (UN) attempting to analyse how climate change may affect the rate, cause and conduct of conflicts around the world, especially in countries considered most vulnerable to the effects of climate change.

This report examines the impact of climate change on the risk of atrocity crimes in the framework of the Responsibility to Protect (R2P). Atrocity crimes (genocide, war crimes, crimes against humanity and ethnic cleansing) are not isolated or spontaneous. Often they occur against a background of armed conflict and always as a process. By understanding those processes, we may develop interventions at different stages with a view to mitigating the damage and saving lives. R2P is the global norm dedicated to preventing such crimes by identifying underlying risks and requiring states to protect their populations. This report seeks to home in on the links between climate change and the risk of atrocity crime, identifying how climate change intersects with processes leading to atrocity crime.

Climate change is a global problem, but it will not affect every country in the same way. Countries that rely on agriculture or natural resources for the majority of their economic viability, or those at high risk of environmental disasters will likely feel greater effects of climate change. This report looks at the Pacific island countries of Fiji and Papua New Guinea, which have been identified as vulnerable to both the long- and short-term effects of climate change, and as having some risk factors for atrocity crimes.

The causes of conflict and atrocity crimes are complex and interwoven with social, economic, political and other attributes that rarely provide a clear causal path. This report provides a preliminary analysis of the links between climate change and atrocity crime, and finds that **climate change is less a direct cause of atrocity crimes than a potential trigger or threat multiplier, where there are already existing risk factors for atrocity crimes**. It is imperative that international institutions, states, and non-governmental organisations develop policies to mitigate the effects of climate change on vulnerable populations in order to meet the challenge of potentially increasing atrocity crime risks.

PART 1: BACKGROUND

1.1 The Current State of the Climate

Climate change and the associated effects on global society have in the last several years become a priority policy issue for the UN and most governments around the world. This is due to the global nature of the problem, which sees a collection of greenhouse gases coalescing and being retained in the earth's atmosphere to gradually warm the planet and change the climate. Goal 13 of the UN's Sustainable Development Goals (SDGs) directly sets targets to limit the effects of climate change, such as extreme weather events, rising sea levels and changing weather patterns,¹ all of which will have consequences for human life. Other SDGs look further at environmental factors such as water quality and clean energy, factors that affect, and can be affected by, climate change.

The degree of change the UN seeks to inhibit is relatively small. A report by the Intergovernmental Panel on Climate Change (IPCC) described a rise in global mean temperatures of 1.5 C in the next few decades as having a high likelihood of drastically affecting the environment and in turn the human living standards which depend on it. It described such change as a multiplier through which changes to agriculture and food prices would exacerbate existing poverty and inequality. Small island developing states (SIDS) in the Caribbean and Pacific, already experiencing changes in their environment due to climate change, are at particular risk of this warming. The agriculture, fishing and tourism industries of these states are likely to be adversely affected.²

The adoption and ratification of the Paris Agreement in 2016 by the majority of UN member states (189 at time of writing)³ acknowledged the danger climate change holds for the continued existence and quality of life of many of the world's citizens. Yet, despite widespread recognition of the problem, attempts by nation states to curb emissions levels and adhere to the guidelines of the Paris Agreement have proceeded slowly. The gradual warming of the planet is predicted to continue, increasing well above the 1.5 C examined by the IPCC.⁴ Indeed, as of 2019, the global mean temperature was estimated at 1.1 C, with the years 2015 – 2019 having the warmest mean temperatures on record.⁵

1.2 Climate Change and Conflict

Climate change is an environmental problem, but one that has indelible links with social, political and economic spheres.⁶ The detrimental effects of climate change on agriculture, food prices and the disadvantaged means economic and in turn political consequences will be felt as well. Climate change also has connections to human security, with its potential impact on the causes, triggers and capacities of armed groups in a given conflict.

The IPCC has found only an inconsistent relationship between climate change and conflict. There can be multiple causes, both direct and indirect, of any armed conflict, including environmental pressures and land or resource distribution.⁷ The IPCC does however, recognise climate change as increasing the severity of existing conflicts, particularly in states which are underdeveloped and where the majority of the population's livelihood relies on agriculture.⁸ Some analysis of recent and ongoing conflicts in regions such as Syria, Darfur, Nigeria and Somalia has identified environmental factors as having increased the vulnerability of the state, or stymied efforts to prevent political violence. In relation to atrocity crime risk, climate change may act "... as a threat multiplier, exacerbating existing weaknesses and threats. While the relationship between climate change and violent extremism is not linear, climate change does impose further stress on water and food security, population dynamics, and societal institutions."⁹ Because it is an amplifier of existing weaknesses and vulnerabilities in a state's institutional architecture, climate change has the potential to affect the whole security landscape.¹⁰ Peacebuilding and stabilisation efforts in conflict zones affected by climate change need to address the full scope of weaknesses and threats heralded by the phenomenon,¹¹ and climate change should be part of any risk analysis of atrocity crimes.

1.3 Climate Change and Atrocity Crimes

Atrocity crimes are understood to be the most serious crimes against humankind. Climate change can adversely affect the ability of a state to protect its population from such crimes when it is coupled with other aspects that hinder state functions. Widening inequality due to resource scarcity and loss of livelihoods, combined with existing weaknesses in political structures or ethnic tensions, could heighten the risk of

conflicts erupting, and in turn, the potential commission of atrocity crimes. While the relationship between climate change and atrocity crimes is not straightforward, there are links suggesting climate change could exacerbate the underlying political and economic causes of atrocity crimes.¹²

Efforts to determine solid causal links between the two phenomena remain difficult due to a paucity of data on mass atrocity crimes, and disputes over the kinds of environmental change having the most impact on a given population.¹³ Despite the strong impact of atrocity crimes on human suffering, most research into climate change in a security context concerns political violence and civil war in general, and not specific analysis of atrocity crimes. While conflict and mass atrocities can share similar causes, conflict does not always lead to the commission of atrocities and thus their dynamics can be missed by traditional conflict assessment and analysis tools.¹⁴ Theoretical models such as 'demographic-environmental stress' (DES) attempt to determine the causal relationship between climate change and mass atrocities. DES catalogues rapid population growth, degradation and overexploitation of resources, and unequal access to those resources within a given environment. Such circumstances are likely to contribute to mass atrocities where exclusionary political institutions and emphasis on group identity (along ethnic, cultural, religious or class divides) determines the quality of life in a population that primarily subsists on agriculture and other environmental resources.¹⁵

The potential for climate change to increase the likelihood and severity of atrocity crimes is a pertinent threat to global peace and security and one that every state will need take into account in policy development. For this reason, the following report analyses the relationship between climate change and atrocity crimes through the rubric of the R2P, the global norm adopted by the UN at the 2005 World Summit. R2P is carried over three 'pillars' as follows:

Pillar I: Each individual State bears the primary responsibility for protecting its own population from genocide, war crimes, ethnic cleansing and crimes against humanity.

Pillar II: The international community has a responsibility to encourage and assist States in fulfilling this primary responsibility.

Pillar III: The international community has the responsibility to use appropriate diplomatic, humanitarian and other peaceful means to protect populations from these crimes. Should peaceful means be inadequate and national authorities of States manifestly fail to protect their populations from these crimes, the international community must be prepared to take timely and decisive action to protect these populations at risk, in accordance with the UN Charter.¹⁶

To support prevention efforts, in 2014 the UN Office on Genocide Prevention and the Responsibility to Protect published the Framework of Analysis for Atrocity Crimes: A Tool for Prevention. The remainder of this report adds a climate change lens to the Framework of Analysis, focusing on the Pacific nations of Fiji and Papua New Guinea, which are vulnerable to climate change impacts and to other underlying risk factors of atrocity crime.¹⁷

PART 2: THE RISK OF ATROCITY CRIMES: A CLIMATE CHANGE LENS

The Framework of Analysis for Atrocity Crimes (the Framework) details several Risk Factors that influence the likelihood of atrocity crimes being committed in a given context. These Risk Factors are divided into common and specific risks. The Common Factors help to identify the probability of atrocity crimes overall and are useful in monitoring and early warning. Specific Risk Factors relate to elements that are unique to the crimes of genocide, war crimes and crimes against humanity (probability of ethnic cleansing is accommodated within the other crimes). Each Risk Factor is accompanied by several indicators, which identify manifestations of the risk present and the likelihood such a risk could lead to atrocity crimes.¹⁸

This section identifies Risk Factors located in the UN Framework that could be impacted by environmental factors brought about by climate change and their likelihood to contribute to atrocity crimes. These Risk Factors relate to issues such as resource scarcity, increased state fragility, migration and rising social inequalities in the context of climate change. The next section will examine such Risk Factors in the context of Fiji and Papua New Guinea.

RISK FACTORS OF ATROCITY CRIMES RELATED TO CLIMATE CHANGE	
Risk Factor 1: Situations of armed conflict or other forms of instability	
Indicator 1.1	International or non-international armed conflict
Indicator 1.3	Humanitarian crisis or emergency, including those caused by natural disasters or epidemics
Indicator 1.7	Economic instability caused by scarcity of resources or disputes over their use or exploitation
Indicator 1.8	Economic instability caused by severe crisis in the national economy
Indicator 1.9	Economic instability caused by acute poverty, mass unemployment or deep horizontal inequalities
Risk Factor 2: Record of serious violations of international human rights and humanitarian law	
Indicator 2.2	Past acts of genocide, crimes against humanity, war crimes and their incitement
Risk Factor 3: Weakness of State structures	
Indicator 3.3	Lack of an independent and impartial judiciary
Indicator 3.4	Lack of effective civilian control of security forces
Risk Factor 4: Motives or incentives	
Indicator 4.2	Economic interests, including those based on the safeguard and wellbeing of elites or identity groups, or control over the distribution of resources
Indicator 4.3	Strategic or military interests, including those based on protection or seizure of territory or resources
Indicator 4.5	Real or perceived threats posed by protected groups, populations or individuals, against interests or objectives of perpetrators, including perceptions of disloyalty to a cause
Risk Factor 6: Absence of mitigating factors	
Indicator 6.10	Lack of support by neighbouring States to protect populations at risk and in need of refuge, including closure of borders, forced repatriation or aid restrictions
Risk Factor 8: Triggering factors	
Indicator 8.9	Sudden changes that affect the economy or the workforce, including as a result of financial crises, natural disasters or epidemics
Indicator 8.10	Discovery of natural resources or launching of exploitation projects that have a serious impact on the livelihoods and sustainability of groups or civilian populations

Risk Factor 1: Situations of armed conflict or other forms of instability

Indicator 1.1: International or non-international armed conflict.

The presence of an armed conflict in a state greatly increases the likelihood of atrocity crimes being committed. While the causes of armed conflict are varied and rarely straightforward, the IPCC considers environmental pressures as a threat multiplier of existing conflicts.¹⁹ It is possible that severe weather events and changing temperatures could heighten the magnitude of ongoing armed conflicts and the potential for atrocity crimes.

Indicator 1.3: Humanitarian crisis or emergency, including those caused by natural disasters or epidemics.

Climate change is expected to significantly increase the frequency and severity of weather events, including natural disasters. Resulting humanitarian crises from such disasters can have severe impacts on affected populations and state infrastructure. The displacement of large numbers of people and the disruption to order can create vulnerability in the affected population. In turn, an increased level of stress on the state elevates the likelihood of serious human rights abuses being committed against vulnerable populations, especially if state functions are already weakened or lacking transparency. Epidemics in the wake of such disasters are also a concern. With global temperatures increasing, habitable environments for a number of food, water and vector-borne diseases are also expected to increase, extending their range to previously unaffected areas.²⁰

The migration of displaced people due to disasters could also increase the range of epidemics, further compounding the vulnerability of populations over a larger area than that affected by the disaster. The potential for human rights abuses and subsequent atrocity crimes stemming from those abuses is high, due to the extra pressure exerted upon the state (or states). If a government already lacks adequate capacity to deal with the fallout of natural disasters, the added pressure of an epidemic in and around a displaced population only heightens risks of exploitation. In addition, scapegoating and hate speech can emerge in the context of epidemics. The tendency for blame to be directed against vulnerable minorities is evident in responses to the Covid-19 pandemic.²¹ See also **Risk Factors 4** and **6** for risks to vulnerable populations.

Indicator 1.7: Economic instability caused by scarcity of resources or disputes over their use or exploitation.

Resource scarcity is one of the most prominent concerns emerging from climate change. This includes basic food and water, but also more complex systems of resource extraction to further economic or strategic prosperity. With incidences of drought and changes in rainfall patterns, water scarcity is an issue of increasing importance, especially where water has already been a limited or contested resource. Similarly, arable land, due to extreme weather events such as droughts and floods, is becoming increasingly contested, leading to conflict and potentially atrocity crimes in countries such as Afghanistan, Somalia and other sub-Saharan countries.²² Historically, the need for living space and food has provided impetus for territorial conquests. While by no means the only determining factor, the expansion of Nazi Germany into Europe and the Japanese Empire into Manchuria and other locations was driven in part by the desire for the resources held in newly conquered territories.²³

More modern examples concern Iraq and Nigeria, where droughts and other environmental changes influenced the availability of water. Islamic State's control over water infrastructure in Iraq helped to attract recruits from water-poor farming communities; while Boko Haram controlled access to water in the Lake Chad region, assisting to recruit those who lacked viable alternatives.²⁴ While resource stockpiling by these two groups was not the only determining factor in attracting recruits to their respective causes, it did provide another avenue to gaining power and escalating conflict in the areas they controlled.

Indicator 1.8: Economic instability caused by severe crisis in the national economy.

Crises in the national economy, potentially brought about by resource scarcity, obviously affect the livelihoods of those who rely on such resources. For example, loss of fish stocks, employment that sustains many of those living in the Pacific, could create severe loss of income and instability in the economy. Wide ranging losses in fish stocks and other resources such as arable land for crop production would likely result in major instability in food prices with the potential for social upheaval.²⁵ On a related note, states that largely rely

on an economy centred on resource extraction, such as Papua New Guinea, are vulnerable to fluctuations in commodity prices that may suffer further instability due to climate change.²⁶ If global warming rises above 1.5°C, the global economy is estimated to shrink by 30 percent.²⁷ In times of such upheaval and instability, the chances of conflict breaking out over remaining resource stocks are significant.

Indicator 1.9: Economic instability caused by acute poverty, mass unemployment or deep horizontal inequalities.

Social inequalities, real and perceived, are a major contributor to intergroup conflict and the commission of atrocity crimes. Inequality is closely linked to the division of land, resources, and the political power associated with land ownership. Climate change exacerbates this inequality as “...the impacts of disasters related to climate variability mesh with the specific political and socioeconomic context where it occurs, often deepening inequalities and expanding social exclusions.”²⁸ In turn, inequalities and exclusions can become a cause of conflict.

The loss of livelihoods in populations that rely on natural resources affected by climate change, and the unemployment that can result from such loss, creates circumstances for a large unemployed and poverty-stricken population. In such a situation, “...inequality, deprivation, social exclusion, and denial of access to political power are a recipe for a breakdown of social norms and order,”²⁹ and the chances of conflict increase, as does the vulnerability to atrocity crimes stemming from conflict or instability.

Risk Factor 2: Record of serious violations of international human rights and humanitarian law

Indicator 2.2: Past acts of genocide, crimes against humanity, war crimes or their incitement.

According to the Framework, those states that have suffered previous incidences of atrocity crimes, “...can be more prone to further atrocity crimes.”³⁰ Although mitigating factors may limit the possibility of atrocity crimes occurring, it is important to consider the effectiveness of those factors in the context of climate change. If, for example, other Indicators come into play regarding resource scarcity or humanitarian crises, it may negatively affect the preventative mechanisms that have previously kept violence from reoccurring. If governance structures are substantially weakened, a violent response may be seen by the state as a ‘necessary’ course of action. The potential for violence to give rise to incidences of atrocity crimes, which is always a risk, is greatly heightened if such acts have already been carried out in the past in a context of violence and instability.

Risk Factor 3: Weakness of State Structures

Indicator 3.3: Lack of an independent and impartial judiciary.

States with an economic reliance on the natural environment and with weak governance structures are particularly vulnerable to changes in the environment that could limit production outputs, including those caused by climate change. In circumstances of resource scarcity, deprivation and humanitarian crises exacerbated by climate change, a state tendency towards violence, combined with limited checks and balances on the government, could lead towards atrocity crimes. Lack of impartiality and independence in local and national judiciaries, or severe restrictions upon them, may mean any decision to respond with violence is met with little legal resistance. This has implications for atrocity crimes and protecting vulnerable populations during climate-induced crises. If limited legal protections are in place to protect people from violence (from either state-sponsored or non-state actors) during climate emergencies, the potential for atrocities is high. Further, without proper legal structures and safeguards, the chances of conflict resolution or accountability of perpetrators of atrocity crimes would be slim.

Indicator 3.4: Lack of effective civilian control of security forces.

Armed actors feature heavily when analysing the commission of atrocity crimes, whether state-sponsored military, paramilitary and law enforcement, or non-state actors. When security forces lack sufficient oversight from the government or the courts, there is a much greater risk of atrocity crimes being committed. A clear example is the Tatmadaw’s operations against the Rohingya and other ethnic minorities in Myanmar, which constituted various forms of mass atrocities including genocide. The Tatmadaw’s control of Myanmar’s government, judiciary and economy allowed it to pursue its violent operations within impunity.³¹

In the context of climate change and economic instability, the need to hold onto power and control resources could provide a motive for security forces to act violently and against international humanitarian law. See **Risk Factor 4** for further information on motives.

Risk Factor 4: Motives or incentives

Indicator 4.2: Economic interests, including those based on the safeguard and well-being of elites or identity groups, or control over the distribution of resources.

Similarly to Indicator 1.7, when resources are scarce and in high demand, or perceived to be so, the control and distribution of those resources can become highly politicised. Intergroup tensions may be exacerbated where distribution and control of resources is perceived as unequal. In such circumstances, where garnering or maintaining control and distribution of resources becomes crucial, conflict could break out including the commission of atrocity crimes.

Indicator 4.3: Strategic or military interests, including those based on protection or seizure of territory and resources.

Tensions and conflict can also arise where military or strategic interests benefit, or are perceived to benefit, a specific group over another, or where the protection and seizure of resources is seen to disadvantage a particular group. This disadvantage can lead to vulnerability to the predations of those in control of the resources and any associated abuses or atrocities. For example, Islamic State, as well as controlling water stockpiles, intended to seize grain stockpiles, mills and silos, with a view to exerting full control over local communities.³² Such situations can facilitate the commission of atrocity crimes.

Indicator 4.5: Real or perceived threats posed by protected groups, populations or individuals, against interests or objectives of perpetrators, including perceptions of disloyalty to a cause.

Rising sea levels, desertification and increased frequency of extreme weather events due to climate change have the potential to render previously inhabited land no longer suitable for settlement. Indeed, estimates suggest by the middle of the century there could be between 150 and 300 million people displaced due to the effects of climate change.³³ The flow of displaced people, who may have reduced adaptive capacities and resources,³⁴ will most likely put extra stresses upon states. Exclusionary ideologies, and an 'us vs. them' dynamic, brought about by an influx of migrants, are likely to produce scapegoating and intergroup violence, subsequently increasing the likelihood of atrocity crimes.³⁵ More information on displaced populations can be found in Indicator 6.10.

Risk Factor 6: Absence of mitigating factors

Indicator 6.10: Lack of support by neighbouring States to protect populations at risk and in need of refuge, including the closure of borders, forced repatriation or aid restrictions.

Migration due to environmental factors has already occurred in some areas, and climate change will see this trend continue.³⁶ This poses a particular problem for international law, as there is currently no provision for those fleeing catastrophic weather events or climate change.³⁷ Therefore, the rights of those who are displaced as a result of climate change, natural disasters, environmental dangers or other potentially life-threatening events are not covered by international legal standards. This protection gap means displaced populations, already highly vulnerable to human rights abuses, are at an increased risk of exploitation, as seen in Somalia in 2016. Hundreds of thousands of Somalis had fled to urban centres such as Mogadishu following droughts and floods. Living in camps, they became susceptible to human trafficking, child exploitation and recruitment into extremist group al-Shabaab, which saw this as an opportunity to bolster its numbers.³⁸

The influx of a population dependent on aid and refuge, in the context of resource scarcity (real or perceived), heightens the chances of ideological dynamics coming into play, as mentioned in Indicator 4.5. "Any perceived threat of resource scarcity etc., might lead to the fear that there is not enough water, food, grain, oil, land, and so on, and therefore, some people will have to be excluded from its use."³⁹ This fear, if coupled with any instability or vulnerability in governance, means conflict mediation and/or resource sharing measures may be compromised. In such a circumstance, a recourse to use violence to ensure resource security and restrict vulnerable populations from gaining support could enable the commission of atrocity crimes.

Even when climate migrants / refugees are accepted into new territories, they face continuing risks. Existing land ownership often makes it difficult for people to settle in new areas without tensions emerging with the existing population. If resource scarcity is present, competition may increase. Moreover, the issue of land shortage is complicated by existing ties to land, such as cultural relationships with the land and systems of land tenure. Resettlement is rarely as simple as moving to a new location. In many areas, there are customary systems of land ownership and/or legal property rights. Both systems raise the potential for conflict, depending upon how resettlement is managed. To ignore customary land ownership typically creates major tension between host communities and new arrivals, especially within the context of climate change where both land and the resources it contains are likely to be precious commodities. In cases of state based legal tenure, where a government would have to expropriate land from its owner in order to offer refuge to displaced groups, there is potential for significant feelings of resentment, and conflict is a real possibility. When these tensions over land holding become framed around identity – such as a perceived inequality between ethnic or religious groups – the risk of potential atrocity crimes increases.

Risk Factor 8: Triggering factors

Indicator 8.9: Sudden changes that affect the economy or the workforce, including as a result of financial crises, natural disasters or epidemics.

Following on from Indicators in Risk Factor 1, extreme weather events and epidemics brought about by climate change can have major economic implications. Loss of income and livelihoods from the destruction of crops or damage to equipment, large scale infrastructure damage and reduced productivity due to disease are just some implications. Financial crises are also a possibility, particularly for states with economies that are heavily reliant on agricultural production, such as Papua New Guinea and other Pacific SIDS. Predicted increases in temperature and changing distribution in rainfall means these states and others are expected to experience substantial declines in crop production, disrupting income and in turn their respective economies.⁴⁰ Evidence shows that subsequent shocks from disruption in agricultural-based economies can increase the likelihood of civil conflict,⁴¹ and in turn, the risk of atrocity crimes.

Indicator 8.10: Discovery of natural resources or launching of exploitation projects that have a serious impact on the livelihoods and sustainability of groups or civilian populations.

Another concern is the overexploitation of existing resources. Where safeguards may have once been in place to protect populations, these may be stripped back in response to resource shortages. The existence of unexploited natural resources, in circumstances of resource scarcity caused by climate change, potentially provides incentive for the violent acquisition and securing of those resources with little regard for the surrounding environment. Environmental damage, such as that caused by climate change and/or resource exploitation, “...may become a precursor to the elimination of living spaces, cultures, economies and even inhabitants of communities depending on the environment. Thus, very large-scale environmental change may have consequences similar to genocide, although this is usually not an intended act but is an inadvertent (although often consciously accepted) side effect.”⁴² Regions where extractive resource practices have already adversely affected native environments and populations, such as in Papua New Guinea, are at greater risk of such practices enabling atrocity crimes.

Several Risk Factors in the Framework could be exacerbated by environmental effects brought about by climate change. These common Risk Factors could be useful for governments, academics and civil society organisations in monitoring the climate change - atrocity crime nexus. **Adding a climate change lens to risk factor analysis will facilitate stronger monitoring and early warning for the commission of atrocity crimes. The impact of climate change will be a critical element of how the principle of R2P is applied in the future, both in terms of how states will protect their populations from atrocity crimes and how the international community will respond to atrocity crimes.**

PART 3: CLIMATE CHANGE AND ATROCITY CRIME RISK IN THE PACIFIC

Taking the information presented in Part 2, this section will analyse and apply the Indicators to the context of two Pacific nations that are experiencing the effects of climate change - Fiji and Papua New Guinea. The ecological fragility of these Pacific nations, along with political, social and economic factors, makes them vulnerable to the effects of climate change and the corresponding risks of conflict, and even atrocity crimes.



Figure 1: Countries under climate change analysis

FIJI

Fiji is considered highly vulnerable to both short-term (e.g. extreme weather events) and long-term (e.g. sea level rise, ocean acidification and land degradation) climate change effects. The country has suffered one to two cyclones per season from 1969 to 2010. In the short-term, Fiji can expect a decrease in the number of tropical cyclones, yet the intensity of those that do occur will increase. It is also predicted to feel the effects of a potential 3 to 16 cm rise in sea levels by 2030.⁴³ The current government of Fiji has taken several steps to develop measures and policies to increase its resilience to climate change.⁴⁴

However, Fiji has a turbulent history of military coups. There is little control, either civilian or judicial, over the actions of its army and police forces, and there have been allegations of human rights abuses. This situation, in the context of major and irreversible climate change, may increase the risks of atrocity crime within the country.

Risk Factor 1: Situations of armed conflict or other forms of instability

Indicator 1.3: Humanitarian crisis or emergency, including those caused by natural disasters or epidemics.

Fiji is highly susceptible to natural disasters, particularly cyclones, floods, earthquakes, tsunamis and drought. In 2018, tropical cyclone Gita caused devastation to the islands of Fulaga, Vatoa and Ono I Lau. In 2016, tropical cyclone Winston damaged 40,000 homes and affected roughly 350,000 people, representing 40 percent of the population.⁴⁵ The humanitarian crises brought on by similar major weather events in the future could cause widespread instability in the country. Cyclone Harold, which hit several Pacific countries including Fiji in 2020, destroyed crops and damaged other food supplies.⁴⁷ The losses to the country are potentially greater given the context of the coronavirus pandemic, where self-isolation and social distancing measures are often impractical for people residing in evacuation shelters. While Fiji and Pacific governments at large have been proactive in implementing measures to stop the pandemic, the humanitarian crises from these two events provides a heightened risk of instability in the country.

Fiji, with help from disaster relief aid from other countries, has recovered from previous natural disasters without experiencing atrocity crimes. While aid is being received to deal with the current emergency, there is a potential Fiji may take a long time to fully recover. There is no indication (at the time of writing) that the

instability will lead to or accentuate the risk of atrocity crimes in Fiji. It is pertinent to note that the situation may change in the future, given the forecast of more extreme weather events. Other economic, security and migration factors (see below) may also combine to influence Fiji's resiliency to future humanitarian emergencies and its ability to curtail the commission of atrocity crimes.⁴⁷

Indicator 1.4: Political instability caused by abrupt or irregular regime change or transfer of power.

Fiji has a history of coups, stemming from longstanding ethnic tensions within the country. Fijian society comprises two main ethnic groups, indigenous Fijians, and Indo-Fijians, brought to the island for the purposes of indentured labour during British colonial rule. Indo-Fijians have been influential in Fiji's economic sectors, while the military, one of the country's most prestigious and influential institutions, comprises mainly indigenous Fijians.

Ethnic tensions played a role in the series of coups in the country from 1987 to 2006. Fiji's newest constitution attempts to resolve some of those divisions and the current government encouraged a singular Fijian identity. Yet ethnic tensions linger. While the coups were bloodless, undercurrents of hostilities between ethnic groups could provide a catalyst for instability and atrocities in the context of climatic change. The prominence of Fiji's military within wider society (see **Risk Factor 3**) and the ease with which it can impose its will within the country, coupled with enduring ethnic differences, creates a risk of instability that could flare in the wake of intense natural disasters or humanitarian crises. While the risk is minor, any event that may activate a military crackdown, especially against a particular community, may provide the necessary environment for violent conflict and the commission of atrocity crimes.

Indicator 1.7: Economic instability caused by scarcity of resources or disputes over their use or exploitation; and,

Indicator 1.8: Economic instability caused by severe crisis in the national economy.

These two Indicators apply to Fiji due to the potential loss of agricultural land from both short- and long-term effects of climate change. A large majority of Fijians live in low-lying or coastal areas and rely on agricultural yields for their livelihoods. With rising sea levels and increasing severity of extreme weather events, the potential for soil erosion, loss of crop yields and water salination from these events would most likely increase, limiting the availability and viability of many crops.⁴⁸ In turn, this could have a major detrimental effect on the revenue of those in the agricultural industry. Due to agriculture's substantial contribution to the Fijian economy, any loss could potentially trigger large scale instability in the country.

In relation to Indicator 1.8, economic instability can arise as a flow-on effect of a humanitarian emergency. The global tourism industry has slumped due to the coronavirus pandemic, and Fiji's tourism industry makes up a large part of the country's economy.⁴⁹ Even without the pandemic, destruction wrought by cyclones and other natural disasters has severely compromised the industry. Such a widespread loss of income, without adequate support or alternatives, can lead to unemployment and economic instability.

Risk Factor 3: Weakness of State structures

Indicator 3.4: Lack of effective civilian control of security forces.

Fiji's military forces are well-trained and equipped. They have a well-deserved reputation of professionalism as UN peacekeepers and private security contractors, and the country makes large contributions of personnel to both fields.⁵⁰ The prestige of the military and its importance to Fiji's national identity has helped sustain its prominence in society since the first of its four coups beginning in 1987.

There is ongoing concern, however, that the military's role in Fijian politics and society is curtailing civil and press freedoms, and there have been allegations of human rights violations by security forces, as well as corruption and political interference in legal proceedings.⁵¹ In the current pandemic, the military has suppressed criticism of government policies, and press freedom advocates have raised concerns that such measures further limit civic freedoms.⁵²

The ease with which Fiji's military can impose restrictions on society does not bode well for mitigating the risks of atrocity crimes. While not a clear indicator in and of itself, the accessibility of the military

to the mechanisms of government and the previous record of instability caused by the coups means the potential for the military to take drastic measures to impose law and order in Fiji remains high. This provides the potential for atrocity crimes.

Risk Factor 6: Absence of mitigating factors

Indicator 6.10: Lack of support by neighbouring States to protect populations at risk and in need of refuge, including closure of borders, forced repatriation or aid restrictions.

This Indicator is relevant for Fiji due to its policies in favour of accepting future climate refugees from other Pacific countries like Tuvalu and Kiribati.⁵³ The former president of Kiribati, through a concept he termed 'migration with dignity', bought 5,500 acres of land in Fiji in the event that his nation could no longer sustain itself due to climate change.⁵⁴

Fiji's willingness to take in climate refugees is significant, given that current international refugee law (the 1951 Refugee Convention) does not recognise those fleeing or displaced from environment related events as refugees. In 2020, there was a case of a Kiribati citizen whose application for refugee status in New Zealand on the basis of climate change induced threat to life, was rejected. However, the Human Rights Committee of the ICCPR recognised that climate change cause a refugee crisis, an acknowledgement that could form a precedent for future changes to international law to provide for refugee applications where a person's life is imminently threatened by climate change. Climate migration is also recognised by the UN Global Compact for Migration.⁵⁵

If other countries in the region are less willing to accommodate climate refugees, it may put more pressure on Fiji to not only assist its internally displaced populations, but also international refugees. Given Fiji is set to remain vulnerable to extreme weather events that have already caused its own population to relocate internally,⁵⁶ the added pressure of refugee populations could increase instability and resource competition, social unrest and violent conflict, with a small risk of atrocity crimes.

Risk Factor 8: Triggering factors

Indicator 8.9: Sudden changes that affect the economy or the workforce, including as a result of financial crises, natural disasters or epidemics.

Predictions suggest Fiji will suffer from more intense tropical cyclones and other extreme weather events. Given the economic reliance on agriculture for many of those in the country, any damage to agricultural production could have serious consequences for the economy and workforce of Fiji. The same applies to the coronavirus pandemic. The potential flow-on effects, such as displacement of workers and mass unemployment, could contribute to an environment conducive to civil unrest and conflict.

Triggering factors by themselves are not an indication of impending atrocity crimes, but as mentioned in **Risk Factor 3**, in a context of instability arising from sudden change in the national economy, Fijian security forces have the means to enforce measures that may raise the risks of atrocity crimes.

Summary

Fiji is highly vulnerable to the short- and long-term effects of climate change. Fiji is subject to potentially catastrophic climate events such as flooding, cyclones and multiple landslips that impact the economy and infrastructure of the country.⁵⁷ Predicted effects such as sea level rise and land degradation could have profound consequences for agriculture, coastal development and even some urban centres. Fiji is exposed to significant risks that climate change is likely to amplify.

The increased pressure exerted on the country and the cost of any attempts to mitigate and adapt to such change raise the potential for instability and conflict, especially along ethnic lines or over resource scarcity. Issues relating to climate refugees, weak state structures and a security sector that holds substantial power and limited transparency, may heighten the risk of atrocity crimes.

Therefore, while climate change is unlikely to directly cause atrocity crimes, there is potential that existing risks within Fiji could be heightened by the effects of climate change, to the point where atrocity crimes may eventuate.

PAPUA NEW GUINEA

Like Fiji, Papua New Guinea (PNG) is vulnerable to acute environmental events such as cyclones and storms, although it has suffered fewer cyclones in the period measured between 1969 and 2010. PNG's terrain consists of mountainous jungles and rolling foothills, with coastal lowlands situated in the east. Therefore, it is not as directly susceptible to long-term sea level rises as the more low-lying Pacific nations. However, a significant portion of its population resides in the eastern coastal areas of the Tasman, Nuguria, Nissan, Mortlock and Carterets Islands and there is concern they will be affected by rising sea levels. By 2030, there is a projected increase of 4 to 15 cm in sea levels in a high emissions scenario.⁵⁸

There are many existing tensions in the country as well as past and current violence, and issues around resource management and extraction industries. Climate change may exacerbate these current instabilities, which could increase the risk of atrocity crimes.

Risk Factor 1: Situations of armed conflict or other forms of instability

Indicator 1.1: International or non-international armed conflict.

PNG is one of the most ethnically and linguistically diverse countries in the world. Over 800 different languages are spoken in the country, with the basic unit of social organisation based around clans and tribes. The associated diversity of social and cultural customs is also the result of the varied landscapes of the country, isolating communities from each other and from the central government in Port Moresby. This makes governance complex, especially in the Highlands, where the remoteness of the terrain reduces the accessibility of basic services. Loyalty to the local group tends to override loyalty to the state, and traditional customs remain the primary authority.⁵⁹

Traditional customs include tribal violence, which is governed by rules passed down over generations. However, in the past few decades, these customs have broken down and violence in PNG has taken a more unpredictable and dangerous direction. Traditional weapons have been replaced with modern firearms and explosives, leading to more sudden and deadly outbreaks of violence, with greater numbers of victims. The remoteness of the terrain, especially in the Highlands, curtails effective law enforcement, leaving many civilians at risk of massacres and sexual and gender-based violence.⁶⁰

In the context of climate change, these conflicts may spread from localised tribal and geographic areas to other parts of PNG, as well as grow in intensity. As mentioned in Part 1 of this report, while climate change may not directly cause conflicts, it can exacerbate the length and intensity of existing ones, or fuel dormant tensions. Due to the entrenched nature of PNG's tribal violence, its geographic vulnerability to climate changes and harmful extractive resource practices that have already caused violence to occur (see other Indicators below), climate change could have a profound effect on conflict in PNG, and on the potential for atrocity crimes.

Indicator 1.3: Humanitarian crisis or emergency, including those caused by natural disasters or epidemics.

PNG is highly susceptible to natural disasters such as earthquakes, droughts, floods, and volcanic eruptions. Populations in the rural and remote areas of the country often experience the worst effects of disasters.⁶¹ As climate change continues, projections predict that although the frequency of natural disasters may fall, those that do occur are likely to be more severe.⁶² Previous responses to natural disasters and recovery efforts by the PNG government have been inadequate, with aid and rebuilding efforts stymied by the geography of isolated regions.⁶³ In the wake of humanitarian crises, affected populations can be left without basic needs in areas where government services are already limited. This could lead to further instability and violence.

Indicator 1.7: Economic instability caused by scarcity of resources or disputes over their use or exploitation.

Use of customary land, and its loss, is an issue that is highly likely to cause conflict in PNG.⁶⁴ Loss of land through natural disasters and weather events displaces populations and puts further stress on land rights and agricultural livelihoods. With tribal links remaining strong in PNG, any instability to a group's land from climate events is likely to cause conflict with those in search of safe haven. Given the increasing brutality of violence over past years, there is a high risk that any violence brought about by land and resource scarcity could result in the commission of atrocity crimes.

Indicator 1.8: Economic instability caused by severe crisis in the national economy.

While up to 80% of PNG's population relies on agriculture to survive,⁶⁵ it is the government that has primarily benefited from a resource boom of mining minerals and oil and gas extraction. While the country has gained large profits from the export of such commodities, an economy based on extractive industries means it is subject to the boom and bust cycle and changing prices of the commodity market.⁶⁶

This inherent instability in the national economy means that changes to the financial markets could lead to a severe crisis. Further, as the resources are based in PNG's natural environment, changes to the extractive process due to extreme weather events or other climate change effects could jeopardise the process and in turn the profits garnered from it. If losses are sufficient to cause an economic crisis, the flow on effects to a society anchored on the natural environment could be devastating. Widespread instability of this kind could affect the validity and effectiveness of government authority. Particularly in areas where such authority is already weak, the risk of atrocity crimes will rise.

Indicator 1.9: Economic instability caused by acute poverty, mass unemployment or deep horizontal inequalities.

Despite large profits from extractive resources, PNG remains an underdeveloped country, with widespread poverty and inequality.⁶⁷ It is a country in the grip of the 'resource curse', where other areas of the economy such as health, infrastructure and employment suffer while one sector - extractive industries - takes precedence.⁶⁸

Widespread disadvantage and poverty in PNG could contribute to an environment conducive to atrocity crimes. Since much of the population relies on agricultural and rural land, its loss due to climate change could cause economic instability and exacerbate existing inequalities. Moreover, the likelihood of a limited government response especially in isolated and remote areas, instability could escalate into conflict, with the subsequent risk of atrocity crimes. See **Risk Factor 4** for more information on the extractive resource industry in PNG.

Risk Factor 2: Record of serious violations of international human rights and humanitarian law

Indicator 2.2: Past acts of genocide, crimes against humanity, war crimes or their incitement.

Tensions remain over the campaign of Bougainville, a semi-autonomous province of PNG, to gain full independence. A bloody decade-long civil war between the PNG government and Bougainville rebels killed between 10,000 - 20,000 people and saw the commission of numerous atrocity crimes.⁶⁹ A peace agreement was signed in 1998 which contained a provision for a referendum on Bougainville independence. Despite many delays, voting concluded in December 2019, with an overwhelming majority of Bougainvilleans voting for full independence from PNG.⁷⁰ The vote is non-binding however, and the PNG government will have the final say. Both parties indicated they will negotiate the outcome of the referendum in good faith, though discussions have mostly stalled due to the coronavirus pandemic. In September 2020, former rebel military leader Ishmael Toroama was elected as president of Bougainville.⁷¹ There remains friction between Bougainville officials and mining companies over the possibility of reopening the Panguna copper mine, where interactions with the mine's owners and Bougainville residents catalysed the civil war. See **Risk Factors 4 and 8** for more information on the effects of resource extraction on PNG.

Indicator 2.3: Policy or practice of impunity for or tolerance of serious violations of international human rights and humanitarian law, of atrocity crimes, or of their incitement.

This Indicator is relevant to sexual and gender-based violence (SGBV), which is widely regarded as an epidemic in PNG.⁷² Domestic and family violence, intimate partner violence, bride price, child abuse and sorcery-related killings are rife, as are all forms of sexual violence. More than two-thirds of all PNG women and 80% of children have been a victim of SGBV at some time in their lives.⁷³

The PNG government has responded by enacting legislation and acceding to international laws that seek to reduce SGBV, however weaks of judicial and law enforcement institutions (see **Risk Factor 3** below), and the pervasiveness of stereotypes of masculinity mean that PNG society continues to tolerate SGBV. The risk of atrocity crimes is closely linked with gender inequality and gendered violence.

There could be an additional dynamic of climate change on SGBV and gendered atrocity crimes. This could include climate effects on resource extraction and agricultural industries, the gender inequality in those workforces, and the potential financial hardship and unemployment that could result from climate change. Evidence from resource-rich and agricultural-based economies in Africa and South America shows that sexual assault, sex trafficking and other forms of SGBV are common in environment-dependent industries.⁷⁴ SGBV also tends to increase in the wake of natural and humanitarian disasters, which are likely to be extreme as climate change continues. Changing gender dynamics due to climate change are beyond the scope of this report, but they are important to note given the prevalence of SGBV in PNG. Domestic and family violence, sexual violence, and other gendered issues like transactional sex and forced prostitution⁷⁵ form part of any future analysis on the connections between climate change, gender and atrocity crime.

Risk Factor 3: Weakness of State structures

Indicator 3.2: National institutions, particularly judicial, law enforcement and human rights institutions that lack sufficient resources, adequate representation or training; and,

Indicator 3.5: High levels of corruption and poor governance.

Governance structures in PNG remain weak. High levels of corruption within government and a general lack of transparency, continue. Government institutions and services are especially inadequate in remote areas, which rely on traditional methods of law and justice, leadership and governance, and social systems.

Village courts were established to balance the rural population's access to the justice system with their respective customs and languages, through restorative justice mechanisms.⁷⁶ While Village courts help keep the peace and address grievances in communities isolated from legal resources and in line with traditional practices, these models are not always effective in achieving justice. Village courts have been known to promote compromises and compensation between aggrieved parties or to accept admission of shame by the wrongdoer as the sole outcome.⁷⁷ This emphasis can lead to impunity for offenders in remote communities and further, fail to protect victims from repeated violence or danger (this is especially pertinent to cases of SGBV, see previous Indicator 2.3).

The other factor complicating PNG's governance is a high level of corruption, with a consistently low rating on Transparency International's Corruption Perception Index.⁷⁸ High levels of corruption limit the effectiveness of public service delivery, legal processes and law enforcement. The perception of corruption within the security sector and the overall public governance framework has seen the rise of an extensive private security industry,⁷⁹ and while this fills security gaps in some contexts, it is not unproblematic.⁸⁰

These weaknesses in state structures constitute an important risk factor for atrocity crimes in PNG, one which climate change has the potential to aggravate. With the predicted intensity of natural disasters and subsequent humanitarian crises, weakness of national institutions leads to slower response times and the provision of aid. Those affected by disasters are therefore likely to remain vulnerable for longer periods of time, not only to poverty and disease but to violence in temporary shelters and other threats to their safety. The reaction of PNG's government to coronavirus cases on its western border with Indonesia gives may indicate some of the struggles that institutions face in addressing serious humanitarian crises.⁸¹

In the case of resource scarcity and social unrest, along with underlying intergroup conflicts, the risk of atrocity crimes is amplified. So too, the reliance on Village courts and absence of other forms of justice, may reduce the potential to hold perpetrators of atrocity crimes accountable.

Risk Factor 4: Motives or incentives

Indicator 4.2: Economics interests, including those based on the safeguard and well-being of elites or identity groups, or control over the distribution of resources.

Extractive operations in developing countries established by transnational corporations have had adverse consequences for many host communities. Resource extraction practices such as mining, forestry and fishing, necessarily have detrimental environmental effects that weigh against their economic and social benefits. Large-scale extraction operations also contribute to climate change through the emission of greenhouse gases into the atmosphere and the rise of global temperatures.⁸²

While resource extraction operations can have economic benefits for the countries in which they operate, these benefits are held largely at the macroeconomic level. In remote and developing communities, where many extraction operations are based, the advantages are much more ambiguous, with local communities having little say in government decisions and facing upheavals in traditional social structures. These include forced removal from their land, loss of livelihoods tied to that land, and increased chances of violence between displaced and local communities.⁸³ In PNG, violent clashes between landowners of different clans and security personnel hired by extraction operations have occurred.⁸⁴ In addition, corporations in charge of the operations and the PNG government have been the main recipients of the profits, while local communities have received very little or nothing at all. Traditional livelihoods based on land use and rights can become untenable given the environmental degradation caused by extraction operations.⁸⁵

Inequalities between government and the private sector on one hand, and local communities on the other, become more entrenched in these circumstances. The denial of proper compensation by the mining operators further inflames that situation, and has resulted in violent conflict.⁸⁶ As previously mentioned in **Risk Factor 1**, violent conflict between tribes over land use is a common and historical phenomenon in PNG. The upheaval caused by resource extraction operations in local social and economic spheres has seen a rise in attacks over control of the resources. The deadliness of these conflicts continues to escalate with firearms an increasingly common armament among participants. As long as extractive resource projects run by transnational corporations continue to aggravate land ownership disputes and deny reparations and compensation to local communities adversely affected by their operations, feelings of inequality and injustice are likely to fuel conflicts. Moreover, as mentioned in **Risk Factor 3**, the PNG government lacks the capacity or will to properly police or legally mitigate the violence, especially in more remote communities.

In the context of climate change, these circumstances could worsen. If intense natural disasters and other climate change effects compromise land and resource supply, the remaining land and resources become more valuable to those who control them. For mining corporations, this control may be reinforced with extra security on the ground or legal agreements with the PNG government. It will be more difficult for traditional landowners and local communities to gain or retain access to land if they are forcibly displaced by climatic events. Negative feelings towards mining operations and ready availability of firearms may lead to violent attempts to wrest control of the resources from the mining corporations and in turn, violent clashes.⁸⁷ Security personnel contracted by the corporations, and elements of PNG security forces, have been accused of human rights abuses in the past (see **Risk Factor 8**), further bolstering resentment and a willingness to resist, sometimes violently. Given increased demand for resources in the wake of climate change events and the subsequent need for continued income and livelihood, any resulting conflict may give rise to atrocity crimes committed either by locals or by forces aligned to the mines. Given the power and government influence that mining corporations possess, they have a greater capacity to crackdown violently, with an associated potential for atrocities.

Risk Factor 6: Absence of mitigating factors

Indicator 6.10: Lack of support by neighbouring States to protect populations at risk and in need of refuge, including closure of borders, forced repatriation or aid restrictions.

In partnership with Australia, PNG established the Pacific Solution to process refugee claims on the Manus Island Regional Processing Centre. While the centre is now closed, both the PNG and Australian governments faced serious and sustained criticism from human rights advocates and the UNHCR for their treatment of refugees.⁸⁸ There is a broader lack of infrastructure and political will in PNG to effectively support refugees. Despite migrants from the Carteret Islands already forced to relocate to Bougainville due to environmental effects, PNG's government has been unable to effectively address the plight of its own climate migrants.⁸⁹ Refugees on Manus Island and subsequently housed in alternate accommodation were subject to local and institutional prejudices and threats of violence, which local police did little to stop.⁹⁰ Given this, PNG is unlikely to welcome the addition of climate refugees from other Pacific countries. Due to laws and customs surrounding land ownership – which are prone to causing outbreaks of violence – resettlement would also likely cause problems among tribal landowners. Climate refugees in PNG would face the risk of ongoing vulnerability as negative public sentiment and weakness in governance prevents proper restitution and asylum processes. That vulnerability would also be heightened by high levels of violence and government corruption and inefficiency, leading to a potential for human rights abuses, exploitation and in the context of violent conflict, atrocity crimes.

Risk Factor 8: Triggering factors

Indicator 8.9: Sudden changes that affect the economy or the workforce, including as a result of financial crises, natural disasters and epidemics.

The vulnerability of PNG to natural disasters and extreme weather events, combined with a reliance on agriculture, means any detrimental environmental change is likely to have a corresponding effect on the economy and workforce.⁹¹ This is evident in mining operations and other extractive practices that have forced landowners from their land without sufficient compensation or alternative incomes (**Risk Factor 4**).

Natural disasters, exacerbated by climate change effects, will also have a huge impact on the national economy, by creating economic and humanitarian crises. The PNG government has a poor record in responding to such crises,⁹² that is likely to be repeated in the face of ever more intense events caused by climate change. Further,

The ready access to weapons and the ingrained culture of tribal violence in PNG could result in communities disaffected by economic problems turning to violence. The likelihood of social and political unrest, exacerbated by underlying resentments, would be fuelled by unemployment and poverty. The PNG government, in such a case, may choose to intervene with a violent crackdown against any protests, peaceful or violent, especially if they impinge on extractive resource operations critical to the national economy. Private mining companies would also likely respond with their own security forces. Regardless of which party instigates or escalates violence, a disaffected population with the means and opportunities for violence following a triggering event such as a natural disaster, and inflamed by government repression, and apathy by the mining companies, could create the potential for atrocity crimes.

Indicator 8.10: Discovery of natural resources or launching of exploitation projects that have serious impact on the livelihoods and sustainability of groups or civilian populations.

As mentioned in **Risk Factor 4**, mining and other extractive resource industries in PNG are a great economic boon for the country, but also a source of unrest and violence. These phenomena have profound effects on the livelihoods of those who live, and make a living on, the areas nearest to these operations. However, mismanagement and intrinsic inequity of resource extraction projects have triggered resentment which has been expressed through violence, peaking in the wake of earthquakes and landslides.⁹³ Displacement from their traditional land (and the source of income it provided) and lack of compensation has resulted in conflict between landowners and mining companies.⁹⁴ While outbreaks of violence are the most overt symptoms of extraction projects on the lives of the local communities, many other phenomena occur over the longer term that are not immediately apparent following the establishment of an operation.

The Porgera gold mine, run by Canadian company Barrick Gold Corp, is an example of the effects resource projects have on the livelihoods of local populations surrounding them. Since opening in 1990, the mine has made up 12% of PNG's resource exports and extracted millions of ounces of gold. Yet it has also been the source of multiple recorded human rights abuses, including those stemming from environmental pollution, damage to health, workplace injuries and disputes, sexual assaults, forced evictions and unlawful killings.⁹⁵ Barrick Gold Corp has also historically been dismissive of accusations of human rights violations levelled at its employees. The area around the mine has long been underdeveloped by the PNG government, and the economic opportunities brought to the area by the mine saw an influx of people looking for work as well as undertaking illegal mining activities on discarded waste from the mine. While the majority of these illegal mining activities are non-violent, some have conducted raids on the mine's stockpiles and in the mine itself, fighting with the mine's security personnel.⁹⁶

There are two main results that have manifested at Porgera. The first is the effect on the local economy. The second relates to the actions of security personnel that have committed human rights abuses in the absence of viable state institutions. The mine has provided a jobs and compensation for land use to locals and those who moved from other parts of PNG. However, the number of economic migrants far outnumbers the jobs available, resulting in an increase in slum like conditions and illegal mining activities, along with other forms of criminal activity, in an effort to replace traditional livelihoods that were present before the introduction of the mine. Further, the local environment, intrinsic to such livelihoods, is no longer able to sustain the popula-

tion due to pollutants that have flowed into nearby rivers and surrounding land. This has left the population around the mine, both locals and migrants, with feelings of intense disillusionment.

Resentment and tensions are compounded by the actions of the mine's personnel in response to local dynamics. There are multiple reports of security personnel carrying out extrajudicial killings against locals, and sexual assaults including gang rapes of local women. The rates of these abuses are likely to be underreported, due to fear and stigma, a lack of confidence in justice processes, and mistrust of security services.

The result is a highly unstable area with irreversible damage across environmental, cultural and social spheres. Further environmental degradation, through ongoing extractive practices or intense natural disasters, is likely to exacerbate the instability and negatively affect the livelihoods of those in the region. Moreover, continued extractive practices contribute to climate change, thus perpetuating the cycle.

The lack of alternative means for earning a living could easily lead to a population desperate for the profits of the gold mine, especially if resources become scarcer due to climate change effects. The recourse to violence, availability of weapons, and the antagonistic attitude to mining and security personnel could see a breakout of widespread conflict and further instability in an already vulnerable area, resulting in a higher risk of atrocity crimes.⁹⁷

Finally, the influx of economic migrants to the area around the Porgera mine may also be indicative of a potential scenario in much of PNG. Climate change will see a rise in internally displaced climate migrants looking for land and replacement livelihoods. Given the PNG government's response to current migrant and refugee issues, further economic and climate migrant movements in the country could see a deterioration in local conditions and an increase in instability that could lead to conflict and atrocity crimes.

Summary

PNG's geography and ethnic diversity, along with customs around land use, ownership, and violence, and its reliance on land and resources, make it vulnerable to the onset of climate change effects. Its agriculture-based population will be affected by intense natural disasters and environmental degradation, aggravated by resource extraction practices. Increasing tribal violence, intrinsic within PNG society, is a likely consequence of any resulting resource scarcity and inequality. Weak state infrastructure and inadequate services, are also a risk. PNG already has many existing vulnerabilities to atrocity crimes. **Climate change is likely to heighten and intensify current vulnerabilities and overwhelm an already unstable state.**

PART 4: CONCLUSION AND RECOMMENDATIONS

Atrocity crimes are understood as the most serious crimes against humankind, affecting the core dignity of human beings. Early warning mechanisms like risk analyses, can help identify and mitigate the processes that lead to a high risk of atrocity crimes. **Climate change, as a problem with global, far-reaching and existential ramifications, must be included in atrocity prevention strategies.** This report has explored the possible effects of climate change on the potential for atrocity crimes, with a preliminary analysis of the Pacific Island nations of Fiji and Papua New Guinea which are considered by the IPCC to be acutely vulnerable to climate change. Using the atrocity prevention framework and applying a climate change lens, **this report finds that climate change has the potential to act as an amplifier or threat multiplier of existing vulnerabilities in countries with underlying risk factors.**

Both PNG and Fiji rely on agricultural and natural resource industries for their economic wellbeing. Climate change induced environmental effects can cause economic shocks, resource scarcity and widespread unemployment, while also disrupting traditional cultures and livelihoods. Intense weather events as climate change continues, as well as sea level rise, will cause humanitarian crises to which the government's response is likely to be inadequate and slow. While climate change is viewed primarily as an environmental problem, its social, political and cultural impacts will be felt in terms of social unrest, intergroup tensions, displacement and migration, and potential violent conflict. For Fiji and PNG, inherent weaknesses in state structures and governance architecture could be exacerbated by the effects of climate change, and combined with the importance of the extraction industry to their economies, may increase the risk of atrocity crimes. Research has not found that climate change is a root or direct cause of atrocity crimes in and of itself. But where there is, for instance, a history of conflict, a lack of accountability for past crimes, human rights violations, and high rates of SGBV, climate change may escalate the risk of violent conflict and the commission of atrocity crimes.

Atrocity prevention with a climate change lens involves strategies to increase resilience to environmental and economic crises, strengthen government institutions and frameworks, and protecting vulnerable communities. The principle of R2P, which requires states to protect populations from atrocity crimes, depends on early warning and risk analysis. Thematic influences on atrocity prevention, such as gender, hate speech, and more recently, Covid-19, are all important considerations. Given the impact of climate change on our global community, it too must form a significant element of atrocity prevention frameworks.

To that end, this report posits the following recommendations.

The international community, via the UN and INGOs, should:

- Acknowledge the social, cultural and economic impacts of climate change, including on the potential for violent conflict, and include these factors in the development of international policy and law.
- Examine current international laws to accommodate for events occurring due to climate change. In particular, review the 1951 Refugee Convention with attention to the definition of refugees, considering the likelihood of future displacement due to environmental events.
- Incorporate a climate change lens into conflict mitigation and atrocity prevention, for example by updating The Framework of Analysis for Atrocity Crimes to include risk factors or indicators that take into account the effect of climate change on atrocity crime risk.
- Consider the amplifying effects of climate change on situations of armed conflict, and ensure development and peacebuilding programs account for climate change variables in design and implementation.

Nation states should:

- Consider the potential economic, social and political impacts of climate change to inform more holistic policy responses, both within the domestic and international spheres.
- Develop strategies and responses to climate change events that account for the possibility of escalating violence and atrocity crimes.
- Support nation states in the Pacific and elsewhere to adhere to the responsibility to protect,

especially in the wake of environmental disasters, with measures that take into account the potential heightening of atrocity crime risk due to climate change.

- Develop national and local adaption and mitigation strategies for climate change effects and work towards greater transparency, more effective governance and service delivery, and ensure consultation with local communities in policy development.

Civil society organisations should:

- Raise awareness of the effects of climate change on atrocity crime risk via advocacy and consultation with governments, multinational corporations and other stakeholders.
- Advocate for recognition of the effects of climate change on human rights, conflict and other social, political and economic issues, and incorporate a climate change lens into peacebuilding programs.
- Work at the local, state and international levels to make connections between the climate change and atrocity prevention fields, to better support and collaborate on overlapping issues.

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