

In RE: National Inquiry on the Impact of Climate Change on the Human Rights of Filipino People, and the Responsibility Therefor, if any, of the Carbon Majors, CHR-NI-2016-0001

Amicus Curiae brief, submitted by Timothy Crosland, Director, [Plan B](#)

"If we don't act boldly, the bill that could come due will be mass migrations, and cities submerged and nations displaced, and food supplies decimated, and conflicts born of despair."

Barack Obama, September 2016

"If we don't speak out now, if we don't raise our voice, then we will die."

Saul Luciano Lliuya, a Peruvian farmer whose Andean village is threatened by glacial melt

Contents

1. [Introduction](#)
2. [Jurisdiction](#)
- 2.1 [‘The effects doctrine’, the ‘no harm principle’ and the duty to safeguard human rights](#)
- 2.2 [Jurisdiction in relation to the Petition](#)
- 2.3 [Jurisdiction over the ‘carbon majors’](#)
3. [The Relationship between climate change and human rights generally](#)
4. [The Right to Life](#)
- 4.1 [When is the right to life engaged?](#)
- 4.2 [The right to an effective remedy](#)
- 4.3 [Determining responsibility](#)
5. [The causal relationship between anthropogenic greenhouse gas emissions and interference with the rights to Filipinos](#)
- 5.1 [Technical assessments relating to the risks from anthropogenic greenhouse gas emissions generally](#)
- 5.2 [Assessments specific to The Philippines](#)
6. [Evaluating the responsibility of ‘carbon majors’ for violations of human rights, and specifically the right to life](#)
- 6.1 [The horizontal application of human rights – the direct obligation of carbon majors to avoid interference with the right to life](#)
- 6.1.2 [Whether a person or entity has breached the right to life](#)
- 6.2 [Breach of an obligation of a duty of care regarding the impacts of their activities on The Philippines](#)
- 6.3 [Accountable on the basis of the principle of ‘the polluter pays’](#)
- 6.4 [Date of knowledge](#)
- 6.5 [Acts and omissions](#)
- 6.6 [Causation](#)
- 6.6.1 [Introduction](#)
- 6.6.2 [Adapting the ‘but for’ test in cases of complex causation](#)
7. [State accountability](#)
8. [Conclusion](#)
9. [Remedies](#)

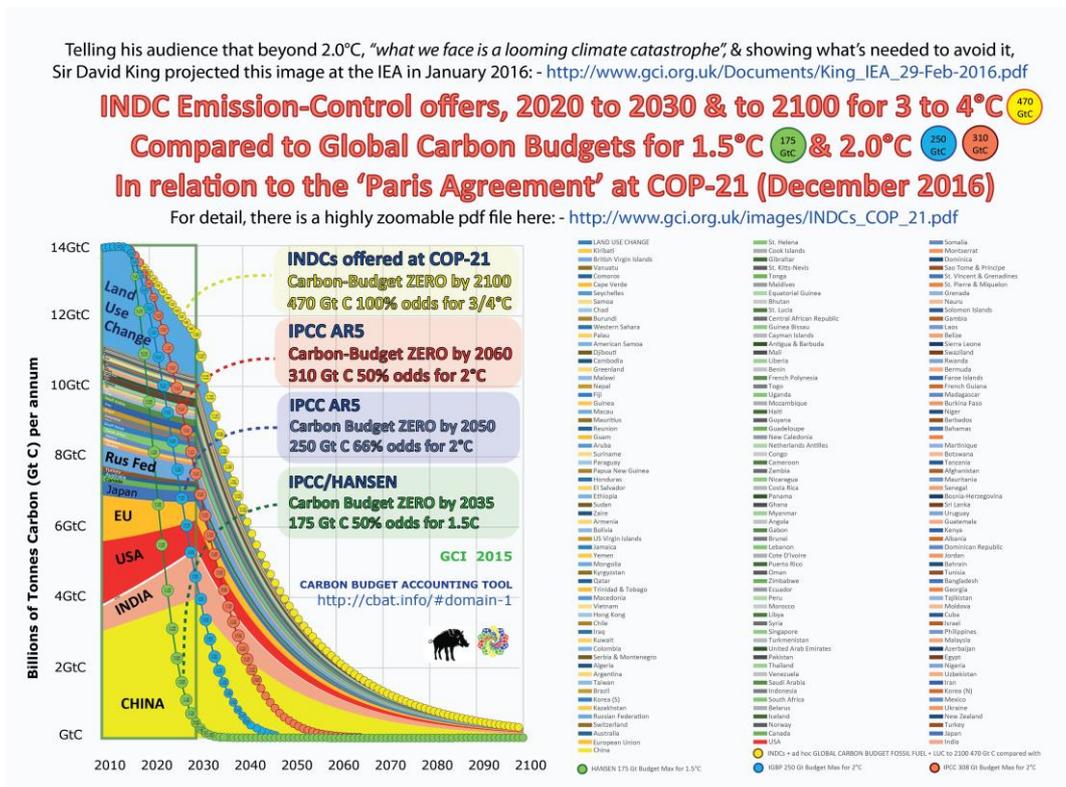
1. Introduction

[Plan B](#) is a charitable incorporated organization (CIO), registered in the UK, and regulated by the UK Charity Commission. Its charitable purposes include:

to promote human rights (as set out in the Universal Declaration of Human Rights and subsequent United Nations conventions and declarations) in so far as they are threatened or adversely affected by the impacts of climate change and other environmental degradation, in particular by:

- (i) preventing infringements of such rights;
- (ii) obtaining redress for victims where such rights are infringed;
- (iii) promoting respect for such rights among individuals, investors and corporations; and
- (iv) providing technical advice to governments and others on relevant matters of human rights.

Climate change poses a grave threat to the human rights of people around the world, in particular those in regions most vulnerable to its impacts. Governments have agreed that warming must be limited to 1.5 or 'well below' 2C, yet the aggregate of national commitments (agreed under the same UN process) leaves the world on track for average 3-4C warming (see graphic below, as presented by Sir David King, the UK's Special Representative for Climate Change, to the International Energy Agency in January 2016):



The gap between 1.5 and 4C is the difference between life and death on a vast scale. The *Paris Agreement* does not impose accountability for meeting the target of 1.5 or ‘well below’ 2C and it is the premise of Plan B that without accountability the target is unlikely to be met. Plan B’s principle objective is to support judicial and other processes, which advance accountability for climate change (and consequently enhance the prospects of avoiding ‘looming catastrophe’). Recognising the scientific, legal and economic complexities that risk obscuring the attribution of responsibility, Plan B, develops analysis and resources to assist lawyers, courts and others.

I, Timothy Crosland, the undersigned, am the Director of Plan B, and a barrister-at-law, qualified in England and Wales. I hold an LLM in International Human Rights Law from the University of Utrecht. I have advised numerous governmental organisations on their human rights obligations. For a time I was Head of Legal at what was the UK’s National Criminal Intelligence Service (NCIS). In the course of this role I advised on matters such as the handling of human informants overseas, international kidnap situations and the sharing of intelligence with foreign military organisations. Such situations demanded a detailed knowledge of human rights law and its cross-border application, including in particular the ‘right to life’. I have led various projects to support developing countries in implementing legal frameworks, working with amongst others the Governments of Kenya, Ghana and Nigeria. My understanding of human rights is informed by a combination of academic research, practical experience and work in a range of different jurisdictions.

These proceedings address matters that have been subject to consideration in different *fora* around the world. The intention of this *amicus curiae* brief is to supply the Honourable Commission with international jurisprudence and other materials, in the hope that they will be of assistance in resolving the issues for its determination. It does not constitute legal advice.

2. [Jurisdiction](#)

2.1 [‘The effects doctrine’, the ‘no harm principle’ and the duty to safeguard human rights](#)

Climate change is cross-border in nature and it is common for ‘climate change litigation’ to raise questions of jurisdiction. One principle of general application is ‘the effects doctrine’, which gives states jurisdiction over conduct, which has impacts within their territory, even where the conduct itself takes place beyond their borders. In *United States v Aluminum Co of America (Alcoa)*¹, for example, the US Court of Appeals

“held that it was settled law...that any state may impose liabilities...for

¹ 148 F.2d 416 (2d Cir. 1945)

conduct outside its borders that has consequences within its borders”².

The principle is the logical counterpart of the ‘no harm principle’ in public international law, a principle that is specifically referenced in the Preamble to the UN Framework Convention on Climate Change:

Recalling also that States have, in accordance with the Charter of the United Nations and the principles of international law ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

It follows that where states fail to prevent activities within their jurisdiction damaging the environment beyond their borders, the affected states should have jurisdiction over the relevant conduct.

Such an extension of jurisdiction is also consistent with the fundamental duty of states to protect their people. Ultimately people will reject a government that abandons them on the basis that it ‘lacks the jurisdiction’ to protect them from harm.

2.2 Jurisdiction in relation to the Petition

The jurisdiction of the Honourable Commission derives from ***The Constitution of the Republic of the Philippines, 1987, section 18:***

The Commission on Human Rights shall have the following powers and functions:

- (1) Investigate, on its own or on complaint by any party, all forms of human rights violations involving civil and political rights ...*
- (2) Provide appropriate legal measures for the protection of human rights of all persons within the Philippines, as well as Filipinos residing abroad, and provide for preventive measures and legal aid services to the underprivileged whose human rights have been violated or need protection ...*
- (6) Recommend to the Congress effective measures to promote human rights and to provide for compensation to victims of violations of human rights, or their families ...*

These functions are elaborated in ***The Omnibus Rules of Procedure of the Commission on Human Rights, April 2012.***

Rule 2(1): the Commission on Human Rights shall take cognizance of and investigate, on its own or on complaint by any party, all forms of human

² Born, “Application of Federal Statutes in International Cases”, in International Civil Litigation in United States Courts, page 583

rights violations and abuses involving civil and political rights, to include but not limited to the following:

- a) right to life;*
- b) right to liberty;*
- c) right to security ... etc*

Rule 2(2): Corollary thereto, the Commission on Human Rights, in line with its role as a national human rights institution, shall also investigate and monitor all economic, social and cultural rights violations and abuses, as well as threats of violations thereof, especially with respect to the conditions of those who are marginalized, disadvantaged, and vulnerable.

By virtue of Rule 3, it is evidence that both aspects of the Commission's jurisdiction relate to violations of human rights by private parties:

*Rule 3, Section 2: To determine whether civil and political rights have been violated, are being violated ... by ... **private person or entity.***

*Rule 3, Section 3: The objectives of investigation and monitoring of economic, social and cultural rights violations or situations are: to determine the rights violated by State or non-state actors, **including private entities and individuals.***

Rule 7, section 3 makes it clear that as long as there is a complaint of a violation of the human rights of a Filipino (whether resident in The Philippines or abroad) the Honourable Commission has jurisdiction to investigate it *wherever* the violation has occurred, and *whomever* may be responsible:

*... Human rights cases and/or issues involving civil and political, or economic, social and cultural rights which are of domestic and/or international implication/importance such as ... forced evictions and/or illegal demolitions, development aggression, displacements, food blockades, or violations involving civil, political, economic, social or cultural rights and/or threats thereof that affect the underprivileged and/or other vulnerable or marginalized sectors, or community of persons, **regardless of the situs of the violation and/or the personalities involved or implicated in the human rights case or issues,** may be the subject of a public inquiry.*

It is clear therefore, that under the terms of both the Constitution and the Omnibus Rules, the Honourable Commission has jurisdiction to investigate violations of the rights of The Filipino People, regardless of the source of those violations.

Such a position is consistent with international norms. It is the responsibility of governments to take positive measures to protect the fundamental rights of their citizens, regardless of the source of threat. Article 1 of the European Convention on Human Rights, states as follows:

*The High Contracting Parties **shall secure to everyone within their jurisdiction** the rights and freedoms defined in Section I of this Convention.*

In *Soering v United Kingdom* 161 Eur. Ct. H.R. (ser. A) (1989), the European Court of Human Rights, held that the UK government had a responsibility to uphold the rights of an individual in the UK under Article 3 (the prohibition on inhuman and degrading treatment), even where the threat to those rights came from outside the jurisdiction of either the UK or the European Court of Human Rights. In the circumstances of the case this prevented the UK extraditing Soering to the US, for as long as there remained a substantial risk extradition would culminate in his detention on 'death row'.

The Council of Europe, Manual on Human Rights and the Environment, 2012, Part II, Chapter 1 (Right to Life), states as follows:

“(a) The right to life is protected under Article 2 of the Convention: This Article does not solely concern deaths resulting directly from the actions of the agents of a State, but also lays down a positive obligation on States to take appropriate steps to safeguard the lives of those within their jurisdiction. This means that public authorities have a duty to take steps to guarantee the rights of the Convention even when they are threatened by other (private) persons or activities that are not directly connected with the State ...”

More specifically the procedural aspect of the right to life demands an effective investigation into loss of life to determine accountability for violations, as emphasised by the European Court of Human Rights³:

The State’s positive obligation [to uphold the right to life] also requires an effective independent judicial system to be set up so as to secure legal means capable of establishing the facts, holding accountable those at fault and providing appropriate redress to the victim ...

The jurisdiction of the Commission, in other words, is determined by the location (or citizenship) of the victims, and the Commission’s responsibility to uphold the rights of the Petitioners, rather than the identity or whereabouts of those allegedly responsible for the violations.

2.3 Jurisdiction over the ‘carbon majors’

It does not follow from the Commission’s jurisdiction to investigate the matters raised by the Petition, that it has jurisdiction *over* any specific party. Indeed Rule 7, Section 2 of the *Omnibus Rules* implies a different understanding of its role:

³ CASE OF İLBEYİ KEMALOĞLU AND MERİYE KEMALOĞLU v. TURKEY (Application no. 19986/06), 2012

*Nature of Inquiry Proceedings – The investigative and inquiry proceedings of the CHR is fact-finding in nature, **and non-adversarial.***

The due process requirements of Rule 7, Section 10 apply to:

Any person implicated in the complaint for or report of human rights violations ...

The due process requirements apply not because a party is subject to the Commission's jurisdiction, but to ensure that any person whose reputation may be affected by the findings of the Commission should have the opportunity to participate in the inquiry process and to put their side of the case. A 'person implicated', outside the jurisdiction of the Commission, is not compelled to give evidence. Rather they have the opportunity to do so, if they so wish.

Regardless of whether the carbon majors are subject to the jurisdiction of the Commission, they are given an opportunity to participate in the process and influence the findings of the Commission.

Where the surrounding circumstances are complex, as here, individual victims will often be in a weak position to determine accountability for the violations of their rights, and will consequently be unable to seek remedial action. They are reliant upon the Honourable Commission to conduct this investigation as a precondition to their rights being given practical effect ⁴.

3. The Relationship between climate change and human rights generally

The Petition alleges violations of a wide range of human rights, including those falling into the category 'civil and political', and others, which may be defined as 'social, economic and cultural'. The allegations reflect the interdependency between human rights and a safe climate and environment, an interdependency, which is widely acknowledged in international instruments and jurisprudence.

Principle 1 of the *Stockholm Convention 1972*, for example, states:

⁴ See *Öneryıldız v. Turkey* [GC], no. 48939/99, § 71, ECHR 2004-XII: 'The Court has held that, in relation to fatal accidents arising out of dangerous activities which fall within the responsibility of the State, Article 2 requires the authorities to carry out of their own motion an investigation, satisfying certain minimum conditions, into the cause of the loss of life ... It further observes that, without such an investigation, the individual concerned may not be in a position to use any remedy available to him for obtaining relief, given that the knowledge necessary to elucidate facts such as those in issue in the instant case is often in the sole hands of State officials or authorities.'

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations ...

The Council of Europe, Manual on Human Rights and the Environment, 2012 explains:

(...)the [European Court of Human Rights] has emphasised that the effective enjoyment of the rights which are encompassed in the Convention depends notably on a sound, quiet and healthy environment conducive to well-being.

And the Preamble to the *Paris Agreement 2015* includes the following:

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

In Germanwatch's Global Climate Risk Index 2015⁵, The Philippines is ranked as the country most affected by climate change (based on data for 2013), and as the fifth most affected country over the 20-year period between 1994 and 2013. Other international indices also rank The Philippines similarly highly in terms of climate change vulnerability⁶. The death toll from super typhoon Yolanda and others is well known, and the Petitioners provide direct evidence regarding impacts already felt. It is evident, beyond serious contention, that climate change presents a grave threat to the rights of Filipinos generally.

In summary it is well established that anthropogenic greenhouse gas (GHG) emissions present a serious threat to human rights. The fact that the threat does not originate within The Philippines, and is therefore beyond the control of Filipinos themselves, is an additional reason for the Honourable Commission's intervention.

4. [The Right to Life](#)

⁵ <http://germanwatch.org/en/download/10333.pdf>

⁶ See, for example, Verisk Maplecroft: Maplecroft identifies 32 'extreme risk' countries in its Climate Change Vulnerability Index (CCVI), which evaluates the sensitivity of populations, the physical exposure of countries, and governmental capacity to adapt to climate change over the next 30 years. Bangladesh (1st and most at risk), Sierra Leone, South Sudan, Nigeria, Chad, Haiti, Ethiopia, Philippines, Central African Republic and Eritrea are the ten countries facing the highest levels of risk.

‘The right to life’ is the most fundamental of human rights. It is the first specific right to be mentioned in the UN’s Universal Declaration of Human Rights (Article 3):

Everyone has the right to life, liberty and security of person.

It is the first of the ‘rights and freedoms’ in the European Convention on Human Rights (Article 2):

Everyone’s right to life shall be protected by law.

It is also the first right in The Philippines Bill of Rights (as set out in Article 3, Section 1 of the Constitution):

No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied the equal protection of the laws.

In the words of Thomas Jefferson:

The first duty of government is the protection of life, not its destruction. Abandon that, and you have abandoned all.

Although the Petition refers to a range of different human rights that:

- a) have been violated and; and
- b) are at increasing risk of future violation,

for the purposes of simplicity this *amicus* brief will focus attention on the right to life. It is difficult to envision circumstances in which the Honourable Commission would conclude there had been a breach of the ‘right to adequate housing’, for example, but not of ‘the right to life’. On the other hand, if the Honourable Commission finds a breach of the right to life, interferences with other rights may readily be inferred.

4.1 When is the right to life engaged?

Generally speaking there are three aspects to the right to life:

- (i) a negative obligation to avoid action which deprives a person of their life;
- (ii) a positive duty to take reasonable steps to preserve life; and
- (iii) a procedural duty on States to conduct a proper investigation into alleged violations of the right to life.

All three aspects are relevant to this Petition, which alleges that:

- (i) the actions of the 'carbon majors' are interfering with Filipinos' right to life;
- (ii) there is a corresponding obligation on both the carbon majors and the Government of the Republic of The Philippines to take reasonable steps to preserve life; and that
- (iii) an investigation is necessary to determine responsibility and appropriate remedial action.

The structure of the Petition therefore accords with general principles of human rights law.

The potential for climate change to interfere with the right to life is widely acknowledged by human rights institutions.

The UN High Commissioner for Human Rights, for example, has made the connection with specific reference to loss of life in The Philippines⁷:

Climate change clearly poses a threat to human life ... As highlighted by Renan Dalisay, Administrator of the National Food Authority of the Philippines, Yolanda which "left a path of death and destruction, claiming no less than 7500 precious Filipino lives, mostly in economically vulnerable communities," this threat extends to both present and future generations. Yolanda, or Typhoon Haiyan as it is more commonly known internationally, was an extreme weather event.

According to the IPCC, the risk of having further extreme weather events and the resulting endangerment of human lives is "moderate to high at temperatures of 1°C to 2°C above pre- industrial levels." A recent report by the World Bank affirms this risk, finding that "further health impacts of climate change could include injuries and deaths due to extreme weather events."

In the context of climate change, extreme weather events may be the most visible and most dramatic threat to the enjoyment of the right to life but they are by no means the only one.

The Council of Europe Manual on Human Rights and the Environment, 2012, pays specific attention to the right to life (Part II, Chapter 1):

⁷ See *Understanding Human Rights and Climate Change, Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change, 26 November 2015* (<http://www.ohchr.org/Documents/Issues/ClimateChange/COP21.pdf>)

(a) The right to life is protected under Article 2 of the Convention: This Article does ... lays down a positive obligation on States to take appropriate steps to safeguard the lives of those within their jurisdiction. This means that public authorities have a duty to take steps to guarantee the rights of the Convention even when they are threatened by other (private) persons or activities that are not directly connected with the State. 1. (...) in some situations Article 2 may also impose on public authorities a duty to take steps to guarantee the right to life when it is threatened by persons or activities not directly connected with the State. (...) In the context of the environment, Article 2 has been applied where certain activities endangering the environment are so dangerous that they also endanger human life.

This passage was cited by the District Court of the Hague in the Netherlands in 2015 in a case brought by the Urgenda Foundation against the Dutch Government⁸. The court stated at paragraph 4.74 of its judgement:

If, and this is the case here, there is a high risk of dangerous climate change with severe and life-threatening consequences for man and the environment, the State has the obligation to protect its citizens from it by taking appropriate and effective measures. For this approach, it can also rely on the aforementioned jurisprudence of the [European Court of Human Rights]. Naturally, the question remains what is fitting and effective in the given circumstances. The starting point must be that in its decision-making process the State carefully considers the various interests.

The Court concluded that the Dutch Government was not doing enough to protect its people:

Based on the foregoing, the court concludes that the State – apart from the defence to be discussed below – has acted negligently and therefore unlawfully towards Urgenda ...⁹

In making the connection between climate change and interference with the right to life, the Petition simply reflects accepted principles of international human rights law.

Moreover it is clear that this interference is particularly acute in The Philippines. According to the Germanwatch Report (referred to above), the annual death toll in the Philippines attributable to climate change (for the period 1994 to 2013) is nearly 1000 people a year. In 2013, it was close to 6,500 (more than twice the number killed in the 9/11 terrorist attacks on the US). If the universal right to life demands positive action in The Netherlands, it must do so with even greater force in The

⁸ *The Urgenda Foundation v. Kingdom of the Netherlands, District Court of the Hague [2015] HAZA c/09/00456689, June 2015*

⁹ *Ibid.* Para. 4.93

Philippines. Without urgent action on mitigation and adaptation this death toll will rise with grim inevitability.

In the circumstances it is respectfully submitted that the Honourable Commission's investigation into this interference is:

- Urgent,
- Necessary, and
- Well-founded.

4.2 [The right to an effective remedy](#)

Accepting that climate change constitutes a grave and growing interference with the right to life, the people of the Philippines are entitled to an effective remedy in support of that right (otherwise their rights lack substance).

A range of international instruments regarding environmental law, including Principle 13 of the *Rio Declaration 1992*, reinforce this principle of a right to redress:

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage.

4.3 [Determining responsibility](#)

Whether or not the Honourable Commission has jurisdiction to require the 'carbon majors' to desist from or to take specific action, its mandate to *investigate their responsibility* for the violations is clearly established. Indeed it is only through undertaking such an investigation that the Honourable Commission will be able to make appropriate recommendations for securing the right to life of the people of The Philippines.

It is respectfully submitted that the determination of responsibility falls into 4 parts:

- i) Is the Honourable Commission satisfied that the anthropogenic emission of greenhouse gases is interfering with the rights to life of Filipinos?
- ii) If so, to what extent are the carbon majors responsible for that interference (if at all)?
- iii) If the carbon majors bear no responsibility, where does responsibility lie?
- iv) In light of the conclusions under (i) to (iii) above, what steps does the Honourable Commission recommend be taken in order to safeguard the right to life?

5. The causal relationship between anthropogenic greenhouse gas emissions and interference with the rights to Filipinos

The Honourable Commission may wish to consider two classes of material in considering the relationship between anthropogenic greenhouse gas emissions and interference with the right to life of Filipinos:

- (i) technical assessments relating to the risks from anthropogenic greenhouse gas generally; and
- (ii) assessments specific to The Philippines.

5.1 Technical assessments relating to the risks from anthropogenic greenhouse gas emissions generally

The UNFCCC process is informed by the assessments of the Intergovernmental Panel on Climate Change (IPCC). The most recent report, the Fifth Assessment Report¹⁰, summarises the impacts of anthropogenic climate change as follows:

‘Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development.’[2.3]

‘Climate change is projected to undermine food security. Due to projected climate change by the mid-21st century and beyond, global marine species redistribution and marine biodiversity reduction in sensitive regions will challenge the sustained provision of fisheries productivity and other ecosystem services (high confidence).’[2.3.1, 2.3.2]

‘Climate change is projected to reduce renewable surface water and groundwater resources in most dry subtropical regions (robust evidence, high agreement), intensifying competition for water among sectors (limited evidence, medium agreement).’[2.3.1, 2.3.2]

‘Until mid-century, projected climate change will impact human health mainly by exacerbating health problems that already exist (very high confidence). Throughout the 21st century, climate change is expected to lead to increases in ill-health in many regions and especially in developing countries with low income, as compared to a baseline without climate change (high confidence).’[2.3.2]

¹⁰ See: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf

‘In urban areas climate change is projected to increase risks for people, assets, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, water scarcity, sea level rise and storm surges (very high confidence). These risks are amplified for those lacking essential infrastructure and services or living in exposed areas.’[2.3.2]

‘Aggregate economic losses accelerate with increasing temperature (limited evidence, high agreement).’[2.3.2]

‘Climate change is projected to increase displacement of people (medium evidence, high agreement). Populations that lack the resources for planned migration experience higher exposure to extreme weather events, particularly in developing countries with low income. Climate change can indirectly increase risks of violent conflicts by amplifying well-documented drivers of these conflicts such as poverty and economic shocks (medium confidence).’[2.3.2]

‘Without additional mitigation efforts beyond those in place today, and even with adaptation, warming by the end of the 21st century will lead to high to very high risk of severe, widespread and irreversible impacts globally (high confidence). In most scenarios without additional mitigation efforts ... warming is more likely than not to exceed 4 degrees C above pre-industrial levels by 2100.’[2.3]

The Honourable Commission may also draw assistance from the following reports:

1. *US Department of Defense Report on National Security Implications of Climate Change*, 2015¹¹ which states:

Global climate change will have wide-ranging implications for U.S. national security interests over the foreseeable future because it will aggravate existing problems—such as poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions—that threaten domestic stability in a number of countries. Each GCC’s assessment of risk reflects how this range of factors will affect security in its Area of Responsibility (AOR). GCCs generally view climate change as a security risk because it impacts human security and, more indirectly, the ability of governments to meet the basic needs of their populations. Communities and states that are already fragile and have limited resources are significantly more vulnerable to disruption and far less likely to respond effectively and be resilient to new challenges. Case studies indicate that in addition to exacerbating existing risks from other factors (e.g., social, economic, and political fault lines), climate-induced stress can generate

¹¹ <http://archive.defense.gov/pubs/150724-congressional-report-on-national-implications-of-climate-change.pdf?source=govdelivery>

new vulnerabilities (e.g., water scarcity) and thus contribute to instability and conflict even in situations not previously considered at risk.

GCCs have identified four general areas of climate-related security risks:

▪ Persistently recurring conditions such as flooding, drought, and higher temperatures increase the strain on fragile states and vulnerable populations by dampening economic activity and burdening public health through loss of agriculture and electricity production, the change in known infectious disease patterns and the rise of new ones, and increases in respiratory and cardiovascular diseases. This could result in increased intra- and inter-state migration, and generate other negative effects on human security. For example, from 2006-2011, a severe multi-year drought affected Syria² and contributed to massive agriculture failures and population displacements. Large movements of rural dwellers to city centers coincided with the presence of large numbers of Iraqi refugees in Syrian cities, effectively overwhelming institutional capacity to respond constructively to the changing service demands. These kinds of impacts in regions around the world could necessitate greater DoD involvement in the provision of humanitarian assistance and other aid.

▪ More frequent and/or more severe extreme weather events that may require substantial involvement of DoD units, personnel, and assets in humanitarian assistance and disaster relief (HA/DR) abroad and in Defense Support of Civil Authorities (DSCA) at home. Massive flooding in Pakistan in 2010 was the country's worst in recorded history, killing more than 2,000 people and affecting 18 million; DoD delivered humanitarian relief to otherwise inaccessible areas. Super Storm Sandy in New York and New Jersey in 2012 resulted in over 14,000 DoD personnel mobilized to provide direct support, and at least an additional 10,000 who supported the operation in various capacities in the areas of power restoration, fuel resupply, transportation infrastructure repair, water and meal distribution, temporary housing and sheltering, and debris removal. The need for HADR and DSCA will likely rise as cities expand to encompass the majority of the global population and because flood risk threatens more people than any other natural hazard, especially in urban areas.³ Many growing cities are located in low- and middle-income countries with limited resources. Building partner nation capacity for HA/DR capabilities and civilian-military partnerships for DSCA are important parts of GCC security cooperation efforts. The Office of U.S. Foreign Disaster Assistance (OFDA) is responsible for leading and coordinating the U.S. Government's response to disasters overseas.

▪ Sea level rise and temperature changes lead to greater chance of flooding in coastal communities and increase adverse impacts to navigation safety, damages to port facilities and cooperative security locations, and displaced populations. Sea level rise may require more frequent or larger-scale DoD

involvement in HADR and DSCA. Measures will also likely be required to protect military installations, both in the United States and abroad, and to work with partner nations that support DoD operations and activities. Sea level rise, increased ocean acidification, and increased ocean warming pose threats to fish stocks, coral, mangroves, recreation and tourism, and the control of disease affecting the economies, and ultimately stability, of DoD's partner nations. Some Pacific island nations face the risk of being entirely submerged by rising seas, and most island nations' freshwater supplies will be threatened by saltwater intrusion well before then. Loss of land, especially highly populated and agriculturally rich coastal land, also poses second- order effects on human displacement and economic and food stability, and may further exacerbate challenges associated with disease vectors.

2. Sir David King's 2015 Report, prepared in conjunctions with experts from China, India and the USA, 'Climate Change: A Risk Assessment'¹², which concludes:

[W]e have a battle on our hands: a battle to preserve a safe climate for the future. Powerful forces are engaged in this battle, whether we notice them or not. The power of vested interests to resist change, the inertia of infrastructure systems, and the unyielding laws of thermodynamics all seem to be arrayed against us.

To win this battle, we must deploy equally powerful forces in favour of change ... We must match the laws of physics with a will and a determination that is equally unyielding.

3. Explaining Ocean Warming: Causes, scale, effects and consequences Edited by D. Laffoley and J. M. Baxter, September 2016¹³.

The above are just a selection of recent technical assessments. There are, of course, many others.

5.2 Assessments specific to The Philippines

In addition to the generic assessments referred to above, the Honourable Commission is respectfully referred to the following assessments, which consider more specifically the vulnerability of The Philippines.

The Climate Reality Project as an NGO founded by former US Vice President Al Gore. It reports on the situation in The Philippines as follows¹⁴:

¹² <http://www.csap.cam.ac.uk/media/uploads/files/1/climate-change--a-risk-assessment-v11.pdf>

¹³ https://portals.iucn.org/library/sites/library/files/documents/2016-046_0.pdf

¹⁴ <https://www.climaterealityproject.org/blog/how-climate-change-affecting-philippines>

Haiyan, Thelma, Ike, Fengshen, Washi, Durian, Bopha, Trix, Amy, Nina.

These are the ten deadliest typhoons of the Philippines between 1947 and 2014. What's alarming is that *five of the 10* have occurred since 2006, affecting and displacing thousands of citizens every time. Seven of these 10 deadly storms each resulted in more than 1,000 casualties. But the deadliest storm on record in the Philippines is Typhoon Haiyan, known locally as Typhoon Yolanda, which was responsible for more than 6,300 lost lives, over four million displaced citizens, and \$2 billion in damages in 2013. So what's going on – is the Philippines simply unlucky? Not exactly. The Philippines has long been particularly vulnerable to extreme weather. But in recent years the nation has suffered from even more violent storms like Typhoon Haiyan. On average, about 20 tropical cyclones enter Philippine waters each year, with eight or nine making landfall. And over the past decade, these tropical storms have struck the nation more often and more severely, scientists believe, because of climate change ...

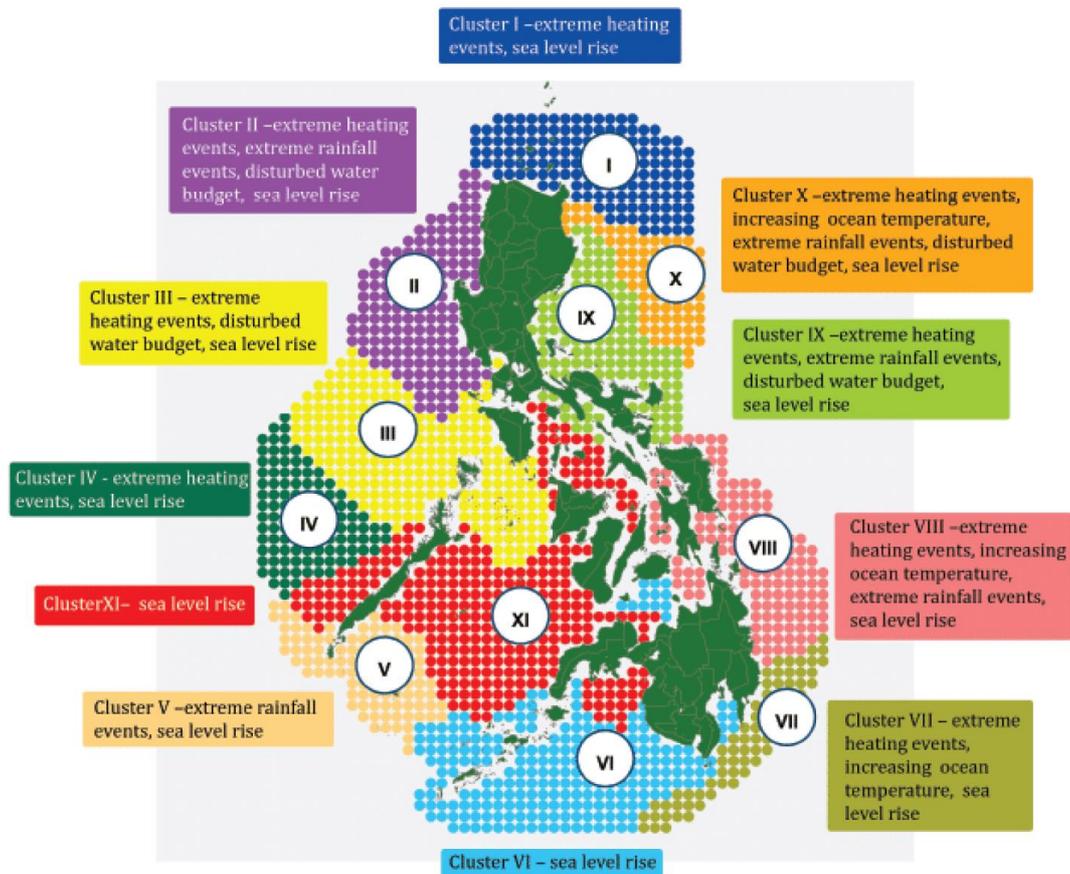
The Global Climate Risk Index 2015 listed the Philippines as the number one most affected country by climate change, using 2013's data. This is thanks, in part, to its geography. The Philippines is located in the western Pacific Ocean, surrounded by naturally warm waters that will likely get even warmer as average sea-surface temperatures continue to rise. To some extent, this is a normal pattern: the ocean surface warms as it absorbs sunlight. The ocean then releases some of its heat into the atmosphere, creating wind and rain clouds. However, as the ocean's surface temperature increases over time from the effects of climate change, more and more heat is released into the atmosphere. This additional heat in the ocean and air can lead to stronger and more frequent storms – which is exactly what we've seen in the Philippines over the last decade.

The Global Climate Risk Index, has already been referred to above.

Attribution of climate extreme events, Kevin E. Trenberth, John T. Fasullo & Theodore G. Shepherd, *Nature Climate Change* 5, 725–730 (2015). This is a technical, scientific paper, which establishes a direct connection between anthropogenic greenhouse gas emissions and Supertyphoon Haiyan.

The graphic below was produced by The Philippines Department of Environment and Natural Resources:

PHILIPPINE EXPOSURE MAP ON CLIMATE CHANGE



It is respectfully submitted that the Honourable Commission may take such assessments into account in considering whether anthropogenic greenhouse gas emissions constitute a threat to the fundamental rights of Filipinos, including specifically, the right to life.

6. Evaluating the responsibility of 'carbon majors' for violations of human rights, and specifically the right to life

'The cost of loss and damage of the 48 least developed countries is currently conservatively estimated to be USD\$50 billion annually, while the 13 biggest fossil fuel companies made more than \$100 billion in profits in 2014.'

Keely Boom, Julie-Anne Richards¹⁵

¹⁵ [Making a Killing: Who Pays the Real Costs of Big Oil, Coal and Gas? \(2015\)](https://www.scribd.com/document/286408432/Making-a-Killing-Who-pays-the-real-costs-of-big-oil-coal-and-gas), Keely Boom, Julie-Anne Richards: <https://www.scribd.com/document/286408432/Making-a-Killing-Who-pays-the-real-costs-of-big-oil-coal-and-gas>

There are three different bases on which the Honourable Commission may hold the carbon majors responsible for violations of human rights consequent on anthropogenic climate change:

- i) The Carbon Majors have breached directly the human rights of the Filipinos, including the right to life;
- ii) The Carbon Majors have acted in breach of a duty of care regarding the impacts of their activities on The Philippines;
- iii) The Carbon Majors are accountable for the damage caused by their products, according to the principle of 'the polluter pays'.

The three bases above are not mutually exclusive: indeed the Honourable Commission may conclude that all three apply concurrently. Common to all three, however, is a requirement to establish a causal relationship between the acts and omissions of the carbon majors, and the interference with the rights of Filipinos. The analysis below will therefore proceed as follows:

- it will consider the different considerations applicable to (i) to (iii) above;
- it will consider the acts and omissions potentially relevant to all of the above; and then
- consider the issue of causation, relating to all of the above.

6.1 The horizontal application of human rights – the direct obligation of carbon majors to avoid interference with the right to life

The Petition appropriately refers to the UN Human Right's Council's 'Guiding Principles on Business and Human Rights'.

The obligation on private parties to respect the human rights of Filipinos, and the Commission's jurisdiction to investigate violations committed by such parties, is apparent from Rule 3 of the *Omnibus rules*:

*Rule 3, Section 2: To determine whether civil and political rights have been violated, are being violated ... by ... **private person or entity.***

*Rule 3, Section 3: The objectives of investigation and monitoring of economic, social and cultural rights violations or situations are: to determine the rights violated by State or non-state actors, **including private entities and individuals.***

Further Rule 7, Section 3 is explicit that the Commission's jurisdiction to investigate relevant interferences of relevant rights applies no matter where the violation occurs:

... violations involving civil, political, economic, social or cultural rights and/or threats thereof that affect the underprivileged and/or other vulnerable or

marginalized sectors, or community of persons, regardless of the situs of the violation and/or the personalities involved or implicated in the human rights case or issues, may be the subject of a public inquiry.

The position is consistent with the approach adopted in other jurisdictions.

In 1997, for example, the Indian Supreme Court considered the relationship between environmental protection and the right to life, and the responsibility of all parties to uphold it¹⁶:

One of the fundamental duties of every citizen as set out in Article 51A(g) is to protect and improve the natural environment, including forests, lakes, rivers and wildlife and to have compassion for living creatures. These two Articles have to be considered in the light of Article 21 of the Constitution which provides that no person shall be deprived of his life and liberty except in accordance with the procedure established by law. Any disturbance of the basic environment elements, namely air, water and soil, which are necessary for "life", would be hazardous to "life" within the meaning of Article 21 of the Constitution ...

In the matter of enforcement of Fundamental Rights under Article 21 under Public Law domain, the Court, in exercise of its powers under Article 32 of the Constitution has awarded damages against those who have been responsible for disturbing the ecological balance either by running the industries or any other activity which has the effect of causing pollution in the environment. The Court while awarding damages also enforces the "POLLUTER PAYS PRINCIPLE" which is widely accepted as a means of paying for the cost of pollution and control.

In 2005 the Nigerian High Court, ruled that practices of the Shell Petroleum Development Company were interfering with the Claimant's right to life¹⁷:

The actions of the 1st and 2nd respondents in continuing to flare gas in the course of their oil exploration and production activities in the applicants' community is a gross violation of their fundamental right to life (including healthy environment) and dignity of human person as enshrined in the Constitution.

¹⁶ *M.C. Mehta v. Kamal Nath, 1997)1 SCC 388*

¹⁷ Nigeria: *Gbemre v Shell Petroleum Development Company Nigeria Limited and Others* (2005) AHRLR 151 (NgHC 2005)

In 2010, the Constitutional and Human Rights Division of the High Court of Kenya, specifically considered whether private entities were bound by human rights obligations under the Constitution of Kenya, Judge Lenaola stating as follows¹⁸:

I am . . . aware that [under the Constitution], this Court is obligated to develop the law to the extent that it gives effect to a right or fundamental freedom; and it must adopt an interpretation that favours the enforcement of a right or fundamental freedom, in order to promote the spirit and objects of the Bill of Rights . . . It is thus clear to my mind that it would not have been the intention of the drafters of the Constitution and the Kenyan people who overwhelmingly passed the Constitution that the Bill of Rights would only bind State Organs. A purposive interpretation . . . would imply that the Bill of Rights binds all State Organs and all persons, whether they are public bodies or juristic persons.

In the UK the *Human Rights Act 1998* has horizontal effect partly because the Courts are treated as ‘public authorities’ for the purposes of the Act. Consequently the courts have an obligation to develop the law, including private law, in a way that is consistent with the European Convention on Human Rights. Thus in *Douglas and others v Hello and others*¹⁹ the common law was developed so as to ensure protection of the right to privacy. In *Venables and Thompson v Newsgroup Newspapers Ltd*²⁰ the High Court of England and Wales held that the common law could be developed to support a claim that the release of personal data would interfere with the claimant’s right to life.

The general point may be summarized as follows: States have an obligation to secure the human rights of their citizens, no matter where the threat originates. If domestic law does not provide:

- a) effective deterrence against violation; and
- b) effective remedies in the event that violation occurs,

then domestic law should be developed accordingly.

For other examples The Honourable Commission may wish to consider the report of the Environmental Law Alliance Worldwide (ELAW): *Holding Corporations Accountable for Damaging the Climate (2014)*²¹.

¹⁸ *Satrose Ayuma v. Registered Trustees of Kenya Railway Staff Retirement Benefits Scheme, High Court of Kenya, 2010*:

<http://nebula.wsimg.com/d7723343ea6a644db7238eb2f6e8617b?AccessKeyId=E7B5A255C426BFBF3693&disposition=0&alloworigin=1>

¹⁹ [2001] 2 All ER 289

²⁰ [2001] 1 All ER 908

²¹ <https://www.elaw.org/system/files/elaw.climate.litigation.report.pdf>

6.1.2 Whether a person or entity has breached the right to life

Jurisprudence regarding the right to life may differ slightly from jurisdiction to jurisdiction but the test for breach generally consists of three common elements:

- (i) Was the person / entity aware of the risk to life or would a reasonable person / entity in similar circumstances have been so aware?
- (ii) Was the risk real and substantial?
- (iii) Did the person / entity take reasonable and proportionate steps to prevent the loss of life?

The European Court of Justice provides an extensive body of jurisprudence on the right to life. In a case, which may of particular interest to the Honourable Commission, *Öneriyıldız v Turkey*²², the Court considered a claim relating to an accidental methane explosion at a waste dump, which killed 39 people. The court held that:

- (i) there has been a violation of Article 2 of the Convention in its substantive aspect, on account of the lack of appropriate steps to prevent the accidental death;
- (ii) there has also been a violation of Article 2 of the Convention in its procedural aspect, on account of the lack of adequate protection by law safeguarding the right to life;
- (iii) there has been a violation of Article 1 of Protocol No. 1 of the Convention (the right to enjoyment of property); and that
- (iv) there has been a violation of Article 13 of the Convention (the right to an effective remedy) as regards the complaint under the substantive head of Article 2.

In a key passage at paragraph 71, the court stated:

The Court considers that this obligation [i.e to take positive steps to uphold the right to life] must be construed as applying in the context of any activity, whether public or not, in which the right to life may be at stake, and a fortiori in the case of industrial activities, which by their very nature are dangerous, such as the operation of waste-collection sites ...[emphasis added]

The court went on to point out that the contingency of the risk was just one factor to be considered (para .73):

In this connection, contrary to what the Government appear to be suggesting, the harmfulness of the phenomena inherent in the activity in question, the contingency of the risk to which the applicant was exposed by

²² *Öneriyıldız v. Turkey* [GC], no. 48939/99, § 71, ECHR 2004-XII

reason of any life-endangering circumstances, the status of those involved in bringing about such circumstances, and whether the acts or omissions attributable to them were deliberate are merely factors among others that must be taken into account in the examination of the merits of a particular case, with a view to determining the responsibility the State may bear under Article 2.

The Court concluded that:

the applicant's complaint ... undoubtedly falls within the ambit of the first sentence of Article 2.

It emphasized (at para 89) that:

The positive obligation to take all appropriate steps to safeguard life for the purposes of Article 2 ... entails above all a primary duty on the State to put in place a legislative and administrative framework designed to provide effective deterrence against threats to the right to life

Of particular relevance in this context, given the evidence, referred to in the Petition, that some of the carbon majors have supported the dissemination of deliberate misinformation regarding the risks from anthropogenic greenhouse gases, is the Court's finding on the importance of accurate information (para. 90 and para. 108):

Among these preventive measures, particular emphasis should be placed on the public's right to information, as established in the case-law of the Convention institutions.

The Court will next assess the weight to be attached to the issue of respect for the public's right to information ... It observes in this connection that the Government have not shown that any measures were taken in the instant case to provide the inhabitants of the Ümraniye slums with information enabling them to assess the risks they might run as a result of the choices they had made. In any event, the Court considers that in the absence of more practical measures to avoid the risks to the lives of the inhabitants of the Ümraniye slums, even the fact of having respected the right to information would not have been sufficient to absolve the State of its responsibilities.

The Court notes the importance of effective deterrence against violations of the right to life (para. 91):

The obligations deriving from Article 2 do not end there. Where lives have been lost in circumstances potentially engaging the responsibility of the State, that provision entails a duty for the State to ensure, by all means at its disposal, an adequate response – judicial or otherwise – so that the legislative and administrative framework set up to protect the right to life is properly implemented and any breaches of that right are repressed and punished ...

It explains that if the infringement of the right to life is unintentional, criminal proceedings may not be necessary as long as other remedies are available to the victims. (para. 92). It also explains the role of an effective investigation in providing access to an effective remedy (see para. 149):

In this connection, the Court has held that if the infringement of the right to life or to physical integrity is not caused intentionally, the positive obligation to set up an “effective judicial system” does not necessarily require criminal proceedings to be brought in every case and may be satisfied if civil, administrative or even disciplinary remedies were available to the victim ...

The Court has held that, in relation to fatal accidents arising out of dangerous activities which fall within the responsibility of the State, Article 2 requires the authorities to carry out of their own motion an investigation, satisfying certain minimum conditions, into the cause of the loss of life ... It further observes that, without such an investigation, the individual concerned may not be in a position to use any remedy available to him for obtaining relief, given that the knowledge necessary to elucidate facts such as those in issue in the instant case is often in the sole hands of State officials or authorities.

Where, however, negligence goes beyond an error of judgement or carelessness, the failure to institute criminal proceedings may itself amount to a violation of the right to life (paras 95-96):

Where it is established that the negligence attributable to State officials or bodies on that account goes beyond an error of judgment or carelessness, in that the authorities in question, fully realising the likely consequences and disregarding the powers vested in them, failed to take measures that were necessary and sufficient to avert the risks inherent in a dangerous activity ... the fact that those responsible for endangering life have not been charged with a criminal offence or prosecuted may amount to a violation of Article 2, irrespective of any other types of remedy which individuals may exercise on their own initiative ...

... the national courts should not under any circumstances be prepared to allow life-endangering offences to go unpunished. This is essential for maintaining public confidence and ensuring adherence to the rule of law and for preventing any appearance of tolerance of or collusion in unlawful acts ...

The court considered it a ‘decisive factor’ that the authorities had available to them information regarding the risks (see para. 98).

To that end, the Court considers that it should begin by noting a decisive factor for the assessment of the circumstances of the case, namely that there was practical information available to the effect that the inhabitants

of certain slum areas of Ümraniye were faced with a threat to their physical integrity on account of the technical shortcomings of the municipal rubbish tip.

Consequently the Court held (at p. 101):

that it was impossible for the administrative and municipal departments responsible for supervising and managing the tip not to have known of the risks inherent in methanogenesis or of the necessary preventive measures ...

It follows that the Turkish authorities at several levels knew or ought to have known that there was a real and immediate risk to a number of persons living near the Ümraniye municipal rubbish tip. They consequently had a positive obligation under Article 2 of the Convention to take such preventive operational measures as were necessary and sufficient to protect those individuals ...

Given the alleged attempts by some of the carbon majors to avoid regulation of their activities, para. 102 of the Court's judgement has particular resonance:

However, it appears from the evidence before the Court that Istanbul City Council in particular not only failed to take the necessary urgent measures, either before or after 14 March 1991, but also ... opposed the recommendation to that effect by the Prime Minister's Environment Office

The Court considered the type of preventative measures that might have been effective (para.107):

The Court considers that the timely installation of a gas-extraction system at the Ümraniye tip before the situation became fatal could have been an effective measure ...

The Court also held that there had been a violation of the right to enjoyment of property (paras. 134-5):

In that connection, the Court would reaffirm the principle that has already been established in substance under Article 1 of Protocol No. 1 ... Genuine, effective exercise of the right protected by that provision does not depend merely on the State's duty not to interfere, but may require positive measures of protection, particularly where there is a direct link between the measures an applicant may legitimately expect from the authorities and his effective enjoyment of his possessions.

In the present case there is no doubt that the causal link established between the gross negligence attributable to the State and the loss of human lives also applies to the engulfment of the applicant's house. In the Court's view, the resulting infringement amounts not to "interference" but to the breach of a positive obligation, since the State officials and

authorities did not do everything within their power to protect the applicant's proprietary interests.

In a later case, also from Turkey European Court of Human Rights considered a particularly sad set of circumstances²³. On 22 January 2004 Istanbul was hit by a heavy snow storm. Consequently, upon the instructions of the Ministry of Education, schools in Istanbul broke up for the winter break a day earlier than scheduled. On that day, Atalay, a 7 year old boy, had gone to his primary school on the municipality's shuttle, which travelled between his home and the school. After the school bulletins had been distributed, classes were dismissed at the beginning of the afternoon, before the normal school day was over. Atalay had not enrolled for the paid school bus, but was using the shuttle that was operated for free by the municipality. As the early dismissal of the classes had not been notified to the municipality, the shuttle did not come when the school was closed. Atalay therefore tried to walk back home, which was 4 km away from his school. Late in the afternoon, when he did not return from school, the applicants called the police. However, it was not possible to find Atalay. His body was found the following day, frozen near a river bed.

Atalays' parents brought a claim alleging that the school's failure to notify the municipality has caused Atalay's death and was therefore a breach of his right to life. It was evident that no-one had intended any harm to come to Atalay, nor envisaged the particular chain of events which unfolded. Nevertheless the court found a violation of the right to life, applying what amounted to a test of due diligence (see para. 41):

Nevertheless, in the circumstances of the present case, where a primary school is exceptionally closed early due to bad weather conditions, in the Court's opinion, it cannot be considered as unreasonable to expect the school authorities to take basic precautions to minimise any potential risk and to protect the pupils. Therefore, the Court considers that, as also stated in the Presidency's decision dated 18 February 2004, by neglecting to inform the municipality's shuttle service about the early closure of the school, the domestic authorities failed to take measures which might have avoided a risk to the right to life of the applicants' son.

Further the Court emphasized the right to life demanded a process for holding accountable those at fault (paras. 38-39).

The State's positive obligation also requires an effective independent judicial system to be set up so as to secure legal means capable of establishing the facts, holding accountable those at fault and providing appropriate redress to the victim ...

²³ CASE OF İLBEYİ KEMALOĞLU AND MERİYE KEMALOĞLU v. TURKEY (Application no. 19986/06), 2012

For the Court, and having regard to its case-law, the State's duty to safeguard the right to life must also be considered to involve the taking of reasonable measures to ensure the safety of individuals in public places and, in the event of serious injury or death, having in place an effective independent judicial system securing the availability of legal means capable of establishing the facts, holding accountable those at fault and providing appropriate redress to the victim.

Taking such precedent into account, the Honourable Commission may reasonably conclude that:

- (i) the right to life requires an investigation into the thousands of death of Filipinos connected to climate change, and consideration of the accountability of the carbon majors; and
- (ii) the appropriate questions for determining the responsibility of the carbon majors (on the basis that the carbon majors have obligations to respect the right to life) are as follows:
 - a. Were the carbon majors aware of the risks to life (and other rights caused by their activities)?
 - b. If so, did they take reasonable steps to prevent those risks occurring?
 - c. Have their acts and / or omissions materially contributed to violations of the right of the Petitioners?

6.2 Breach of an obligation of a duty of care regarding the impacts of their activities on The Philippines

The law of negligence gives practical effect to a basic and essential idea of social responsibility: that people should take reasonable care to avoid causing harm to others (that they owe a 'duty of care' to those who may be affected by their actions).

In most common law jurisdictions establishing negligence requires proof of the following 4 elements:

- i) Duty of care;
- ii) Breach of duty;
- iii) Causation; and
- iv) Damages.

Duty of care

Different common law jurisdictions have adopted different approaches to establishing a duty of care. Central to the concept, however, is the 'reasonable foreseeability' of harm (indeed some jurisdictions, such as the US States of Florida and Massachusetts, make it the only test). Another key consideration

is the overall fairness and reasonableness of imposing a duty of care.

From the time it becomes foreseeable that a company's activities and products present a serious risk of harm to others, there will be a strong argument that the company assumes a duty of care towards those others.

Although a public law action, relevant in this context is the conclusion of the Dutch Court in the *Urgenda* case, regarding the Dutch Government's duty of care (at 4.65):

The court also takes account of the fact that the State has known since 1992, and certainly since 2007, about global warming and the associated risks. These factors lead the court to the opinion that, given the high risk of hazardous climate change, the State has a serious duty of care to take measures to prevent it.

Breach of duty

Breach occurs where a person who owes a duty of care, fails to exercise the standard of care that might be expected of a reasonable person in that situation. In determining what steps are reasonable the court will consider factors such as:

- the defendant's knowledge regarding the risks;
- the degree of risk (the greater the risk of substantial harm, the greater the precautions the defendant will be expected to have taken);
- the practicality of proposed precautions;
- the social utility of the activity in question; and
- common practice.

The Honourable Commission may note the similarity with the tests for breach of the positive obligation to protect the right to life. Both are founded in the idea of a failure to take reasonable steps to prevent foreseeable harm.

6.3 Accountable on the basis of the principle of 'the polluter pays'

Legal responsibility for harm caused to others is one of the mainstays of public and commercial life. The potential for legal liability instills a measure of confidence that the medicines we take will not harm us and that the transport we use complies with appropriate safety procedures etc, etc.

Making businesses accountable for the social costs of the products they profit from, steers the market towards socially beneficial activity. The 'polluter pays' is therefore an economic principle as much as a legal one. Fossil fuels companies should not be exempt from this principle and should not be allowed to displace the social and environmental costs of their products onto the poor and the vulnerable.

The importance of implementing the principle has long been recognised by the international community as critical to environmental protection. In 1972, the OECD asserted that 'the polluter pays' was the principle for encouraging 'rational use of scarce environmental resources.' In the same year Principle 22 of the Stockholm Declaration committed states to further developing international law 'regarding liability and compensation for the victims of pollution and other environmental damage'. Since then 'the polluter pays' has been widely referenced as a general principle of law. The Rio Declaration 1992, Principle 16 states that:

'National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution.'

Art. 191(2) of the EU's 2007 Lisbon Treaty states that EU environmental policy shall be based on the principle (inter alia) that 'the polluter should pay'.

In practice, however, the principle has not been applied in a way that would encourage the rational use of the atmosphere and carbon sinks. Indeed the very opposite has been happening. A 2015 IMF Report, '*Counting the Cost of Energy Subsidies*', concludes that the failure to internalise the environmental costs of fossil fuels amounts to an annual subsidy of \$5.3 trillion (that's \$10 million a minute). Such a figure implies a market distortion on a vast scale; and a systematic failure to implement the principle of the 'polluter pays' in the context of climate change.

Who is 'the polluter'?

Everyone has a 'carbon footprint'. That does not make everyone a 'polluter who should pay'. In order to function as an economic tool, polluters should be identified as the principal economic operators profiting from the polluting activities. Such an approach is supported by the OECD Recommendations of 1992, 1(2):

On grounds of economic efficiency and administrative convenience, it is occasionally appropriate to identify the polluter as the economic agent playing a decisive role in the pollution, rather than the agent actually originating it. Hence a vehicle manufacturer could be deemed the polluter, although pollution results from the vehicle's use by its owner. Similarly, a pesticide producer could be the polluter, even though the pollution is the outcome of proper or improper use of pesticides.

Our political and economic system is founded on obedience to the economic incentive. For as long as polluters can profit from polluting, while displacing the social and environmental costs onto others, market forces all but guarantee a disregard for human rights. Making the polluter pay is critical to changing course.

6.4 Date of knowledge

The 'greenhouse effect' was first evidenced by John Tyndall in 1859. In 1917 Alexander Graham Bell wrote "[The unchecked burning of fossil fuels] would have a sort of greenhouse effect", and proposed the use of alternative energy forms, such as solar. In 1956 the New York Times headlined, '*Warmer Climate on Earth May be due to More Carbon Dioxide in the Air*'. As documented in the Petition recent investigative journalism has uncovered information regarding Exxon's research into climate change, and the state of its knowledge regarding the risks.

6.5 Acts and omissions

On the assumption that the Honourable Commission concludes that the carbon majors have been aware of the threats posed by climate change for some time, it may then go onto consider whether their acts and omissions were appropriate in light of their state of knowledge:

- What steps did they take to make people aware of the dangers?
- What steps did they take to safeguard their products?
- What steps did they take to stimulate appropriate policy debate?
- What steps have they taken to prevent violations of the rights of the People of The Philippines?

6.6 Causation

6.6.1 Introduction

The standard test for causation in tort is the '*but for*' test, i.e. can the claimant prove that the alleged damage would not have occurred *but for* the defendant's acts or omissions? The strict application of this test would present a claimant with two major hurdles in the context of climate change litigation:

- 1) Can the claimant show that damage would not have occurred but for man-made climate change? If so,
- 2) Can they show that the relevant degree of climate change would not have occurred but for the actions / omissions of the defendant?

The law, however, is concerned with both substantive justice and the fair allocation of cost. Where a rigid application of the '*but for*' test is inconsistent with these objectives, courts around the world have adopted more flexible approaches. In circumstances of scientific complexity, for example, or where multiple causes are present, courts have adopted alternative tests, such as whether a defendant's acts or omissions made a *material contribution* to the harm, or *materially increased the risk* of the harm occurring. More specifically, in the context of pollution from different sources, they have developed the *commingled product* theory of causation.

Such approaches translate well to the context of climate change litigation, and there is no longer any reason to regard 'causation' as a major obstacle to its success. Demonstrating that the actions of a particular defendant have, for example, 'materially increased the risk' of climate change damage occurring has been made significantly easier by:

- i) developments in the science allowing for the probabilistic attribution of specific climatic patterns and weather events to climate change;
- ii) the work of Rick Heede, showing that the majority of greenhouse gases can be attributed to just 90 'carbon majors'; and
- iii) the work of investigative journalists which appears to show that certain companies deliberately set out to undermine the scientific consensus regarding climate change, with the specific purpose of obstructing the development of appropriate policy responses.

6.6.2 Adapting the 'but for' test in cases of complex causation

This section will review jurisprudence, which shows the 'but for' test may be adapted:

- a) in cases where there are different, cumulative causes for a single harm; or
- b) where it would be unfair or unreasonable to expect a claimant to establish a precise causal link.

Material contribution to harm

In *Bonnington Castings Ltd v Wardlaw* [1956] AC 613, [1956] UKHL 1 the UK's House of Lords held that it was sufficient to show that a defendant's breach of duty had made a material contribution to the claimant's injury even where other causes had made a more substantial contribution. 'Material', in this context, means a cause exceeding the *de minimis* threshold.

The case provides, in small scale, an analogue for climate change litigation. The claimant had developed pneumoconiosis as a result of inhaling air containing minute particles of silica. The court found as fact that the defendant's breach of duty resulted in only a small proportion of the inhalation, which could not be precisely quantified. In the words of Lord Reid:

The medical evidence was that pneumoconiosis is caused by a gradual accumulation in the lungs of minute particles of silica inhaled over a period of years. That means, I think, that the disease is caused by the whole of the noxious material inhaled and, if that material comes from two sources, it cannot be wholly attributed to material from one source or the other ... I cannot agree that the question is which was the most probable source of the Respondent's disease, the dust from the pneumatic hammers or the dust from the swing grinders. It appears to me that the source of his

disease was the dust from both sources, and the real question is whether the dust from the swing grinders materially contributed to the disease. What is a material contribution must be a question of degree. A contribution which comes within the exception *de minimis non curat lex* is not material, but I think that any contribution which does not fall within that exception must be material. I do not see how there can be something too large to come within the *de minimis* principle but yet too small to be material.

A similar approach may be discerned in *Massachusetts v EPA*, when the US Supreme Court rejected the US Environmental Protection Agency's argument that its non-regulation of greenhouse gases contributed insignificantly to the claimant's injuries:

Given EPA's failure to dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming, its refusal to regulate such emissions, at a minimum, "contributes" to Massachusetts' injuries. EPA overstates its case in arguing that its decision not to regulate contributes so insignificantly to petitioners' injuries that it cannot be haled into federal court, and that there is no realistic possibility that the relief sought would mitigate global climate change and remedy petitioners' injuries, especially since predicted increases in emissions from China, India, and other developing nations will likely offset any marginal domestic decrease EPA regulation could bring about. Agencies, like legislatures, do not generally resolve massive problems in one fell swoop ...

In the 2015 *Urgenda* decision, a Dutch court held (paras. 4.79 and 4.90) that despite the Netherlands global emissions totalling only 0.42% of the global total (for 2010), that was nevertheless a relevant a contribution to climate change:

Therefore, the court arrives at the opinion that the single circumstance that the Dutch emissions only constitute a minor contribution to global emissions does not alter the State's obligation to exercise care towards third parties ...

The fact that the current Dutch greenhouse gas emissions are limited on a global scale does not alter the fact that these emission contribute to climate change.

It is submitted that this approach is more generally applicable to the context of climate change litigation.

Material increase to risk of injury

In certain circumstances courts have made a finding of liability even where the claimant can not prove that the defendant's acts or omissions materially contributed to the injury, as long as he or she can show that they *materially increased the risk of injury*.

In *McGhee v National Coal Board* [1973] 1 WLR 1 the UK's House of Lords considered the question of causation in circumstances where the claimant, who had developed dermatitis, could show that the defendant had:

- breached its duty of care
- that this breach had materially increased the risk of suffering dermatitis
- but could not prove that *but for* the breach, he would probably not have suffered dermatitis.

The Court held that causation was nevertheless sufficiently established (one of the judges, Lord Wilberforce, going so far as to propose a reversal of the burden of proof):

But the question remains whether a pursuer must necessarily fail if, after he has shown a breach of duty, involving an increase of risk of disease, he cannot positively prove that this increase of risk caused or materially contributed to the disease while his employers cannot positively prove the contrary. In this intermediate case there is an appearance of logic in the view that the pursuer, on whom the onus lies, should fail - a logic which dictated the judgments below. The question is whether we should be satisfied, in factual situations like the present, with this logical approach. In my opinion, there are further considerations of importance. First, it is a sound principle that where a person has, by breach of a duty of care, created a risk, and injury occurs within the area of that risk, the loss should be borne by him unless he shows that it had some other cause. Secondly, from the evidential point of view, one may ask, why should a man who is able to show that his employer should have taken certain precautions, because without them there is a risk, or an added risk, of injury or disease, and who in fact sustains exactly that injury or disease, have to assume the burden of proving more: namely, that it was the addition to the risk, caused by the breach of duty, which caused or materially contributed to the injury? In many cases, of which the present is typical, this is impossible to prove, just because honest medical opinion cannot segregate the causes of an illness between compound causes. And if one asks which of the parties, the workman or the employers, should suffer from this inherent evidential difficulty, the answer as a matter of policy or justice should be that it is the creator of the risk who, *ex hypothesi* must be taken to have foreseen the possibility of damage, who should bear its consequences. (per Lord Wilberforce, page 6).

Lord Simon considered that previous case-law had already established a rule (at page 8):

... that where an injury is caused by two (or more) factors operating cumulatively, one (or more) of which factors is a breach of duty and one (or more) is not so, in such a way that it is impossible to ascertain the

proportion in which the factors were effective in producing the injury or which factor was decisive, the law does not require a pursuer or plaintiff to prove the impossible, but holds that he is entitled to damages for the injury if he proves on a balance of probabilities that the breach or breaches of duty contributed substantially to causing the injury. If such factors so operate cumulatively, it is, in my judgment, immaterial whether they do so concurrently or successively.

Indeed Lord Simon regarded "material reduction of the risk" and "substantial contribution to the injury" as mirror concepts. Any other conclusion would mean that the defenders were under a legal duty which they could, on the present state of medical knowledge, ignore (page 9).

Lord Kilbrandon expressed a similar conclusion as follows:

When you find it proved (a) that the defenders knew that to take the precaution reduces the risk, chance, possibility or probability of the contracting of a disease, (b) that the precaution has not been taken, and (c) that the disease has supervened, it is difficult to see how those defenders can demand more by way of proof of the probability that the failure caused or contributed to the physical breakdown ... In the present case, the pursuer's body was vulnerable, while he was bicycling home, to the dirt which had been deposited on it during his working hours. It would not have been if he had had a shower. If showers had been provided he would have used them. It is admittedly more probable that disease will be contracted if a shower is not taken. In these circumstances I cannot accept the argument that nevertheless it is not more probable than not that, if the duty to provide a shower had not been neglected, he would not have contracted the disease. The pursuer has after all, only to satisfy the court of a probability, not to demonstrate an irrefragable chain of causation, which in a case of dermatitis, in the present state of medical knowledge, he could probably never do.

Lord Salmon stated:

In the circumstances of the present case, the possibility of a distinction existing between (a) having materially increased the risk of contracting the disease, and (b) having materially contributed to causing the disease may no doubt be a fruitful source of interesting academic discussions between students of philosophy. Such a distinction is, however, far too unreal to be recognised by the common law.

Market share liability doctrine

In the US, *Sindell v Abbott Laboratories* 26 Cal. 3d 588 (1980) was a class action for personal injuries said to have resulted from pre-natal exposure to the anti-miscarriage drug diethylstilbestrol (DES) which had been manufactured by one of a

potentially large number of defendants. The plaintiff could not identify which particular defendant had manufactured the drug responsible for her injuries. However, her complaint alleged that the defendants were jointly and individually negligent in that they had manufactured, marketed and promoted DES as a safe drug to prevent miscarriage without adequate testing or warning of its dangerous side effects; that they had collaborated in their marketing methods, promotion and testing of the drug; that they had relied on each others' test results; that they had adhered to an industry-wide safety standard; and that they had produced the drug from a common and mutually agreed generic formula. The court distinguished Summers on the basis that in that case all the parties who were or could have been responsible for the harm to the plaintiff were joined as defendants, whereas in Sindell there were approximately 200 drug companies which had made DES, any of which might have manufactured the injury-producing drug. The court held that it would be unfair, in such circumstances, to require each defendant to exonerate itself. Further, it said that there might be a substantial likelihood that none of the five defendants joined in the action had made the DES which caused the injury, and that the offending producer, not named, would escape liability. The court surmounted this problem by adapting the Summers rule so as to apportion liability on the basis of the defendant's market share. See pp 593-595, 602-603, 604-605 and 612-613. A very similar case concerning the same drug arose in the Netherlands in *B v Bayer Nederland BV* (Hoge Raad, 9 October 1992, NJ 1994, 535) which turned on Article 6.99 BW. That provision is in these terms:

Where the damage may have resulted from two or more events for each of which a different person is liable, and where it has been determined that the damage has arisen from at least one of these events, the obligation to repair the damage rests upon each of these persons, unless he proves that the damage is not the result of the event for which he himself is liable ...

[Article 6.99BW] aims to remove the unfairness arising from the fact that the victim must bear his or her own damage because he or she cannot prove whose action caused his or her harm. The victims in the present case are faced with such an evidentiary difficulty . . .

In para 3.7.5 of its judgment the court said:

It is sufficient for each DES daughter to establish . . . in relation to each of the pharmaceutical companies: (i) that the pharmaceutical company in question put DES in circulation during the relevant period and can therefore be found liable because it committed a fault; (ii) that another or several other producers - regardless of whether they are parties to the proceedings or not - also put DES in circulation during the relevant period and can therefore also be found liable because it (they) committed a fault; and (iii) that she suffered injury that resulted from the use of DES, but that it is no longer possible to determine from which producer the DES originated.

In principle the burden of proof on these issues rests on the DES daughter

concerned.

International jurisprudence on causation

In *Snell v Farrell* [1990] 2 SCR 311 at 320, 326-7, Sopinka J, delivering the judgment of the Supreme Court of Canada, said:

The traditional approach to causation has come under attack in a number of cases in which there is concern that due to the complexities of proof, the probable victim of tortious conduct will be deprived of relief. This concern is strongest in circumstances in which, on the basis of some percentage of statistical probability, the plaintiff is the likely victim of the combined tortious conduct of a number of defendants, but cannot prove causation against a specific defendant or defendants on the basis of particularized evidence in accordance with traditional principles. The challenge to the traditional approach has manifested itself in cases dealing with non-traumatic injuries such as man-made diseases resulting from the widespread diffusion of chemical products, including product liability cases in which a product which can cause injury is widely manufactured and marketed by a large number of corporations ...

Reversing the burden of proof may be justified where two defendants negligently fire in the direction of the plaintiff and then by their tortious conduct destroy the means of proof at his disposal. In such a case it is clear that the injury was not caused by neutral conduct. It is quite a different matter to compensate a plaintiff by reversing the burden of proof for an injury that may very well be due to factors unconnected to the defendant and not the fault of anyone.

In *March v E & MH Stramare Pty Ltd* (1991) 171 CLR 506 at 508, Mason CJ, sitting in the High Court of Australia, did not "*accept that the 'but for' (causa sine qua non) test ever was or now should become the exclusive test of causation in negligence cases*" and added (at p 516):

The 'but for' test gives rise to a well-known difficulty in cases where there are two or more acts or events which would each be sufficient to bring about the plaintiff's injury. The application of the test 'gives the result, contrary to common sense, that neither is a cause': Winfield and Jolowicz on Tort, 13th ed (1989), p. 134. In truth, the application of the test proves to be either inadequate or troublesome in various situations in which there are multiple acts or events leading to the plaintiff's injury: see, e.g., *Chapman v Hearse*, *Baker v Willoughby* [1970] AC 467; *McGhee v National Coal Board*; *M'Kew* (to which I shall shortly refer in some detail). The cases demonstrate the lesson of experience, namely, that the test, applied as an exclusive criterion of causation, yields unacceptable results and that the results which it yields must be tempered by the making of

value judgments and the infusion of policy considerations.

In *Rutherford v Owens-Illinois Inc* 67 Cal. Rptr. 2d 16 (1997), in a judgment with which the Chief Justice and all save one member of the Supreme Court of California concurred, Baxter J observed (at p 19):

Proof of causation in such cases will always present inherent practical difficulties, given the long latency period of asbestos-related disease, and the occupational settings that commonly exposed the worker to multiple forms and brands of asbestos products with varying degrees of toxicity. In general, however, no insuperable barriers prevent an asbestos-related cancer plaintiff from demonstrating that exposure to the defendant's asbestos products was, in reasonable medical probability, a substantial factor in causing or contributing to his risk of developing cancer. We conclude that plaintiffs are required to prove no more than this. In particular, they need not prove with medical exactitude that fibers from a particular defendant's asbestos-containing products were those, or among those, that actually began the cellular process of malignancy.

McLachlin J, extra-judicially ("*Negligence Law - Proving the Connection*", in *Torts Tomorrow, A Tribute to John Fleming*, ed Mullany and Linden, LBC Information Services 1998, at p 16), has voiced a similar concern:

Tort law is about compensating those who are wrongfully injured. But even more fundamentally, it is about recognising and righting wrongful conduct by one person or a group of persons that harms others. If tort law becomes incapable of recognising important wrongs, and hence incapable of righting them, victims will be left with a sense of grievance and the public will be left with a feeling that justice is not what it should be. Some perceive that this may be occurring due to our rules of causation. In recent years, a conflation of factors have caused lawyers, scholars and courts to question anew whether the way tort law has traditionally defined the necessary relationship between tortious acts and injuries is the right way to define it, or at least the only way. This questioning has happened in the United States and in England and has surfaced in Australia. And it is happening in Canada. Why is this happening? Why are courts now asking questions that for decades, indeed centuries, did not pose themselves, or if they did, were of no great urgency? I would suggest that it is because too often the traditional 'but-for', all-or-nothing, test denies recovery where our instinctive sense of justice - of what is the right result for the situation - tells us the victim should obtain some compensation.

Professor Christian von Bar (*The Common European Law of Torts*, 2000, vol 2, pp 441-443) has written:

German law on medical negligence provides the example of the reduced burden of proof of causation in cases of grave treatment errors. Recent environmental legislation has reacted to the problem of scientifically

uncertain causal relationships in a similar manner. The reversal of the burden of proof regarding causation is no more than a reduction of the probability required for attribution.

Professor Walter van Gerven (van Gerven, Lever and Larouche: Cases, Materials and Text on National, Supranational and International Tort Law, 2000, p 441), surveying the tort law of, in particular, Germany, France and Britain, wrote:

In many cases, it will be possible for the victim to show that he or she has suffered injury, that it has been caused by someone who must have been at fault, but the author of that fault will not be identifiable. The best that the victim will be able to achieve is to define a class of persons of which the actual tortfeasor must be a member. Strictly speaking, however, the basic *conditio sine qua non* test will not be met, since it cannot be said of any member of the class that the injury would not have happened 'but for' his or her conduct, given that in fact any other member could have caused the injury. Nonetheless, all the legal systems studied here have acknowledged that it would be patently unfair to deny recovery to the victim for that reason.

In Germany cases of this kind have been held to be covered by the second sentence (to which emphasis has been added) of BGB §830.1 which provides:

If several persons have caused damage by an unlawful act committed in common each is responsible for the damage. The same rule applies if it cannot be discovered which of several participants has caused the damage by his act.

Of this provision Markesinis and Unberath (The German Law of Torts, 4th ed, 2002, p 900) states:

§830.1, second sentence, applies the same rule to a different situation where several persons participate in a course of conduct which, though not unlawful in itself, is potentially dangerous to others. The difference between this and the previous situation lies in the fact that whereas in the former case of joint tortfeasors the loss is caused by several persons acting in consort, in the latter case only one person has caused the loss but it is difficult if not impossible to say which one has done so. (The classic illustration is that of the huntsmen who discharge their guns simultaneously and the pellets from one unidentifiable gun hit an innocent passer-by.) In this case, as well, §830 BGB adopts the same rule and makes all the participants liable to the victim for the full extent of damage.

Article 926 of the Greek Civil Code, entitled "Damage caused by several persons" provides:

If damage has occurred as a result of the joint action of several persons, or if several persons are concurrently responsible for the same damage, they are all jointly and severally implicated. The same applies if several persons

have acted simultaneously or in succession and it is not possible to determine which person's act caused the damage.

A similar provision is to be found in the Austrian Civil Code:

1302 In such a case, if the injury is inadvertent, and it is possible to determine the portions thereof, each person is responsible only for the injuries caused by his mistake. If, however, the injury was intentional, or if the portions of the individuals in the injury cannot be determined, all are liable for one and one for all; however, the individual who has paid damages is granted the right to claim reimbursement from the others.

In a Norwegian case (see Nils Nygaard, *Injury/Damage and Responsibility*, 2000, pp 342-343) F was a passenger on a motor scooter and was injured in an accident caused either by a cable stretched across the street by a construction company or by the motor scooter falling onto him or as a result of collision with a truck, or by any combination of these factors. In giving judgment (RG 1969 p 285 at 293) the Norwegian court said:

As stated in the beforementioned conclusions made by experts, they could not conclude whether the situation that resulted in crushed bones in F's left hip region, was a result of falling on the cobble stones in the street or from the truck's front tyre, that ended up on top of F's left hip region. It is possible that the injuries were partially a result of the fall and being hit by the truck. We cannot say anything definite about this. The court finds that it cannot conclude whether it is the fall or being hit by the truck or a combination of both these factors that caused the injury. After a collective evaluation of the whole event the court finds that A (construction company), the scooter and the truck each have a part in F getting injured and each of them must naturally be seen as adequate cause of injury.

UK asbestos / mesothelioma cases

Of particular interest is a line of cases from the UK relating to asbestos exposure and the development of the cancer mesothelioma. The cases contain a number of features likely to arise in the context of climate change litigation such as:

- slow onset
- uncertainty regarding precise causal chain between conduct and harm
- exposure from diverse sources.

However it is important to note that these cases concern a difficulty not arising in the context of climate change litigation. Mesothelioma, much like malaria, is understood to be caused by a single exposure rather than by cumulative effect. Consequently where a number of defendants have exposed the claimant to asbestos it is likely that only one was the 'true cause' of the injury. Climate change, by contrast, is caused by the accumulation of greenhouse gases in the atmosphere, and

therefore all emitters are technically contributors to the causal chain. It is the other elements of the tort of negligence (duty of care and breach) together with the requirement that the causal contribution is greater than *de minimis* that limit the scope of claims for liability.

The mesothelioma cases are significant more generally, however, in demonstrating the willingness of the courts to adapt the test of causation where it is in the interests of justice to do so, and where uncertainties in the science obscure identification of the precise causal chain. They also provide guidance on possible approaches to apportionment of damages.

In *Fairchild v Glenhaven Funeral Services [2002]* the UK House of Lords, addressed the issue of causation in the context of asbestos mesothelioma. The court expressed the problem raised by the case as follows:

If (1) C was employed at different times and for differing periods by both A and B, and (2) A and B were both subject to a duty to take reasonable care or to take all practicable measures to prevent C inhaling asbestos dust because of the known risk that asbestos dust (if inhaled) might cause a mesothelioma, and (3) both A and B were in breach of that duty in relation to C during the periods of C's employment by each of them with the result that during both periods C inhaled excessive quantities of asbestos dust, and (4) C is found to be suffering from a mesothelioma, and (5) any cause of C's mesothelioma other than the inhalation of asbestos dust at work can be effectively discounted, but (6) C cannot (because of the current limits of human science) prove, on the balance of probabilities, that his mesothelioma was the result of his inhaling asbestos dust during his employment by A or during his employment by B or during his employment by A and B taken together, is C entitled to recover damages against either A or B or against both A and B?

Lord Bingham concluded that he was, stating:

I do not therefore consider that the House is acting contrary to principle in reviewing the applicability of the conventional test of causation to cases such as the present. Indeed, it would seem to me contrary to principle to insist on application of a rule which appeared, if it did, to yield unfair results.

He emphasised the broad convergence of international jurisprudence on the issue:

Whether by treating an increase in risk as equivalent to a material contribution, or by putting a burden on the defendant, or by enlarging the ordinary approach to acting in concert, or on more general grounds influenced by policy considerations, most jurisdictions would, it seems, afford a remedy to the plaintiff. Development of the law in this country cannot of course depend on a head-count of decisions and codes adopted in other countries around the world, often against a background of different

rules and traditions. The law must be developed coherently, in accordance with principle, so as to serve, even-handedly, the ends of justice. If, however, a decision is given in this country which offends one's basic sense of justice, and if consideration of international sources suggests that a different and more acceptable decision would be given in most other jurisdictions, whatever their legal tradition, this must prompt anxious review of the decision in question. In a shrinking world (in which the employees of asbestos companies may work for those companies in any one or more of several countries) there must be some virtue in uniformity of outcome whatever the diversity of approach in reaching that outcome.

Accepting that this broad approach might involve a defendant assuming legal responsibility for an injury he or she had not in fact caused, where the defendant's conduct had been otherwise negligent, he considered such a result less unjust than leaving the victim without compensation:

... there is a strong policy argument in favour of compensating those who have suffered grave harm, at the expense of their employers who owed them a duty to protect them against that very harm and failed to do so, when the harm can only have been caused by breach of that duty and when science does not permit the victim accurately to attribute, as between several employers, the precise responsibility for the harm he has suffered. I am of opinion that such injustice as may be involved in imposing liability on a duty-breaking employer in these circumstances is heavily outweighed by the injustice of denying redress to a victim.

Further he considered it inevitable that the principle would be developed in future cases by analogy:

I would in conclusion emphasise that my opinion is directed to cases in which each of the conditions specified in (1) - (6) of paragraph 2 above is satisfied and to no other case. It would be unrealistic to suppose that the principle here affirmed will not over time be the subject of incremental and analogical development. Cases seeking to develop the principle must be decided when and as they arise.

Lord Nicholls articulated his support for the conclusion in forceful terms (at para. 36):

I have no hesitation in agreeing with all your Lordships that these appeals should be allowed. Any other outcome would be deeply offensive to instinctive notions of what justice requires and fairness demands.

He expressed the threshold test in broad terms (i.e. as long as the breach was 'not insignificant'), and set out the logic for it:

So long as it was not insignificant, each employer's wrongful exposure of its employee to asbestos dust and, hence, to the risk of contracting mesothelioma, should be regarded by the law as a sufficient degree of

causal connection. This is sufficient to justify requiring the employer to assume responsibility for causing or materially contributing to the onset of the mesothelioma when, in the present state of medical knowledge, no more exact causal connection is ever capable of being established. Given the present state of medical science, this outcome may cast responsibility on a defendant whose exposure of a claimant to the risk of contracting the disease had in fact no causative effect. But the unattractiveness of casting the net of responsibility as widely as this is far outweighed by the unattractiveness of the alternative outcome.

He suggested that policy considerations would be key to further application of the test:

Policy questions will loom large when a court has to decide whether the difficulties of proof confronting the plaintiff justify taking this exceptional course. It is impossible to be more specific.

Lord Hoffman elaborated on the concepts underpinning rules of legal causation (at para. 56):

The concepts of fairness, justice and reason underlie the rules which state the causal requirements of liability for a particular form of conduct (or non-causal limits on that liability) just as much as they underlie the rules which determine that conduct to be tortious. And the two are inextricably linked together: the purpose of the causal requirement rules is to produce a just result by delimiting the scope of liability in a way which relates to the reasons why liability for the conduct in question exists in the first place.

In *Barker v Corus (UK) plc* [2006] UKHL 20 the UK's House of Lords addressed two questions undecided by the decision in *Fairchild*:

- First, what are the limits of the exception? In *Fairchild* the causal agent (asbestos dust) was the same in every case, the claimants had all been exposed in the course of employment, all the exposures which might have caused the disease involved breaches of duty by employers or occupiers and although it was likely that only one breach of duty had been causative, science could not establish which one it was. Must all these factors be present?
- Secondly, what is the extent of liability? Is any defendant who is liable under the exception deemed to have caused the disease? On orthodox principles, all defendants who have actually caused the damage are jointly and severally liable. Or is the damage caused by a defendant in a *Fairchild* case the creation of a risk that the claimant will contract the disease? In that case, each defendant will be liable only for his aliquot contribution to the total risk of the claimant contracting the disease - a risk which is known to have materialised.

Lord Hoffman concluded that it did not matter whether all the sources of risk were

tortious, or whether they were man-made:

The purpose of the Fairchild exception is to provide a cause of action against a defendant who has materially increased the risk that the claimant will suffer damage and may have caused that damage, but cannot be proved to have done so because it is impossible to show, on a balance of probability, that some other exposure to the same risk may not have caused it instead. For this purpose, it should be irrelevant whether the other exposure was tortious or non-tortious, by natural causes or human agency or by the claimant himself. These distinctions may be relevant to whether and to whom responsibility can also be attributed, but from the point of view of satisfying the requirement of a sufficient causal link between the defendant's conduct and the claimant's injury, they should not matter.

It was, however necessary to prove that the type of risk to which the defendant contributed was in fact a cause of the injury:

In my opinion it is an essential condition for the operation of the exception that the impossibility of proving that the defendant caused the damage arises out of the existence of another potential causative agent which operated in the same way. It may have been different in some causally irrelevant respect, as in Lord Rodger's example of the different kinds of dust, but the mechanism by which it caused the damage, whatever it was, must have been the same. So, for example, I do not think that the exception applies when the claimant suffers lung cancer which may have been caused by exposure to asbestos or some other carcinogenic matter but may also have been caused by smoking and it cannot be proved which is more likely to have been the causative agent.

Adopting such an approach to the context of climate change implies a two stage test for 'causation':

- 1 The Claimant must prove, on the balance of probabilities, that climate change was a cause of the particular injury; and, if so, that
- 2 That the Defendants actions or omissions have materially increased the risk of climate change.

The Court in *Barker*, however, preferred to avoid the 'legal fiction' that the test was one of causation. Rather there were circumstances in which risk creation could displace the requirement to prove causation (Lord Scott at para. 53):

It is essential, in my opinion, to an appreciation of the effect of the *Fairchild* decision to keep firmly in mind that liability was not imposed on any of the defendant employers on the ground that the employer's breach of duty had caused the mesothelioma that its former employee had contracted. That causative link had not been proved against any of them. It was imposed because each, by its breach of duty, had materially increased

the risk that the employee would contract mesothelioma. That, coupled with the fact that mesothelioma had been contracted and that it was not possible to tell when the fatal inhalation had taken place, justified, in their Lordships' view, the imposition of liability on each employer who had contributed to the risk.

While *Barker* ruled in favour of several liability where the *Fairchild* principle was being applied, the approach was subsequently reversed by the *UK Compensation Act 2006* which makes liability in such circumstances 'joint and several'.

In *Sienkiewicz v Grief* (2011), the UK Supreme Court (the successor to the House of Lords), again considered the test of causation in the context of asbestos exposure. This time the increased exposure created by the defendant's breach of duty was particularly small: the judge at first instance found that the exposure to asbestos over the deceased's working life at Greif's factory increased the risk to which environmental exposure subjected her from 24 cases per million to 28.39 cases per million – an increase of risk of 18%.

Lord Phillips described the question for the court at para. 11:

Knowledge about mesothelioma is based in part on medical science and in part on statistical analysis or epidemiology. These appeals raise the question of whether, and if so to what extent, the court can satisfactorily base conclusions about causation on the latter, both in mesothelioma cases and more generally.

It was submitted by the defendant that the 'double the risk' test for proving causation should be applied. The theory that causation could be proved on the balance of probabilities by reference to a doubling of the risk of injury was first applied by Mackay J in the oral contraceptive litigation *XYZ v Schering Health Care Ltd* (2002) 70 BMLR 88. As a preliminary issue, the parties agreed that the judge should examine the epidemiological evidence relating to the risk of deep vein thrombosis arising from two different types of oral contraceptive. The claimant group could succeed only if the epidemiology showed that the risk of harm arising from the type of contraceptive they had been taking (which it was assumed they had not been warned about and would not have taken if warned) was at least twice that arising from the type which they had formerly been taking (which it was assumed they had been warned about and which risk they had accepted). The logic behind this was that, if the risk from potential cause A is x% and the risk from the other potential cause B is 2.1x%, it is more likely than not that the condition which has eventuated has been caused by B.

Lord Phillips explained the circumstance in which he considered the 'doubles the risk' test might be appropriate:

Where there are competing alternative, rather than cumulative, potential causes of a disease or injury, such as in *Hotson*, I can see no reason in principle why epidemiological evidence should not be used to show that

one of the causes was more than twice as likely as all the others put together to have caused the disease or injury.

By contrast:

It does not seem to me that there is any justification for adopting the “doubles the risk” test as the bench mark of what constitutes a material increase of risk. Indeed, if one were to accept Mr Stuart-Smith’s argument that the “doubles the risk” test establishes causation, his *de minimis* argument would amount to saying that no exposure is material for the purpose of the Fairchild/Barker test unless on balance of probability it was causative of the mesothelioma. This cannot be right.

I doubt whether it is ever possible to define, in quantitative terms, what for the purposes of the application of any principle of law, is *de minimis*. This must be a question for the judge on the facts of the particular case. In the case of mesothelioma, a stage must be reached at which, even allowing for the possibility that exposure to asbestos can have a cumulative effect, a particular exposure is too insignificant to be taken into account, having regard to the overall exposure that has taken place. The question is whether that is the position in this case.

I do not think that Judge Main would have dismissed the addition that Greif’s wrongful exposure made to the risk that Mrs Costello would contract mesothelioma as statistically insignificant or *de minimis*.

Commingled product theory

In 2005, the Federal Court for the Southern District of New York, considered the issue of causation in the context of an allegation that a gasoline additive, MTBE, had contaminated water supplies (*In re Methyl Tertiary Butyl Ether (MTBE) Prods. Liab. Litig.*, 379 F. Supp. 2d 348, 377 (S.D.N.Y. 2005)). It noted that some of the factors for applying the market share liability doctrine were absent, but stated:

[F]rom time to time courts have fashioned new approaches in order to permit plaintiffs to pursue a recovery when the facts and circumstances of their actions raised unforeseen barriers to relief.

It developed and applied a new doctrine, 'commingled product theory.' As summarised in 2013 proceedings:

Under this theory, when a plaintiff can prove that certain gaseous or liquid products (e.g., gasoline, liquid propane, alcohol) of many refiners and manufacturers were present in a completely commingled or blended state at the time and place that the harm or risk of harm occurred, and the commingled product caused plaintiff’s injury, each refiner or manufacturer is deemed to have caused the harm. Each defendant is then given the opportunity to exculpate itself by proving that its product was not present at the relevant time or in the relevant place, and therefore could not be

part of the commingled or blended product.

Before the rebuttable presumption undergirding this theory is activated, a plaintiff must prove by a preponderance of the evidence that the defendant contributed-in-fact to the injury by showing that each defendant's product was part of the commingled mass that injured the plaintiff. The theory thus requires the plaintiff to prove that each defendant's gasoline was part of the commingled product, but relieves the plaintiff of the duty to prove that each individual defendant's contribution to that product, in and of itself, was sufficient to have caused an injury. "Rather, to establish liability against a particular defendant with respect to an individual well, [the plaintiff] must show that (a) the defendant's MTBE was present in a commingled product and (b) that the commingled product [rather than defendant's product alone] caused plaintiff's injury."

The combination of 'commingled product theory' with Rick Heede's research into the contribution of 'carbon majors' to total greenhouse base emissions, appears to provide a sound basis for attributing climate change loss and damage to fossil fuel corporations and others.

Climate change litigation

Courts have considered the question of causation in two recent climate change cases. In the 2015 *Urgenda case* the Government of the Netherlands argued that:

it cannot be seen as one of the causers of an imminent climate change, as it does not emit greenhouse gases [see 4.66].

The court held, however, that:

... it is an established fact that the State has the power to control the collective Dutch emission level (and that it indeed controls it). Since the State's acts or omissions are connected to the Dutch emissions a high level of meticulousness should be required of it in view of the security interests of third parties (citizens), including Urgenda ...

From the above considerations ... it follows that a sufficient causal link can be assumed to exist between the Dutch greenhouse gas emissions, global climate change and the effects (now and in the future) on the Dutch living climate. The fact that the current Dutch greenhouse gas emissions are limited on a global scale does not alter the fact that these emission contribute to climate change. The court has taken into consideration in this respect as well that the Dutch greenhouse emissions have contributed to climate change and by their nature will also continue to contribute to climate change.

In April 2016, in *United States District Court for the District of Oregon, Case 6:15-cv-01517-TC*, Coffin Magistrate Judge, again considering the causal relationship between governmental acts and omissions and climate change loss and damage

concluded as follows:

As noted above, there must be a causal connection between the injury and the conduct of which plaintiffs complained. In other words, the injury has to be fairly traceable to the challenged action of the defendant, and not the result of the independent action of some third party not before the court. *Simon v. Eastern Ky. Welfare Rights Organization*, 426 U.S. 26, 41-42 (1976). The government asserts that the association between the complained of conduct (such as subsidizing the fossil fuel industry, favorable revenue code provisions, allowing transport of fossil fuels, and authorizing fossil fuel combustion in the energy/refinery/transportation/manufacturing sectors) and the associated greenhouse gas emissions that ultimately cause the harm is tenuous and filled with countless intervening actions by unidentified third parties. However, as alleged, without the complained of conduct, the third parties would not be able to engage as extensively in the activities that allegedly cause climate change and the resulting harm ... In cases where a chain of causation involves numerous third parties whose independent decisions collectively have a significant effect on plaintiffs' injuries, the causal chain may be too weak to support standing at the pleading stage. See *Allen*, 468 U.S. at 759. But here, there is an alleged strong link between all the supposedly independent and numerous third party decisions given the government's regulation of CO₂ emissions. See, e.g., 42 U.S.C. § 7409 (providing the EPA the authority to regulate national ambient air quality standards for the attainment and maintenance of the public health); *Massachusetts v. EPA*, 549 U.S. 497 (2007) (EPA has power to regulate greenhouse gas emissions). If the allegations in the complaint are to be believed, the failure to regulate the emissions has resulted in a danger of constitutional proportions to the public health. Presumably, sweeping regulations by this agency (the EPA) alone could result in curtailing of major CO₂ producing activities by not just the defendant agencies, but by the purported independent third parties as well. At this pleading stage, the court need not sort out the necessity or propriety of all the various agencies and individuals to participate as defendants, at least with respect to issues of standing.

For now, it is sufficient that EPA's action/inaction with respect to the regulation of greenhouse gases allegedly results in the numerous instances of emissions that purportedly cause or will cause the plaintiffs harm.

Conclusion

The 'commingled product' theory developed in the US is essentially a variant of the 'material contribution' test.

Applying either approach to the context of climate change loss and damage implies the imposition of a two-stage test:

i) Can the claimant show on the balance of probabilities that violations of their rights are attributable / part attributable to the anthropogenic increase in atmospheric concentrations of greenhouse gases? If so,

ii) Have the Respondents materially contributed to that increase?

If both questions can be answered in the affirmative the Honourable Commission may well conclude that the Respondent carbon majors have caused the violations in question.

More generally the case-law in the UK regarding asbestos and mesothelioma (although not directly analogous to climate change litigation) illustrates the readiness of courts to ensure uncertainties regarding the chain of causation do not operate unfairly against those who have suffered loss and damage.

Case-law from both the Netherlands and the US offers clear precedent for establishing a causal link between a single defendant and global climate change. Both cases concerned governmental acts or omissions. In the *Urgenda* case, for example, the Dutch government's annual contribution to aggregate emissions of 0.42% was not considered to be *de minimis* and the court rejected the government's submissions that its actions were not a cause of climate change loss and damage.

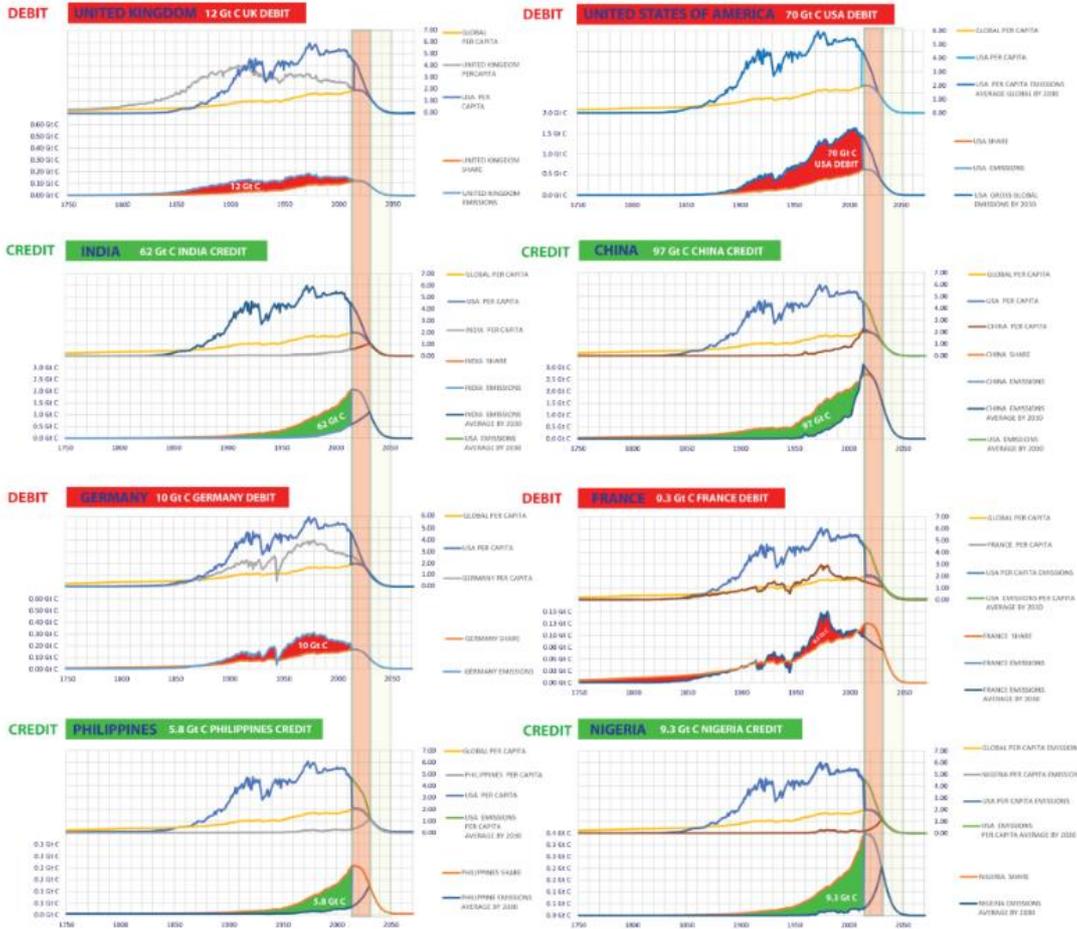
The work of Rich Heede demonstrates that all of the Respondent carbon majors have contributed to the increased atmospheric concentration of greenhouse gases at a level beyond that which might be regarded as *de minimis*.

7. [State accountability](#)

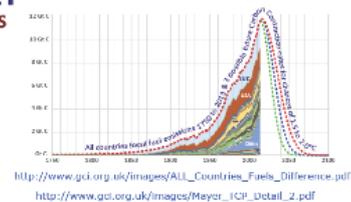
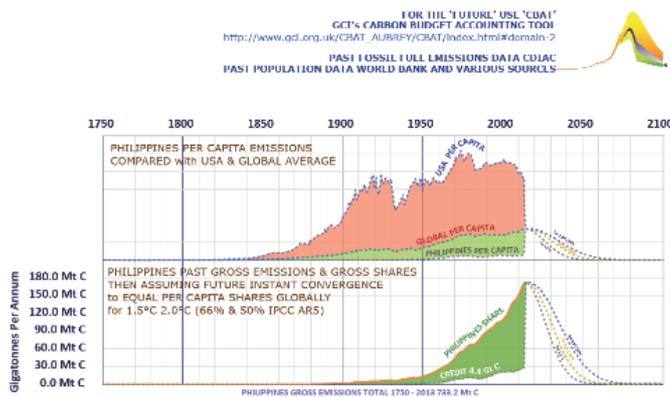
The Petition refers to the 'no harm' principle under public international law. It is respectfully submitted that the Honourable Commission might also consider the extent to which Governments are responsible for violating the human rights of The Filipino People.

It is often noted that the countries least responsible for climate change are often those most vulnerable to its effects. That is certainly true in the case of The Philippines. The graphic below (prepared by the Global Commons Institute) reveals the extent to which The Philippines is a 'carbon creditor' (calculated on the basis of equal *per capita* shares of the 'carbon budget'):

ACCOUNTING FOR the PAST UNEQUAL USE of the COMMONS for FUTURE INDCS with (e.g.) **CONTRACTION** by 2050 & **CONVERGENCE** by 2030



PHILIPPINES SHARE of TOTAL GLOBAL CARBON BUDGET CARBON WEIGHT ACCOUNTING for the PAST UNEQUAL USE of the GLOBAL COMMONS & FUTURE INDCS; here **CONTRACTION** by 2040-50 with **CONVERGENCE** by 2014



| PAST 1750 to 2013 | |
|------------------------|-----------------|
| GLOBAL BUDGET | 499.3 Gt C 10% |
| PHILIPPINES | 0.7 Gt C 0.14% |
| Actual Share | 0.7 Gt C 0.14% |
| Equal Per Capita Share | 5.1 Gt C 1.00% |
| Carbon CREDIT/DEBIT | 4.4 Gt C 0.89% |
| FUTURE 2013 - 2040 | |
| 1.5°C | NOT TOO RISKY |
| GLOBAL | 194.0 Gt C 10% |
| PHILIPPINES | 2.73 Gt C 1.38% |
| FUTURE 2013 - 2050 | |
| 2.0°C (67%) | VERY RISKY |
| GLOBAL | 278.9 Gt C 10% |
| PHILIPPINES | 5.6 Gt C 1.98% |
| FUTURE 2013 - 2080 | |
| 2.0°C (50%) | VERY RISKY |
| GLOBAL | 326.8 Gt C 10% |
| PHILIPPINES | 5.8 Gt C 1.82% |

Nb. The differential in credits arises from using CDIAC's figures for global production total as the basis for the first graphic, and global consumption total for the second.

The concept of equitable shares of a carbon budget is the logical way to reflect equity and historical responsibility (as per the principles of the UNFCCC). However the concept is not directly established by the *Paris Agreement*, which imposes only the procedural requirement for countries to report their nationally determined contributions. If The Philippines is to pursue the full value of its 'credits' to other governments, it appears it will need to do so via a claim to the International Court of Justice.

Assuming The Government of the Philippines were to bring an action against Party F, alleging its NDC is inconsistent with the objective of limiting warming to 1.5 or 'well below' 2 degrees Celsius, on what basis would the adequacy of Party F's NDC be assessed? UNFCCC directly incorporates a number of relevant principles of law, the most significant of which are:

- the precautionary principle (UNFCCC Art. 3(3)); and
- equity (UNFCCC Art. 3(1)).

Likewise the Paris Agreement confirms that NDCs should be prepared on the basis of equity and common but differentiated responsibilities (Paris Agreement, Preamble, and Article 4). The question for the court might therefore be framed as follows: *In light of the precautionary principle, and principles of equity, is Party F's NDC adequate to discharge its duty to prevent climate induced harm to The Philippines (and others)?*

One approach would be to begin with a conceptual distribution of the *remaining* budget on the basis of per capita shares (on the principle that no one person has a right to consume a greater share of the atmosphere's storage capacity than any other). Dividing, let's say, 1000 Gigatonnes CO₂ by a world population of 7.4 billion realises per capita shares of 135 tonnes CO₂. That would give the US (with a population of about 320 million) a combined share of approximately 43.2 GtCO₂. Bangladesh, with a population of about 160million would have approximately 21.6 GtCO₂. According to US researchers Paul Murtaugh and Michael Schlax, the carbon legacy of the average female in Bangladesh is 136 tonnes (just a fraction over per capita shares of a 1000 Gt budget); while for the average female in the US the figure is 18,500 tonnes. Consequently a division of the budget on a *per capita* basis produces an equalising effect of 'contraction and convergence'. There are two obvious objections to this approach, one likely to be raised by developing countries, the other by developed countries. IPCC AR5 states that between 1750 and 2011 there were about 2000 Gt of cumulative anthropogenic CO₂ emissions to the atmosphere (AR5, SPM 2.1). Developing countries might reasonably argue that an even distribution of the last third of the pie (after developing countries have consumed most of the first two thirds) fails to reflect historic responsibility. The principles of historic responsibility and 'the right to sustainable development' require the development of a formula for the notional

distribution of the 'original' CO₂ budget (which, according to the IPCC, was about 3000 Gt CO₂, as of 1750).

On the other hand developed countries may argue, that even in relation to the final third of the pie, it is simply impractical to divide it equally. Levels of per capita GHG consumption in developed countries far exceed those in the developing world, an imbalance, which, in practical terms, can not suddenly be reversed.

Both points have force (the former on the basis of equity; the latter on grounds of practicality). The following **TEN STEP PROCESS** is proposed as a practical framework for addressing both sets of concerns, ensuring that pragmatism does not come at the expense of equity (nor *vice versa*).

Step 1: Assess the total carbon budget available from the start of the industrial age (say 1750) consistent with the 1.5 / 2 dc temperature goal: **T** (Gt CO₂)

Step 2: Determine the total global population from 1750 to projected decarbonisation date (say 2050): **P**

Step 3: Define per capita shares of the total carbon budget as **T/P** tonnes of CO₂: **K** (tonnes CO₂)

Step 4: Calculate the total population for each Party between 1750 and 2050: **P1, P2** etc

Step 5: Define equitable shares of the total carbon budget for each country as **K x P1, K x P2** etc, tonnes of CO₂: **T1, T2** etc (Gt CO₂)

Step 6: Calculate total actual emissions for each country: **M1, M2** etc (Gt CO₂)

Step 7: Calculate the difference between equitable and actual share for each country as **T1-M1, T2-M2** etc: **C1, C2** etc (Gt CO₂) where the difference is positive (a GHG 'credit'); **D1, D2** etc (Gt CO₂), where negative (a GHG 'debit').

Step 8: Assess the future carbon budget consistent with a high degree of probability of meeting the temperature goal: **F** (Gt CO₂).

Step 9: Use the principles of contraction and convergence to determine practical country shares of this budget: **F1, F2** etc Gt CO₂.

Step 10: Apportion liability for loss and damage, attributable to warming in excess of the temperature goal, on the basis of **D / D1, D2** etc (where **D** is the sum of D1, D2, D3 etc).

Breach of the duty to prevent might be established on one of two bases:

i) that, looked at in total, Country X has a GHG debit, ie it has emitted more than its fair share of the total carbon budget consistent with the 1.5 / 2 degree temperature goal; or that

ii) that Country X's current NDC emissions are inadequate in terms of the long term goal (i.e in excess of F1, F2 etc).

In relation to (i) above, the remedy could only be compensatory. In relation to (ii) a court might order an increase in emission reductions.

It may help to provide a brief illustration of how the framework would operate in practice. Let's assume, for example, that T (the total carbon budget) is 3000 Gt CO₂. D (the sum of all debits) is 1000 Gt CO₂. Party X has a GHG debit, D_X, of 100 Gt CO₂, ie it is responsible for a tenth of the overshoot. On this basis Party X would be liable for a tenth of all loss and damage consequent on the budget having been exceeded.

The virtues of such a scheme are multiple. It would:

- a) anchor aggregate emissions to the long-term term temperature goal;
- b) provide a strong financial incentive for all Parties to be ambitious in their emission reductions;
- c) reflect principles of historic responsibility, capacity, equality and the right to sustainable development;
- d) enable trading in credits and debits (with the availability of credits firmly anchored to the total available carbon budget);
- e) anchor 'debits' / financial contributions to the value of current and projected loss and damage;
- f) provide a relatively simple and objective framework, ensuring foreseeability and consistency in the application of the duty to prevent to GHG emissions; and
- g) provide a corresponding framework for determining financial contributions / liabilities.

Clearly the proposal might benefit from refinement and elaboration. For present purposes, the aim is less to present a comprehensive scheme for putting the duty to prevent into practice; than to demonstrate, in general terms, the viability of such a scheme, and to indicate the sort of approach that might be adopted by the ICJ to provide a binding global framework for GHG emission reductions.

State and corporate accountability for climate change operate in tandem (it is not a case of either / or). Governments owe a duty of care to other governments to regulate activities within their jurisdiction, so as to prevent them causing harm to

other territories. Corporates owe a duty of care directly to all those foreseeably affected by their activities. Enforcing state liability is one of the means of ensuring appropriate regulation of companies, and implementation of the principle of 'the polluter pays'. To put it another way, the Honourable Commission might seek to uphold the rights of the Filipino people by recommending both that:

- The Government of the Republic of the Philippines enforces its State rights through the international courts; and that
- The Government of the Republic of the Philippines ensures its domestic legal framework provides citizens with adequate remedies for breaches of their rights, and that it promotes the principle of 'the polluter pays'.

8. Conclusion

The Honourable Commission is confronted by a question, the answer to which may determine the future not only of millions of Filipino people, but of countless others around the world:

- Who is accountable for the devastation wreaked by man-made climate change?

Should the Filipino People, who are carbon creditors, pay for it with their lives, without recompense or findings of accountability? Or should those who are profiting from the causes of climate change assume responsibility?

If the law does not serve fundamental notions of justice, it is failing in its duty. It is respectfully submitted, however, that (as set out in more detail above) international instruments and jurisprudence support the following conclusions:

- i) States have a duty to uphold the human rights of their people, regardless of the source of the violation or potential threat;
- ii) States have an obligation to prevent activities occurring within their jurisdiction which cause substantial harm to other states;
- iii) Corporations are bound by both a duty of care and human rights principles to avoid causing serious harm to others;
- iv) States and corporations must take all reasonable measures to prevent foreseeable harm occurring;
- v) The impacts of climate change may constitute a serious interference with human rights (including the right to life);
- vi) The substantive aspect of the right to life demands that, where there is a foreseeable risk to life, reasonable measures are taken to prevent that risk occurring;
- vii) The procedural aspect of the right to life demands that:
 - a. There is a full investigation into violations of the right to life;

- b. There is a legal framework in place to provide redress and deterrence for violations.
- viii) The 'polluter' should pay for the social and environmental costs of their pollution (where 'polluter' may be defined as the economic agent playing a decisive role in the pollution);
- ix) As long as a company has 'materially contributed' to the pollution causing a particular harm, that company may be said to have 'caused' the harm.

9. Remedies

The Honourable Commission has the responsibility of making recommendations to ensure the survival of The Filipino People.

It is respectfully submitted that the Honourable Commission, subject to its findings on responsibility and accountability, consider making the following Recommendations:

A. That the Government of the Republic of The Philippines develop and implement a nationwide adaptation programme, grounded in projections of future temperature and sea-level rises that are as accurate as possible²⁴, to include a public awareness campaign explaining the projected future risks.

B. That the Government of the Republic of the Philippines enforce its state rights through the international courts, seeking judicial recognition of its status as a carbon creditor, with a view to securing the funds to support necessary mitigation and adaptation efforts.

B. That a review is conducted of the current domestic legal framework to ensure that where the rights of Filipino people are adversely affected by climate change, the victims can claim compensation directly from 'polluters' (eg the principal economic operators profiting from the production and supply of fossil fuels). The framework should incorporate 'the effects doctrine', and promote 'access to justice', recognizing the public interest in facilitating such claims. In Brazil, for example, the Constitution grants any citizen the right to bring a legal action to protect the environment, providing that such action will not incur judicial costs unless it has been brought in bad faith.

²⁴ See, for example, the Carbon Budget Accounting Tool (CBAT), which supports, interrogation of scientific projections with a view to precautionary, risk-based policy development under conditions of uncertainty (http://www.gci.org.uk/CBAT_AUBREY/CBAT/index.html#domain-1).

Plan B respectfully makes itself available to the Honourable Commission to answer any questions arising out of the submissions above.

Signed:

A handwritten signature in black ink, appearing to read 'Timothy Crosland', written in a cursive style.

**Timothy Crosland
Director, Plan B**