Applying state responsibility for transboundary harm through an evolutionary lens

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ABSTRACT

The Principle of State Responsibility and Liability For Transboundary Harm is a constantly evolving obligation on states. States can no longer exercise their sovereignty in such a way that it causes harm to another state’s sovereign territory. As development of the original Principle of State Responsibility and Liability For Transboundary Harm occurs, a direct accountability is still placed on states to prevent causing transboundary harm to another state.

This study aims to provide an historical overview of the Principle of State Responsibility and Liability For Transboundary Harm by examining the nature of the Principle of State Responsibility and Liability For Transboundary Harm and its application historically and presently in international law. In the context of environmental law, the sovereign use of biodiversity or natural resources can potentially have global impacts. For this reason, it is vital to determine what the nature of state responsibility is for transboundary harm and to determine whether the development of the Principle of State Responsibility and Liability For Transboundary Harm has kept up with modern-day environmental challenges. Based on the historical development and current application, this study concludes with trends and suggestions as to whether the Principle of State Responsibility and Liability For Transboundary Harm in its current form, is suitably adapted to resolve global environmental challenges.

The purpose of this study was an attempt to add and effect change to the ever-growing discussion on why it is important to conserve our planet’s biodiversity. It is essential for global society today to live with an environmental consciousness and understand that environmental challenges of the past, present and future were and are not confined to sovereign boundaries. As human beings, we have an important moral obligation to protect our environment which helps us live daily. Moreover, the world’s population is rapidly increasingly daily. Thus, we need to ensure that we do not destroy our planet for future generations.
Key words: state sovereignty, evolution, transboundary environmental harm, environmental challenges.
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1 Introduction

Since we live in an ever more globalising world, the actions of states increasingly affect neighbouring states. Historically, states could freely use their resources within their territory regardless of the environmental impact it had on other states. In the context of environmental law, the sovereign use of biodiversity or natural resources (a common concern of mankind) can have global impacts. It is also possible for a state to cause global environmental harm or harm to the global commons.

Due to the increasing levels of pollution involving global transboundary harm, a duty to prevent significant transboundary harm was established to prevent detriment to human and environmental health. This duty finds form in the Principle of State Responsibility and Liability for Transboundary Harm (hereinafter Principle of State Responsibility). It has become an ever-growing concern to determine what appropriate action is required when the act of sovereignty affects the globe. To address this ever-growing concern, it is important to establish what the nature of the state’s responsibility is for transboundary harm and to see whether the development of the principle is adequate to address modern-day environmental challenges as part of this study.

1.1 Problem statement

The Principle of State Responsibility for transboundary harm is a constantly evolving obligation through hard and soft law. In international law, liability for transboundary harm is based on analogies going back to Roman law.¹ The Principle of State Responsibility was first elaborated upon in the Trail Smelter (United States v Canada) case of 1938 (hereinafter Trail Smelter case). In this arbitration Canada was accused of allegedly causing transboundary air pollution affecting the territory of the United States of America. While Canada had a right to exploit its natural

resources, an international norm also existed for the United States of America to protect its national territory. The Arbitral Tribunal concluded that Canada was liable for causing transboundary environmental harm to the United States of America.\textsuperscript{2} This decision is important because it served as the first manifestation of the \textit{Principle of State Responsibility}, the practical effect being that a state may not cause transboundary harm to another when using its own territory. This obligation to not cause harm to another state placed an important limitation on how sovereignty was understood at the time.\textsuperscript{3}

In 1972, the \textit{United Nations Conference on the Human Environment} (hereinafter \textit{United Nations Conference}) sought to address the deficiencies of liability and compensation for the victims of transboundary harm in existing law.\textsuperscript{4} Thus, the \textit{United Nations Conference} focused on liability and compensation for the victims of transboundary environmental harm caused by activities within the jurisdiction or control of such states. The \textit{United Nations Conference} marked the initial development of addressing liability and compensation for transboundary environmental harm.\textsuperscript{5} In 1978, the International Law Commission introduced the \textit{Liability for Injurious Consequences of Acts Not Prohibited by International Law} which was a further development to the original \textit{Principle of State Responsibility} in addressing liability and compensation for transboundary environmental harm.\textsuperscript{6} Further development of liability was also achieved by the identification thereof through the \textit{Stockholm Declaration of the United Nations Conference on the Human Environment, 1972} (hereinafter \textit{Stockholm Declaration}) and furthermore in principle 2 of the \textit{Rio Declaration on Environment and Development, 1992} (hereinafter \textit{Rio

\textsuperscript{2} Bratspies and Miller \textit{Transboundary Harm in International Law: Lessons Learnt From The Trail Smelter Arbitration} 27-40.


Declaration) where these instruments placed a direct accountability on states to ensure that they do not cause transboundary harm to another state.  

The Rio Declaration, signed by more than 170 countries, states the following in principle 2:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and 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.

Therefore, state sovereignty, namely a state’s freedom to act without outside interference, can no longer be exercised in such a way that it causes harm to another state’s sovereign territory. Compensation can be regarded as an indirect outcome when applying principle 2 of the Rio Declaration. The limitation of state sovereignty still remains one of the important elements in determining the presence of transboundary harm. As development of the original Principle of State Responsibility occurs, a direct accountability is still placed on states to prevent causing transboundary harm to another state.

In recognition of the need for "clearer articulation" regarding the nature of the Principle of State Responsibility and its application historically and presently in international law, this study aims to provide an historical overview of the Principle of State Responsibility for transboundary harm. In the context of environmental law, the sovereign use of biodiversity or natural resources can potentially have global impacts. For this reason, it is vital to determine what the nature of state responsibility is for transboundary harm and to determine whether the development of the Principle of State Responsibility has kept up with modern-day environmental

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challenges. Policy and principles of international environmental law will also be discussed to provide further background to the evolution of the Principle of State Responsibility. Based on the historical development and current application, this study concludes with trends and suggestions as to whether the Principle of State Responsibility in its current form, is suitably adapted for the global environmental challenges faced.

The purpose of this study was an attempt to add and effect change to the ever-growing discussion on why it is important to conserve our planet’s biodiversity. It is imperative for global society today to be environmentally conscious and understand that environmental challenges of the past, present and future were and are not confined to sovereign boundaries. The environmental challenges experienced today can have disastrous impacts on future generations if positive change is not implemented in today’s society. As human beings, we have an ever-present and vital moral obligation to protect our environment which helps us live daily. Moreover, the world’s population is rapidly increasingly daily. Thus, we need to ensure that we do not destroy our planet for future generations by promoting inter-generational equity.

2 Modern-day environmental challenges

2.1 Introduction

This chapter discusses a few of the critical global environmental challenges that culminate in contributing to global transboundary harm. This chapter also emphasises the importance of addressing these challenges urgently to prevent more significant transboundary harm challenges in future.

2.2 Global environmental challenges

Our planet faces a diverse and growing range of environmental challenges which can only be actioned through global co-operation. Climate change, globalisation, loss of biodiversity, toxic and hazardous waste, depletion of freshwater resources, ozone depletion, acid rain and pollution of rivers are some of the critical
environmental challenges faced by our planet at present. Our eco-systems are intricately connected to each other. Environmental challenges are linked to the theories of connectivity and holism, among others. Connectivity, for example, refers to everything that the environment comprises of being connected to another. Thus, if one part of the environment experiences harm, it can have a cascading effect on the environmental chain.

It is a further well-known and documented fact that pollution does not recognise borders. Pollution may arise in one country and cause harm to another. An oil spill in one state may affect the marine life of its neighbouring state. Thus, it will have an adverse impact on the livelihoods of fishermen, for example, who rely on these fish to sustain their livelihood. Therefore, solving environmental issues facing the world today is not a linear process. Activities that occur on a sovereign level can have major adverse effects on our planet. The future generation of our world will face a more significant environmental challenge than the generation of today if these environmental challenges are not addressed.

International law was therefore called upon to solely address these growing environmental challenges. International environmental law has emerged from a "backdrop of environmental challenges" accompanied by a recognition that "ecological interdependence does not respect national boundaries" and that challenges previously viewed as being a domestic sovereign issue now has international implications. These implications may have bi-lateral, sub-regional, regional or global impacts and can only be adequately addressed through international law and regulation.

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12 For example see Beckman, Jayakumar, Koh and Pahn Transboundary Pollution: Evolving Issues of International Law and Policy 121-189.
14 For example see Beckman, Jayakumar, Koh and Pahn Transboundary Pollution: Evolving Issues of International Law and Policy 121-189.
15 Sands Greening International Law 20-87.
2.2.1 International legal order

During the Rio Declaration in 1992, the international community was given an opportunity to prioritise environmental issues and consolidate international environmental legal agreements.\(^{16}\) The environmental treaties and other international acts adopted prior to the Rio Declaration reflected the growing range of economic activity that has become a growing concern for the international community.

Sands highlights that environmental challenges pose challenges for three aspects of existing international legal order. The first challenge is directed at legislative, administrative and adjudicative functions. The second challenge is directed at the manner in which international legal arrangements are organised along territorial lines. The third challenge involves several actors who are considered members of the international community and participants in several practices of international legal order. The ability of international legal order to address these three challenges in the context of environmental challenges will determine whether international law is aptly prepared to handle the growing list of global environmental challenges.\(^{17}\)

The cumulative adverse effect of states causing harm to the ozone layer and planet as an example becomes a case of transboundary harm.\(^{18}\) Environmental treaties such as the Convention on Biological Diversity, 1993, Montreal Protocol and the Kyoto Protocol are great examples of global attempts to address the current modern-day environmental challenge of ozone depletion and climate change.\(^{19}\)

\(^{16}\) Sands Greening International Law 20-87.
\(^{17}\) Sands Greening International Law 20-87.
\(^{18}\) Verheyer Climate Change Damage and International Law: Prevention Duties and State Responsibility 150-164.
\(^{19}\) Verheyer Climate Change Damage and International Law: Prevention Duties and State Responsibility 150-164.
2.2.1.1 Convention on Biological Diversity, 1993

The *Convention on Biological Diversity*, 1993 (hereinafter *Convention on Biological Diversity*) stipulates that environmental conservation is a common concern of mankind. The preamble of the *Convention on Biological Diversity* mentions that states have sovereign rights over the use of their biological resources. However, the *Convention on Biological Diversity* clarifies that states are accountable to use their biological resources in a conservative and sustainable manner. The *Convention on Biological Diversity* notes that certain human activities such as transboundary harm have reduced biological resources and supports the *Principle of State Responsibility* in preventing transboundary environmental harm.

2.2.1.2 Ozone depletion

Rapid ozone depletion is one of the most significant environmental issues facing our planet today. The thin layer of the ozone in the lower stratosphere performs an essential “Earth system function” in absorbing ultra-violet radiation emitted by the sun. If ultra-violet radiation is absorbed it would have reached the Earth’s surface and cause harm to living organisms. Without our ozone layer wrapping our planet, life on earth would not exist. Therefore, the protection of the ozone layer is essential in preserving all forms of life on earth.

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25 Kotzé *Environmental Law and Governance for the Anthropocene* 6-54.
The Montreal Protocol on Substances that Deplete the Ozone Layer, 1987 (hereinafter the Montreal Protocol) is a global agreement which aims to protect the stratospheric ozone layer by reducing the production of ozone depleting substances. The illegal trade of ozone depleting substances is a significant threat to the non-compliance of the Montreal Protocol. Illegal trade is an extremely lucrative business in the world of today. Weak states that have a weak economy leading to diminishing financial power, a high corruption rate or going through a state of transition regarding their economies, are all at risk of non-compliance and falling victim to the black market trade. Considering that weak states are sometimes known to have significant corruption problems, the likelihood of their states misinterpreting the data and hence reporting inaccurate data is immensely high. Despite having inherit weaknesses, the ozone layer is in a recovery stage due to the successful global action taken to reduce the production and consumption of ozone depleting substances. Kotzé attributes the success of the Montreal Protocol to having a single clear objective to eliminate ozone depleting substances, unlike the Kyoto Protocol to combat climate change.

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28 Kotzé Environmental Law and Governance for the Anthropocene 6-54.
29 Kotzé Environmental Law and Governance for the Anthropocene 6-54.
2.2.1.3 Climate change

Climate change has become a significant worldwide environmental concern due to its presence indicative through scientific research.\(^\text{30}\) The global scope of climate change, the warming of the Earth’s surface and atmosphere from increasing concentrations of greenhouse gases, is unquestionably the greatest environmental challenge for humanity.\(^\text{31}\) In the 1960s, factual global consensus on the climate change was evident with the publication of the “so-called” Keeling curve.\(^\text{32}\) The Keeling curve indicated the rising levels of atmospheric greenhouse gases (mainly carbon dioxide).\(^\text{33}\)

According to Warren and Others\(^\text{34}\), there is evidence that more than half of the planet’s plants and “one-third of animals will lose more than half” of their climatic range by year 2080 if human-induced climate change is not addressed. Yang asserts that within the last four decades, the total global anthropogenic carbon emissions into the atmospheres have doubled, “with a 10-fold increase” over the last century. Temperatures and sea levels are expected to rise, with attendant increases in the frequency of storms, floods, droughts, and other extreme weather events, changes in ecosystems, adverse effects on human health, among others.\(^\text{35}\) Thus, there is an urgent need to reduce anthropogenic interference on climate change and prevent transboundary harm.\(^\text{36}\)

\(^{30}\) Barnard and Carter 2015 www.efundi.ac.za.
\(^{31}\) Yang 2013 https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1769&context=facpubs.
\(^{32}\) Barnard and Carter 2015 www.efundi.ac.za.
\(^{33}\) Barnard and Carter 2015 www.efundi.ac.za.
\(^{34}\) Kotzé Transboundary Governance of Biodiversity 349
\(^{35}\) Yang 2013 https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1769&context=facpubs.
\(^{36}\) Kotzé Environmental Law and Governance for the Anthropocene 6-54.
The United Nations Framework Convention on Climate Change (hereinafter the UNFCCC) and the Kyoto Protocol are the main multi-lateral agreements in place to specifically address climate change globally. The UNFCCC serves as a basis for “concerted international action” to mitigate climate change and to adapt to its effects. Similar to the UNFCCC, the Kyoto Protocol was also established to aid countries to adapt to adverse effects of climate change. The differences and complexity of countries in comparison to one another poses a challenge to international environmental legislation where a “one size fits all” model will not suffice.

Rapid economic growth in many developing countries has raised the standards of living and increased their environmental footprint accordingly. A prominent example of this trend has been the emerging economies in East Asia and South America where standards of living comparable to North America, Western Europe and Japan have been achieved in substantial parts of society. Countries such as China and India, which have a huge population and thus a prospective global environmental impact, have become essential players in international environmental

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cooperation and diplomacy. Previously, poverty alleviation and other societal needs made these countries reluctant to environmental issues such as pollution control over economic growth.\textsuperscript{40} Furthermore, the \textit{Principle of Common but Differentiated Responsibilities and Capabilities} under the \textit{Rio Declaration} in principle 7, based on the “different contributions to global environmental degradation”, has provided that industrialised countries bear the primary responsibility for addressing environmental problems.\textsuperscript{41} China, currently the world’s largest emitter of greenhouse gases, has committed to capping its carbon dioxide emissions by 2030. China has further established numerous objectives regarding policy.\textsuperscript{42} Therefore, based on the \textit{Principle of Common but Differentiated Responsibility}, the main environmental transgressors such as China are viewed as leading the way in combatting global environmental challenges.

While legal order faces critical challenges in implementation, international environmental law is also influenced by non-legal factors such as science and economic activity.

\textbf{2.2.2 Non-legal order}

\textbf{2.2.2.1 Science}

Before the nineteenth century, international legal controls were often gradually implemented owing to certain environmental incidents and the availability of scientific evidence. During the late nineteenth century, states began to realise the adverse effect of transboundary harm in areas beyond national jurisdiction.\textsuperscript{43} Environmental law principles such as the \textit{Precautionary Principle} provides for action to be taken in the event of substantial scientific uncertainty. Scientific evidence

\begin{itemize}
  \item \textsuperscript{40} Yang 2013 https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1769&context=facpubs.
  \item \textsuperscript{41} Yang 2013 https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1769&context=facpubs.
  \item \textsuperscript{42} The Diplomat 2015 www.thediplomat.com/2015/12/china-and-climate-change-three-things-to-watch-after-paris/.
  \item \textsuperscript{43} Sands Greening International Law 20-87.
\end{itemize}
comprises of two viewpoints. Some are of the view that environmental action should only be taken when strong scientific evidence is presented to prevent environmental harm. Others are of another view that their economic development must be strongly considered in international environmental law.

2.2.2.2 Economic activity

The progress of international environmental law represents a close relationship between environmental protection and economic development. The *Stockholm Declaration* states the following in principle 21:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and 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.

In principle 2 of the *Rio Declaration*, two words were added to the original principle in the *Stockholm Declaration*, referring to states’ own environmental and developmental policies. The need for a state to explore their own development goals was significantly recognised while not causing harm to another state. Although economic activity enhances the standards of living in the short-term, it can degrade the “ecological infrastructure” needed to sustain the prevention of long-term transboundary harm. Thus, environmental treaties are forced to break new ground in developing “international legal techniques” to prevent transboundary harm. The *Principle of Sustainability*, which is further discussed in Chapter 3.2.4, is an example

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44 Sands Greening International Law 20-87.
45 Sands Greening International Law 20-87.
49 Sands Greening International Law 20-87.
of international environmental law recognising the need for sustainable development while caring for the environment.\textsuperscript{50}

\section*{2.3 Conclusion}

Historically, environmental challenges were considered as a domestic sovereign issue. Today, there is a growing awareness and concern of environmental challenges having international implications.\textsuperscript{51} Examples of modern-day environmental challenges facing our planet today are climate change, globalisation, ozone depletion, loss of biodiversity, toxic and hazardous waste, depletion of freshwater resources, acid rain, balancing the needs of economic activity with sustainable development and encouraging global participation of environmental preservation when states have their own unique challenges. It is becoming more apparent in international law, as global environmental challenges become more complex, that all states have an increasing obligation to ensure that their activities do not cause transboundary environmental harm to another state and the global environment.\textsuperscript{52}

\section*{3 Policy and principles of International Environmental Law}

\subsection*{3.1 Introduction}

The growth of international environmental challenges is reflected in the large body of principles and rules of international environmental law which is applied bilaterally, regionally and globally, reflecting international interdependence.\textsuperscript{53} International environmental policies and principles of international environmental law have been constantly evolving to address global environmental challenges. This chapter aims to provide an overview of the policies and principles of international environmental law based on customary international law, multilateral treaties and

\begin{thebibliography}{53}
\bibitem{50} Kidd Environmental Law 57-69.
\bibitem{51} Sands Greening International Law 20-87.
\bibitem{52} For example see Beckman, Jayakumar, Koh and Pahn Transboundary Pollution: Evolving Issues of International Law and Policy 121-189.
\end{thebibliography}
decisions of the International Court of Justice to indicate its support to prevent transboundary harm.\textsuperscript{54}

\textbf{3.2 Principles of International Environmental Law}

\textbf{3.2.1 Principle of State Responsibility and Liability For Transboundary Harm}

The origin of international liability is traceable to Roman law and common law, as evidenced by the Latin maxim: \textit{sic utere tuo ut alienum non laedas} which means use your property “in such a way as not to harm others”.\textsuperscript{55} This concept of liability is based on “restrictive enjoyment” of one's own property, or “limited and regulated” use of proprietary rights subject to the prevention of harm to one's neighbours.\textsuperscript{56} The theory of international liability finds expression in state practice, as practiced in the \textit{Trail Smelter} case. In this case, the primary rule, which provides that a state must refrain from harming its neighbours, received further application with far wider implications. A state must not only refrain from harming or hurting neighbouring states, it must also prevent harm in the territories of neighbouring states.\textsuperscript{57}

Principle 21 of the \textit{Stockholm Declaration} states the following:

\begin{quote}
States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and 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.\textsuperscript{58}
\end{quote}

State sovereignty, which is pertinent to a state’s freedom to act without outside interference, cannot be exercised in such a way that it interferes with another state’s sovereignty. This also gives way to the important element of responsibility of


\textsuperscript{55} \textit{Sic utere tuo ut alienum non}.

\textsuperscript{56} Sucharitkul 1996 https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?referer=&httpsredir =1&article=1225& context=pubs.

\textsuperscript{57} Sucharitkul 1996 https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?referer=&httpsredir =1&article=1225& context=pubs.

\textsuperscript{58} \textit{Stockholm Declaration of the United Nations Conference on the Human Environment, 1972.}
states. 59 This was evident in the decision taken in the Trail Smelter case where Canada’s actions adversely affected the United States of America. 60 As a result, states may not conduct activities within their jurisdiction and control in such a way that will cause harm to the environment of other states or areas beyond the national jurisdiction. 61

3.2.2 Principle of Good Neighbourliness and International Cooperation

Principle of Good Neighbourliness and International Cooperation (hereinafter the Principle of Good Neighbourliness) places a direct obligation on states to practice due care to prevent transboundary harm to their neighbours and to cooperate with each other to resolve conflict. 62 This entails assessing the risk of transboundary harm, taking reasonable measures to prevent or minimise the risk of significant transboundary harm, notify, cooperate or consult with the potentially affected state, and balance the benefits of action. These steps are done to ensure a reasonable course of action for both states. 63

Article 74 of the United Nations Charter, 1945 mentions that environmental policy in metropolitan areas must be generally based on the Principle of Good Neighbourliness and must consider “the interests and well-being” of the rest of the world regarding “social, economic and commercial matters.” 64 This is also pertinent to the principle 24 of the Stockholm Declaration and principle 27 of the Rio Declaration, in addition to numerous other international instruments. 65 The presence of the Principle of Good Neighbourliness is evident in numerous international

60 Trail Smelter (United States v Canada) case of 1938.
63 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
65 Kidd Environmental Law 57-69.
environmental law instruments indicating its importance in preventing transboundary harm to states and the planet.

3.2.3 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities

In 2006, the Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities (hereinafter Principles of Loss) was adopted by the International Law Commission. The purpose of the Principles of Loss was to further ensure compensation to the victims of transboundary harm and to protect the environment from the effects of transboundary harm. The Principles of Loss was a further development to the original Principle of State Responsibility specifically intended to provide compensation to the victims of transboundary harm, which was previously a deficiency in prior existing law.\(^\text{66}\)

3.2.4 Principle of Sustainability

While environmental treaties may have done great work in ensuring a new level of environmental protection, development of new norms has since reduced. Some suggest that environmental treaties “subsume” environmental considerations and “perpetuates an approach to international economic activities” that compounds environmental problems. To address this concern, environmental protection and economic development have been integrated to form a new environmental principle called the Principle of Sustainability.

The Brundtland Report (hereinafter the Brundtland Report) introduced the concept of sustainable development as a global policy objective.\(^\text{67}\) The Brundtland Report termed sustainable development as “development that meets the needs” of the present without compromising the ability of future generations to meet their own needs. This definition contains two concepts, namely the vital needs of the present

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\(^{67}\) Sands Greening International Law 20-87.
generation and the limitation imposed by technology and social organisation on the global environment’s ability to meet present and future needs.

Principle 21 of the *Stockholm Declaration* can be regarded as posing a limit to national sovereignty which in turn can restrict states’ pursuit of development and economic growth. In consideration of having a balance between environmental responsibility and national sovereignty, principle 21 of the *Stockholm Declaration* states that:

States have the sovereign right to exploit their resources in pursuit to their environmental policies.

Sands points out that the above quote is juxtaposed with and balanced against the *Principle of Responsibility*. The *Principle of Responsibility* states that states have an important responsibility to ensure that activities within their jurisdiction or control do not cause harm to the environment of other states or of areas beyond the limits of national jurisdiction. The *Principle of Responsibility* evident in the *Rio Declaration* states the following:

States have the sovereign right to exploit their own resources in pursuit of their environmental and development policies.

Sands notes that the addition of “and development” provides for a significant purpose. The direct emphasis on development upsets the balance struck in the *Stockholm Declaration* between the sovereign use of natural resources and the duty of care of the environment. In the *Stockholm Declaration*, the sovereign right to exploit the natural resources of states was affirmed in the context of their environmental policies, giving an “ecological colour” to the *Principle of State Responsibility* over natural resources. The direct emphasis on environment is now

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68 Sands Greening International Law 20-87.
70 Sands Greening International Law 20-87.
71 Sands Greening International Law 20-87.
73 Sands Greening International Law 20-87.
74 Sands Greening International Law 20-87.
“neutralised” by the addition of national development policies in the *Rio Declaration*. After the *Rio Declaration*, the responsibility of a state to exercise its sovereign right over natural resources will be evaluated in conjunction with its environmental policy.\(^7\) The criteria for balancing environmental protection and economic development under sustainable development has not been directly clarified by the *Rio Declaration* or subsequent international environmental instruments. This shortcoming of sustainable development can possibly give way to economic interests to be dominant against environmental protection goals.\(^6\)

The *Local Agenda 21* was formed in 1992 as a global partnership for sustainable development.\(^7\) The motive for *Local Agenda 21* is to integrate environment and development concerns for action by the international community. This integration addresses environmental needs such as improved living standards, protected ecosystems and a safer and prosperous future for all.\(^8\) As a further development towards integrating environmental protection and development the *National Environmental Management Act 107* of 1998 stipulates that the *Principle of Sustainability* refers to development being undertaken in a social, environmental and economically viable manner.\(^9\) The presence of all three factors is vital for achieve sustainability.

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\(7\) Sands Greening International Law 20-87.
\(6\) Scholtz and Vershuuren *Regional Environmental Law: Transregional Comparative Lessons in Pursuit of Sustainable Development* 2-25.
\(7\) Sands Greening International Law 20-87.
\(8\) Sands Greening International Law 20-87.
Despite certain challenges, the concept of sustainable development has had the biggest impact to this date in comparison to the other principles of environmental law. The concept of sustainable development is embedded in local and international government policies. Business corporations whether small, medium or large enterprises have incorporated sustainable development into their business strategies and practices.\(^8\) Sustainable development remains a common inclusion in almost “every important legal instrument” since the *Rio Declaration* in 1992. Thus, sustainable development has been embraced at a regional, national and international level. This embrace has further promoted the integration of environmental and economic governance amongst the international community thus making sustainable development a mutual goal of states. However, international environmental law must constantly undergo a rebalance to ensure that economic development is rightly prioritised with the global need for environmental protection and prevention of transboundary environmental harm.\(^9\)

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\(^8\) Earthenbowl 2016 https://earthenbowl.wordpress.com/blog/about/.


\(^9\) Sands *Greening International Law* 20-87.
3.2.5 Precautionary Principle

The Due Diligence Principle and Due Care Principle pertinent to the environment and natural wealth and resources are considered the first basic principles of environmental protection and preservation law. The Due Diligence Principle and Due Care Principle are rooted in ancient law, natural law and religion. Over time, there has been an ongoing emphasis on the duty of states to take preventive measures to protect the environment. The Due Diligence Principle and Due Care Principle both form the core of the Precautionary Principle (which will be further discussed in Chapter 6.3).

The Principle of State Responsibility requires preventive measures to be taken into consideration before activities involving potential harm can be conducted. The Precautionary Principle is implemented through exercising the right to sovereignty. The Precautionary Principle is supported by general principles of law e.g. good faith, avoiding abuse of the law, duty of diligence, liability for harm, among others.\(^83\)

Kidd\(^84\) describes the Precautionary Principle as instituting preventive measures in situations of scientific uncertainty where a course of action may cause harm to the environment.\(^85\) Principle 15 of the Rio Declaration mentions that a lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation in the case of threats of serious irreversible harm.\(^86\) Kidd\(^87\) explains further that if either the safe or hazardous nature of a chemical substance had not been proven by science, it must be treated as hazardous until proven safe.\(^88\) The Precautionary Principle entrenches the realisation that harm to the environment can also be reversible in certain instances. However, it is important to avoid causing transboundary harm instead of trying to remedy it.


\(^{84}\) Kidd Environmental Law 57-69.

\(^{85}\) Kidd Environmental Law 57-69.


\(^{87}\) Kidd Environmental Law 57-69.

\(^{88}\) Kidd Environmental Law 57-69.
later. The extinction of a certain species is an example of where harm cannot be reversed.\cite{Kidd2006} Precautionary measures are also subject to change dependent on the level of certainty or uncertainty indicated by scientific progress.\cite{Mendis2006} Thus, the \textit{Precautionary Principle} demands that a safer approach in precaution be applied as opposed to a risky approach of causing unknown harm. The \textit{Precautionary Principle} also reverses the burden of proof i.e. the person who wishes to conduct a particular activity must prove that such activity will not cause severe harm to the environment.\cite{Mendis2006} Kidd explains that every development occurring runs the risk of causing some harm to the environment that can be unknown at the time of occurrence. Therefore, it is vital to balance the degree of likely risk with the cost of avoidance and likelihood of harm eventuating.\cite{Kidd2006}

Some judges of the International Court of Justice have stated that the \textit{Precautionary Principle} is not part of customary international law but a general international law.\cite{Esposito2010} In the \textit{Mox plant (Ireland v United Kingdom)} case of 2001, it was noted that the \textit{Precautionary Principle} is now a rule of customary international law.\cite{Esposito2010} While some may view the \textit{Precautionary Principle} as an obstacle, others may view it as a fundamental principle that underpins long-term sustainable development with intergenerational accountability.\cite{Mendis2006} The \textit{Precautionary Principle} certainly demands policy makers to remain vigilant of potential harm that could be caused to the environment.\cite{Mendis2006}

\begin{thebibliography}{99}
\bibitem{Kidd2006} Kidd \textit{Environmental Law} 57-69.
\bibitem{Kidd2006} Kidd \textit{Environmental Law} 57-69.
\bibitem{Esposito2010} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\bibitem{Esposito2010} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\end{thebibliography}
3.2.6 Public Participation Principle

The Public Participation Principle pertains to involving public participation in decision-making involving the environment in which they live in. Environmental laws such as laws relating to fisheries and water resources, can play an important role in livelihoods of poor communities. However, the same laws can also deprive these poor communities of their livelihoods if they are developed, implemented and enforced in a manner that does not consider the interests of these communities. For example, if a government’s pollution control legislation forces the closure of small factories as a means to prevent transboundary environmental harm, the law will adversely affect factory workers for whom there might be no alternative livelihood available. These people may have relied solely on the income earned in the factory in order to survive. This is pertinent to the Trail Smelter case (further discussed in Chapter 5.2) where the residents of the surrounding area relied on the income they earned from working at the smelter which caused transboundary harm.

Recent development policies in environmental law have sought to “decentralise” decision-making and “enhance local institutional capacities” by strengthening local government and non-governmental organisations to create a more “participatory” approach. This has also been supported and motivated by global policy initiatives such as the Local Agenda 21 movement (further discussed in Chapter 3.2.4) for sustainable development. The purpose of this movement is to build upon existing local government strategies and resources to integrate environmental, economic and social goals.

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97 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
99 Trail Smelter (United States v Canada) case of 1938.
3.2.7 Polluter Pays Principle

The Polluter Pays Principle states that whoever is responsible for the harm caused to the environment should bear the costs associated with it. In the Trail Smelter case (further discussed in Chapter 5.2), Canada was liable for transboundary harm caused. Canada had to compensate the affected people, for example, farmers whose crops were destroyed by the aerial spraying.\(^{102}\)

3.3 Policies of International Environmental Law

3.3.1 United Nations Conference on the Human Environment, 1972

The United Nations Conference on the Human Environment, 1972 (hereinafter United Nations Conference) marked the initial development of addressing liability and compensation for transboundary environmental harm.\(^{103}\) The United Nations Conference aims to address the deficiencies of liability and compensation for the victims of transboundary environmental harm in existing law.\(^{104}\) Thus, the United Nations Conference focuses on liability and compensation for the victims of transboundary environmental harm caused by activities within the jurisdiction or control of such states.\(^{105}\)

3.3.2 Liability for Injurious Consequences of Acts Not Prohibited by International Law

The International Law Commission has spent years developing the law on prevention of transboundary environmental harm as a primary rule and the issue of compensation for such harm caused as a secondary rule.\(^{106}\) In 1978, the

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\(^{102}\) Trail Smelter (United States v Canada) case of 1938.


\(^{106}\) Sucharitkul 1996 https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1225&context=pubs.
International Law Commission also introduced the *Liability for Injurious Consequences of Acts Not Prohibited by International Law* which was a further development to the original *Principle of State Responsibility* in addressing liability and compensation for the victims of transboundary environmental harm.\[^{107}\] In the *Liability for Injurious Consequences of Acts Not Prohibited by International Law* the International Law Commission had defined a set of rules that clarified prevention duties for states to abide by. The obligation to prevent transboundary environmental harm to the environment of other states or of areas beyond the limits of national jurisdiction is a “clear directive” to states to employ their best efforts. Liability of a state is dependent on its injurious consequences suffered by persons beyond its boundaries.\[^{108}\]

### 3.3.3 Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, 2001

In 2001, the International Law Commission adopted the *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, 2001* (hereinafter *Draft Articles on the Prevention*).\[^{109}\] The *Draft Articles on Prevention* builds on the *Rio Declaration* referring to a nation’s sovereign right to develop its resources without causing harm to another state. Therefore, the *Draft Articles on Prevention* recognises the importance of sovereignty of states over natural resources within their territory. However, the freedom of states to exercise activities within their territory is not unlimited.\[^{110}\] The *Draft Articles on Prevention* requires a nation whose activities may potentially harm another state to act responsibly according to the *Principle of Good Neighbourliness* (further discussed in Chapter 3.2.2).\[^{111}\]

107 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
109 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
110 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
111 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
3.3.4 Draft Articles on Responsibility of States for Internationally Wrongful Acts

In 2001, the International Law Commission also completed the Draft Articles on Responsibility of States for Internationally Wrongful Acts (hereinafter Draft Articles on Responsibility).\textsuperscript{112} The Draft Articles on Responsibility determines the rights, obligations and remedies that arise when a state has breached an international obligation.\textsuperscript{113} Once a state has caused environmental harm to another state, the Draft Articles on Responsibility imposes an obligation on the breaching state to cease the breaching activity, ensure that it does not reoccur and to compensate the affected state. The affected state can now demand that the breaching state take responsibility for the harm and can enforce compliance on the breaching state within certain limits.\textsuperscript{114} The Draft Articles on Responsibility also makes provision to resolve disputes when cooperation, negotiation, and other means between the states have failed.\textsuperscript{115}

The Draft Articles on Responsibility appears to impose a substantive requirement that may make states uncomfortable.\textsuperscript{116} The Draft Articles on Responsibility states that states are under an obligation to prevent significant harm to other states. This is also coupled with balancing harm and benefits where the benefits to the states must outweigh the harm. Therefore, some states may regard such a balancing act as an imposition on their sovereignty.\textsuperscript{117} Despite criticism, the development of the Draft Articles on Prevention and Draft Articles on Responsibility signifies the importance of recognising the legal obligation of states to prevent transboundary harm on an international level.\textsuperscript{118}

\textsuperscript{112} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{113} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{114} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{115} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
3.4 Conclusion

There are several international environmental law policies and principles distinguished from several international instruments, in both hard and soft law. However, not every principle has equal scope or status in international law. Some principles have been greatly entrenched whereas other principles are still emerging in international law. However, environmental principles such as the Polluter Pays Principle and the Principle of Good Neighbourliness and environmental policies such as the Draft Articles on Responsibility encompass a common feature which is to critically support the legal obligation of the Principle of State Responsibility.

4 Statehood and sovereignty

4.1 Introduction

To further understand the responsibility of states in international environmental law, the main criteria of what constitutes a state must be understood. In this chapter, an overview will be provided on the characteristics that define a state and the role that sovereignty plays in the prevention of transboundary harm.

4.2 Statehood

According to predominant nineteenth-century doctrine, there were no rules to determine what ‘states’ were. States were determined at the discretion of existing recognised states. Although early writers dealt with issues pertinent to the recognition of states, it was not clearly defined before the middle of the eighteen century. This is because sovereignty, originally meaning the mere location of supreme power of a territory, came from within the state and did not require recognition of other states.

119 Kidd Environmental Law 57-69.
For over a century there has been a debate between the “declarative theory” and “constitutive theory” on statehood. According to the “declaratory theory”, a state should possess the following qualifications: a defined territory, a permanent population and a government as per the *Montevideo Convention on the Rights and Duties, 1933* (hereinafter the *Montevideo Convention*). The *Montevideo Convention* declares that statehood is independent of recognition by other states. The “declaratory theory” prescribes that recognition of a state by an existing state expresses its willingness to enter into relations with that state.

In contrast, according to the “constitutive theory”, a state only becomes a state by virtue of recognition by the other states. This doctrine is considered to be “unsustainable in practice”, as there is no international body with the authority to acknowledge the existence of states on behalf of the entire community of states. Therefore, each state may individually decide whether a new state has come into being and recognise it. In addition, there is no international obligation for states to recognise a territorial entity as a state once it fulfils the “factual criteria” for statehood.

Although the “declarative theory” has been predominantly relied upon in international law, a generally accepted legal definition of statehood does not exist. Despite the lack of a “clear definition” of what constitutes a state, international law does provide guidelines relating to the issue of statehood. For example, the existence of effective control (further discussed in Chapter 4.2.1.3) is widely regarded as a crucial consideration in assessing the emergence of new states. States possess certain “exclusive” and general legal characteristics of states which signifies the concept of statehood as per the following five principles:

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1. States have in principle, full competence to perform acts in the international sphere such as entering into treaties. This function relates to the term sovereignty applicable to states.

2. States in principle are exclusively competent regarding internal affairs. While states have the authority or legal capacity to act in all matters in international law, regarding those affairs, it does mean that their jurisdiction is prima facie both complete and not subject to the control of other states.

3. States cannot be, in principle, compelled to participate in international protocols, jurisdiction or settlements unless they consent to such an exercise.

4. As recognised by the United Nations Charter, states are given equal status in international law. Crawford clarifies that in any international organisation not based on equality, the "consent of all the members" to the "derogation from equality" is required.

5. Any derogation from the above principles must be clearly formed. In a case of doubt, an International Court or Tribunal will resolve disputes involving the freedom of the state’s action or as not having consented to a particular exercise of international jurisdiction or to a particular derogation from equality.

As a rule of interpretation when a state is mentioned, the state is considered to comprise of the above five characteristics of statehood, subject to the context.

4.2.1 Montevideo Convention on the Rights and Duties, 1933

The main criteria of statehood can be found in the Montevideo Convention. The Montevideo Convention has been recognised by many as the most widely “accepted formulation” of the criteria of statehood and features three main criteria, namely a defined territory, a permanent population and a government (further discussed in Chapter 4.2.1.1).

4.2.1.1 A defined territory

The development of the state is closely linked to the ability to exercise effective control over a defined territory. The Principle of Territorial Sovereignty (further
discussed in Chapter 4.3) is pertinent to the exclusive right of a state to perform its activities within its territory. Therefore, to be regarded as a state is dependent on whether the state can exercise full governmental powers in its territory.  

This criterion has become more important with the “increased technical capabilities” of border demarcation, the “increased centralisation of power within the state” and the rise of nationalism. In terms of territory, there are two cases that can arise, namely harm claims pertinent to the entire territory of a new state and harm claims pertinent only to the boundaries of a state. In customary international law, a state is considered as any entity founded as a state in a given territory, regardless if that territory previously belonged to or was claimed by another state. Crawford further observes the following:

In any event, customary international law prohibits the settlement of territorial disputes between states by the threat or use of force, and a state for the purpose of this rule means any entity established as a state in a given territory, whether or not that territory formerly belonged to or is claimed by another state.

For a territorial entity to subsequently be protected by the above rule, it would first have to be considered as a state, as the above rule only applies to the relations between states and not territorial entities in general.

4.2.1.2 A permanent population

If a state comprises of a certain territory, there will be a certain population that resides within that territory. Thus, the existence of a permanent population is a typical prerequisite for statehood. Without a population, there can be no actors to take roles in the government necessary to assert the elements of statehood. There is no “minimum limit” based on population size or the nature of the population to exist to qualify for statehood in international law. The requirement of a permanent

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139 Taylor 2012 https://www.law.upenn.edu/journals/jil/articles/volume18
population also does not relate to the nationality of a population. The grant of nationality to a population may only be performed by states according to their municipal law. Hence, the determination of a population’s nationality is dependent on statehood where the state is able to give a certain nationality to a person, due to being a state.

4.2.1.3 Government

The third and final criterion, as considered by many, is the existence of a government capable of exercising “independent and effective authority” over the population and the territory. International environmental law also defines territory by the “governmental powers exercised or capable of being exercised” in an area by a state. Since international law lacks a central executive body to enforce compliance with international obligations, compliance with international obligations must often be ensured by the states themselves. Thus, a state must be able to “effectively” and “independently exercise its authority” within its borders. A state’s authority must be exercised independently of external interference.

Independence is widely considered as an essential requirement for statehood. Crawford notes that the requirement that a putative state possesses an effective government may be regarded as central to its claim for statehood. However, the criterion of independence as a basic element of statehood in international law may operate differently in diverse contexts.

In the *Austro-German Customs Union (Austria v Germany)* case of 1931 (hereinafter *Austro-German Union* case) the customs regime between Austria and Germany was debated. The concept of independence was explored in a treaty designed to guarantee the continuance of Austria and its separation from Germany.

Independence was also explored in this case in light of a “putative loss” of independence of an existing state. The Permanent Court of International Justice was asked to advise whether the proposed customs union between Germany and Austria was consistent with “obligations of Austria” under the Treaty of Saint-Germain, 1919 and the Geneva Protocol, 1925. The following definition given by Judge Anzilotti is often considered as a standard definition of independence as the criterion of statehood:

Independence as thus understood is really no more than the normal condition of states according to international law; it may also be described as sovereignty (suprema potestas), or external sovereignty, by which is meant that the state has over it no other authority than that of international law.

There are two key elements involved in the Austro-German Union case. This first element is the “separate existence of an entity” within reasonably coherent frontiers and the second element is that the entity is “not subject to the authority” of any other state or group of states. Separate existence in this case would seem to be dependent upon the exercise of substantial governmental authority with respect to some territory and people. Where this exists, the area concerned is potentially a “state-area”. However, Judge Anzilotti asserted that a further element, being the absence of subjection to the authority of another state or states, is essential. It may be that an entity, while not formally independent, operates in fact with “substantial” freedom in both internal and external affairs. This situation arises where formal claims are made in a situation where the gradual grant of power from a metropolitan state to a former colony “masks” the emerging statehood of the latter, for example. Alternatively, it may be that an entity formally independent is in fact under the direction of another state to the extent that its formal independence is nugatory. The Permanent Court of International Justice therefore held the proposed union illegal.

152 World Courts 1931 http://www.worldcourts.com pci/eng/decisions/1931.09.05_customs.htm.
The criterion of independence is primarily intended to indicate that states must possess “constitutional independence”, which means that the state constitutes the highest legal order exclusive of international law and that it must be able to protect this formally independent legal order. Therefore, some parts of a federal state, such as California, are not considered to be states in international law. Although these states may comprise of a territory, a population and an effective authority, they lack constitutional independence. In contrast, the federal states to which they belong do possess independence and can therefore operate as a state under international law.

Furthermore, independence must be “formal” and “functional”.\textsuperscript{155} Formal independence exists where the powers of government of a territory (both in internal and external affairs) are vested in the separate authorities of the putative state. The vesting of power, in this sense, may be the result of the municipal law in force in the territory concerned, or it may be the result of a grant of full power from the previous sovereign. It may also be established or recognised by a bilateral or multilateral treaty.\textsuperscript{156} Functional independence exists when a certain minimum level of power is exercised by the authorities of the state.\textsuperscript{157}

In international law, the criterion of independence as the basic element of statehood may function differently in different qualifications for statehood, and as a criterion for its “continued existence”. For example, if a new state is formed through secession from an existing state, it will have to demonstrate formal and functional independence before it is considered to be “definitively created”. In contrast, international law protects the independence of an existing state against illegal invasion and annexation so that it may continue to exist as a legal entity in spite of a lack of effectiveness.\textsuperscript{158}

\begin{footnotesize}
\textsuperscript{155} Zadeh 2015 http://arno.uvt.nl/show.cgi?fid=121942.
\textsuperscript{156} Crawford 2012 https://academic.oup.com/bybil.
\textsuperscript{157} Zadeh 2015 http://arno.uvt.nl/show.cgi?fid=121942.
\textsuperscript{158} Crawford 2012 https://academic.oup.com/bybil.
\end{footnotesize}
4.2.1.4 Capacity to enter into relations with other states

The capacity to enter into relations with other states is not regarded as a requirement of statehood but as a “consequence of statehood”.\(^{159}\) If an entity meets the first three criteria of statehood as per the *Montevideo Convention* (a defined territory, a permanent population and a government) it can be considered a state and therefore has the ability to enter into relations with other states.\(^{160}\)

**4.3 Sovereignty**

The term 'sovereignty' is sometimes used instead of the term 'independence' (discussed in Chapter 4.2.1.3) as a basic criterion for statehood. However, sovereignty has another more viable meaning as a consequence of statehood, that is, “plenary competence” that states, *prima facie*, possess. Since the two meanings are distinct, it seems preferable to restrict 'independence' to the prerequisite for statehood and 'sovereignty' to the legal incident.\(^{161}\) Kidd defines state sovereignty as a “state’s freedom to act without outside interference” of another state.\(^{162}\) Permanent sovereignty over natural environmental resources involves each state having exclusive jurisdiction within its territory and its people for the following:

- Legislative sovereignty
- Sovereign rights unless agreed by contract\(^ {163}\)

The doctrine of sovereignty and equality has three essential corollaries, namely:

- A jurisdiction, *prima facie* exclusive, over a territory and a permanent population living there
- A duty of non-intervention of exclusive jurisdiction of other states
- The dependence of obligations arising from customary law and treaties on the consent of the obligation

\(^{159}\) Zadeh 2015 http://arno.uvt.nl/show.cgi?fid=121942.
\(^{162}\) Kidd Environmental Law 57-69.
\(^{163}\) Noll 2007 www.lunduniversity.lu.se.
Sovereignty and exclusive jurisdiction of the states means that, in principle, they alone can have the competence to develop policies and laws in respect of the natural resources and the environment of their territory.\textsuperscript{164}

The \textit{Principle of Territory Sovereignty}, as referred to in the \textit{Montevideo Convention}, encompasses two important aspects: the obligation to protect the rights of other states within the territory and the rights which states may claim for in foreign territory. Previously, states could freely exercise their activities in their own territory without much consideration of the effect their activities had or may have had on other states. While states are sovereigns of their own territory, international environmental law places a strict legal obligation on states to prevent harm to another state. Hence, sovereignty cannot be “practiced in isolation” due to the effect it may have on the sovereign rights of other states. This limitation of a state exercising its sovereignty gives rise to the element of responsibility (further discussed in Chapter 3.2.4).\textsuperscript{165}

Kidd\textsuperscript{166} mentions that sovereignty and responsibility are vitally “two sides” of the “same coin”.\textsuperscript{167} To establish state responsibility, there must be two vitally present elements, namely an act or omission on behalf of a state that is internationally unlawful and such conduct that “constitutes a breach of an international obligation” of that state. If state responsibility can be established based on these grounds, the state found responsible is duty-bound to “cease the act or omission” causing the breach. The guilty state is further duty-bound to offer an assurance that transboundary harm will not be repeated and “reparations” where deemed necessary by a relevant authority will made.\textsuperscript{168}

\textsuperscript{164} Sands Greening \textit{International Law} 20-87.
\textsuperscript{165} Noll 2007 www.lunduniversity.lu.se/.
\textsuperscript{166} Kidd \textit{Environmental Law} 57-69.
\textsuperscript{167} Kidd \textit{Environmental Law} 57-69.
Considering the balance of practicing sovereignty without causing transboundary harm to another state, the scope of transboundary harm is somewhat restricted. State practice and some legal scholars agree that not all harm must be prevented. There is a certain degree of severity of harm that must be prevented. Only “significant or serious” harm can trigger the duty to prevent transboundary harm. The word 'significant' can be defined as “something having a special or important” meaning. The International Law Commission had used the term 'significant' as a “starting point” and defined the threshold of relevant harm as something more detectable but “not at the level of more serious or substantial”.\textsuperscript{169} In cases where there is a small likelihood of a concrete risk turning into transboundary environmental harm, the expected harm must be significant to trigger the Principle of State Responsibility.\textsuperscript{170}

4.4 Conclusion

In summary, a state is considered to have statehood if it comprises of three main criteria, namely a defined territory, a government and a permanent population as per the Montevideo Convention. The capacity to enter into relations with other states is not widely considered as a requirement of statehood since this capacity can only be exercised if a state is considered a state.\textsuperscript{171} States can exercise their sovereign right over their natural resources and biodiversity, provided that they do not cause transboundary harm to another state.\textsuperscript{172}

5 Case law

5.1 Introduction

State responsibility has become a critical “legal tool” in international environmental law cases especially in bringing cases before international courts such as the

\textsuperscript{169} Verheyer Climate Change Damage and International Law: Prevention Duties and State Responsibility 150-164.
\textsuperscript{170} Verheyer Climate Change Damage and International Law: Prevention Duties and State Responsibility 150-164.
\textsuperscript{171} Zadeh 2015 http://arno.uvt.nl/show.cgi?fid=121942.
\textsuperscript{172} Noll 2007 www.lunduniversity.lu.se/.
International Court of Justice. The “strongest support” for the Principle of State Responsibility and its implications can be found in the jurisprudence of international case law. This chapter aims to provide an overview of how the Principle of State Responsibility was applied in certain case law.

5.2 Trail Smelter (United States v Canada) Case of 1930

The Principle of State Responsibility was first directly elaborated upon in the Trail Smelter case. The Trail Smelter case occurred at a transitional phase of international environmental law and is regarded as a “springboard” for the evolution of the law of transboundary environmental harm.

During the 1930s, farmers in Washington claimed that fumes from a copper mine in Trial Smelter (province of British Colombia) had caused harm to their crops and forests. As a result, the state of Washington instituted this claim in an arbitration administered by the International Joint Commission. In this arbitration Canada was accused of allegedly causing transboundary air pollution affecting the territory of the United States of America.

![Figure 4: Map showing the position of Trail Smelter adjacent to the border of the United States of America](https://www.eenews.net/stories/1060028510).

The basis for the evolution of the duty of the Principle of State Responsibility in modern international law was formed during the proceedings of the Trail Smelter case. Canada, having sovereignty over its own territory, had a right to exploit its natural resources. However, an international norm also existed for the United States of America to protect its national territory, with the United States having sovereignty over its own territory. While states have exclusive sovereignty over their own territory, taking due care when conducting their activities must be practiced. Neighbouring states must adopt a duty of care approach to ensure as far as reasonable practicable that their activities do not cause harm to another state. In consideration of Principle of State Responsibility the Arbitral Tribunal concluded that Canada was liable for causing transboundary environmental harm to the United States of America.

The Trail Smelter case illustrates the ever present battle of a big business versus the working man and corporate power versus a grassroots organization. The Trail Smelter case sets environmental protection against economic profits. This case also challenged legislators to achieve sovereignty amongst two states where one state requested their right to pollute for the purpose of economic development while the other defended its right not to be harmed by a foreign state. The ruling of this case is important because it serves as the first manifestation of the Principle of State Responsibility. The practical effect being that, a state may not cause transboundary harm to another state when using its own territory.

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5.3 Aerial Spraying (Ecuador v Colombia) case of 2008

The other crucial case to the development and application of the Principle of State Responsibility is the Aerial Spraying case (Ecuador v Colombia) case of 2008 (hereinafter Aerial Spraying case). In this case, a claim was instituted by Ecuador allegedly accusing Colombia of engaging in aerial spraying comprising of extremely toxic herbicides along Colombia’s 600km border shared with Ecuador.\(^{182}\) The aerial spraying was an action of Plan Colombia to combat the major issue of illegal drug trade in Colombia. Plan Colombia consisted of Colombia’s aerial spraying of toxic herbicides on coca leaf plantations near, at, and across its border with Ecuador.\(^{183}\)

![Figure 5: Aerial spraying being conducted by Colombia\(^{184}\)](image)

Since the beginning of the aerial spraying, public opposition to the aerial spraying has been reflected in statements and actions in recent years by various organisations, non-governmental organisations and government agencies. The various organisations that monitor the impact of the aerial spraying have constantly

\(^{182}\) Esposito 2010 www.digitalcommons.pace.edu/pilronline.
complained that the Colombian government has not been complying with its initial commitment to leave a ten kilometre strip free of chemicals.\textsuperscript{185}

On 30 March 2008, Ecuador filed an application to the International Court of Justice pertaining to the aerial spraying conducted by Colombia. In the application, Ecuador asserted its request for the International Court of Justice to declare the following in its application:

- Colombia has violated rights under international law regarding transboundary harm
- Ecuador must be compensated for any harm or loss, for example, injury or death caused as a result of Colombia's actions and costs involved to monitor and identify future risks that Ecuador may be subjected to.

Ecuador’s application before the International Court of Justice claims that the aerial spraying has caused serious transboundary environmental, economic, social and health impacts within their territorial boundary, over a prolonged period of time.\textsuperscript{186}

In October 2002, the Health Office of Sucumbíos confirmed that there was an increase in cases of skin problems in Ecuador especially among children, although it did not establish that the problems were a direct consequence of the spraying. However, the sudden illnesses did coincide with the start-up of aerial spraying in areas near the border of Colombia and Ecuador.\textsuperscript{187} Ecuador claims that its residents suffered from fevers, diarrhoea, intestinal bleeding and a range of eye and skin issues as a result of the aerial spraying.\textsuperscript{188}

The aerial spraying destroyed Ecuador’s substance crops, diminished soil quality and reduced the yield in plants. Farmers who sell their grown vegetation to exporters incurred a loss of business as a result of product being unavailable after being destroyed through the aerial spraying.\textsuperscript{189} This adverse economic impact incurred by the Ecuadorian people also does not support principle 5 of the \textit{Rio Declaration} which

\begin{thebibliography}{99}
\bibitem{189} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\end{thebibliography}
pertains to eradicating poverty.\textsuperscript{190} These adverse effects are also not in support of principle 1 of the \textit{Declaration of the United Nations}, 1942 where it stipulates man’s fundamental right to freedom, equality, and a sufficient quality of life and asserts that forms of oppression must be eradicated.\textsuperscript{191}

The Awe people also chew the coca which provides an essential source of vitamins and minerals that they lack in the local diets. It also curbs their appetite which is useful especially during extreme circumstances where access to adequate food is scarce. Much of the coca plantations have been destroyed by the aerial spraying therefore significantly reducing their supply of food.\textsuperscript{192} This adverse effect does not support principle 1 and principle 22 of the \textit{Rio Declaration} which states that humans are entitled to a healthy and productive lifestyle in harmony with nature, and that states should recognise and duly support the culture, interests and identity of indigenous people.\textsuperscript{193}

Aquatic pollution was also evident whereby people residing in the borders of Ecuador acknowledged large traces of herbicides found in the rivers. These people also rely heavily on the water supply in the rivers to conduct their daily life activities, for example, washing of clothes and cooking.\textsuperscript{194} Therefore, any aquatic pollution and contamination of the rivers will incur adverse health effects to the people exposed. The animals that survived the aerial spraying are also at a future risk of dying from starvation or disease due to their water sources being contaminated and food sources being destroyed.\textsuperscript{195}

A common issue known to be associated with aerial spraying is the act of drifting, that occurs when herbicides drift or become dispersed into the areas of Ecuador when aerial spraying is performed.\textsuperscript{196} The director of the World Wildlife Fund heavily

\textsuperscript{190} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{192} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{193} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\textsuperscript{195} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
criticised the method of aerial spraying stating that for every hectare sprayed, another is lost due to pesticide drifting and another to additional clearing to compensate for displaced crops. In accordance with the Principle of Good Neighbourliness (further discussed in Chapter 3.2.2), Ecuador recalled several attempts to resolve this matter with Colombia. However, Ecuador stated in its application that these attempts were unsuccessful. Ecuador also stated that government warnings were not issued by Colombia informing Ecuador of when the aerial spraying would occur. These actions performed by Colombia can thus be motivated as being in violation of the Principle of Good Neighbourliness. Colombia has consistently claimed that the spraying was only conducted to control illicit coca and poppy plantations suspected to be growing in these areas. Although it has been reported that Colombia did reduce the number of gangs promoting the sale and use of drugs by reducing the coca vegetation area, this achievement remains insignificant in comparison to the severity of the harm caused to the Ecuadorian people, environment and ecosystems.

Another downfall of Colombia is that a thorough environmental impact assessment (further discussed in Chapter 6.3), which would have taken into account all the potential impacts of the aerial spraying, was not conducted. Had a proper environmental impact assessment been conducted by Colombia, controls measures would have been in place to prevent harm to Ecuador as per the Principle of State Responsibility (further discussed in Chapter 3.2.1).

Regarding the possible judgements of the International Court of Justice, there are three key approaches to the legal consequences of transboundary environmental

197 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
harm. The first is liability *ex delicto*, under which states would be responsible for transboundary harm if they failed to take reasonable measures to prevent the harm. The second is liability *sine delicto stricto sensu*, under which states may be responsible to pay compensation for transboundary harm even in the absence of fault or negligence. The third approach, known as a “balancing of interests” approach, is liability *sine delicto lato sensu*, under which transboundary harm may be permitted as long as it is reasonable and equitable. It is a great possibility that the International Court of Justice could have taken the non-compliance of the Precautionary Principle (further discussed in Chapter 3.2.5) into account and declare that Colombia had been negligent in adequately meeting its international obligation to prevent detrimental transboundary harm to another state and the environment. Furthermore, the International Court of Justice can instruct Colombia to compensate Ecuador for the transboundary harm caused if found liable. This judgement can be motivated on the basis of the liability *ex delicto* approach and the liability *sine delicto stricto sensu* approach.

On 12 September 2013, the government of Ecuador informed the International Court of Justice that it would like to discontinue the proceedings of this case. An agreement was reached between Colombia and Ecuador which establishes *inter alia* an exclusive zone whereby Colombia will not perform any aerial spraying and to establish mechanisms whereby drifting will not be caused in Ecuador outside the exclusive area. The International Court of Justice had accepted this resolution.

### 5.4 Conclusion

Case law has proven that compliance to the *Principle of State Responsibility* is of extreme importance in proving a state’s innocence. A state’s breach of obligations to prevent harm, or to minimise the risk of harm occurring, may constitute an

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200 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
201 Esposito 2010 www.digitalcommons.pace.edu/pilronline.
internationally wrongful act entailing the international responsibility of that state.\footnote{Henry and Kim 2012 http://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1413&context=law_globalstudies.} A state’s failure to comply with the Principle of State Responsibility may also give rise to an obligation to pay compensation to the affected state.\footnote{Henry and Kim 2012 http://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1413&context=law_globalstudies.}

6 Current application of state responsibility: emerging practice and trends

6.1 Introduction

This chapter aims to explore the emerging practices and trends evident in the current application of state responsibility in case law. These practices and trends are important for states to proactively implement to comply with the Principle of State Responsibility (further discussed in Chapter 3.2.1).

6.2 Due diligence requirement

Historically, most transboundary pollution disputes have initially attempted to be resolved through diplomatic channels and/or institutional structures.\footnote{Kinna 2013 www.wmich.edu/evalphd/wp-content/uploads.} These channels and structures were established through bilateral, multilateral and regional agreements governing the use of shared natural resources.\footnote{Kinna 2013 www.wmich.edu/evalphd/wp-content/uploads.} Certainly, cases such as the Aerial Spraying case (further discussed in Chapter 5.3) is notable for instances whereby states claiming transboundary harm alleged that the states causing the harm failed or demonstrated an unwillingness to participate in good faith to address the harm being caused.\footnote{Kinna 2013 www.wmich.edu/evalphd/wp-content/uploads.} Ecuador’s application in the Aerial Spraying case mentioned that Colombia consistently failed to negotiate regarding ceasing the harmful aerial sprayings.
The International Court of Justice was very clear that certain measures are now inherent requirements of due diligence regarding the obligation to prevent transboundary harm.\textsuperscript{209} Considering the due diligence obligation and the level of harm that must be significant, the \textit{Aerial Spraying} case presented another opportunity for the International Court of Justice to confirm the due diligence status as a recognised element of customary international law.\textsuperscript{210} The main element of the due diligence obligation articulated by the International Court of Justice was that the process of due diligence is framed within the \textit{Principle of State Responsibility} (further discussed in Chapter 3.2.1) for causing significant transboundary harm. In effect, if the International Court of Justice was to endorse this formulation, states would now be strictly under a due diligence obligation to prevent considerable transboundary environmental harm under customary international law.\textsuperscript{211}

\section*{6.3 Environmental impact assessment and the Precautionary Principle}

The roots of an environmental impact assessment were first referred to in 1972 in the \textit{Stockholm Declaration}.\textsuperscript{212} The \textit{Stockholm Declaration} recognised the need for “environmental planning” mentioned in seven of its principles.\textsuperscript{213} Two decades later, the \textit{Rio Declaration} recognised that the concept of “planning” had become a concrete obligation to undertake an environmental impact assessment.\textsuperscript{214} Principle 17 of the \textit{Rio Declaration} states that an environmental impact assessment must be conducted for proposed activities that are likely to cause a significant impact on the environment and are subject to a decision of competent national authority.

An environmental impact assessment is a “systematic and detailed study” of identifying potential environmental impacts of an activity.\textsuperscript{215} An environmental impact assessment provides the need for a “common outlook” and for common
principles to promote preservation and enhancement of the environment. As mentioned in earlier chapters, a customary duty exists on states to prevent transboundary harm to the environment of other states. Thus, this customary duty to prevent harm contains a preventive component whereby it also covers activities which may have an adverse transboundary impact. The environmental impact assessment reflects this preventive approach which is an integral component of the basic customary rule for the protection of the environment.

A scholar has identified eight principles for the design of an effective environmental impact assessment process. These principles are as follows:

- An integrated approach
- A clear and automatic application of the requirement pertinent to a significant activity
- A thorough examination and comparison of alternatives
- Legal, mandatory and enforceable requirements
- An open and participatory process
- Consideration of implementation issues inclusive of monitoring and enforcement of compliance
- A practical and efficient implementation
- Links to broad policy concerns, for example, the economy, agriculture, transportation, and urban development

The environmental impact assessment is another trend that has been developing in conjunction with the rapid rise of the Precautionary Principle. As witnessed in the proceedings of case law such as the Aerial Spraying case, there is an imminent need for more stringent environmental impact assessments to be conducted as a core requirement of the Precautionary Principle. The Precautionary Principle (further discussed in Chapter 3.2.5) has moved swiftly from soft law to being incorporated into treaties. Simultaneously, it has also hardened from an academic principle to

217 Kidd Environmental Law 57-69.
218 Kidd Environmental Law 57-69.
a more clearly defined objective principle establishing its continued importance in environmental law in future.220

6.4 Other trends

International environmental law has progressed from being concerned exclusively with the adoption of normative standards to guide behaviour, to addressing implementation techniques that are practical, equitable, effective and acceptable to most members of the international community. There are two consequences that arise from this progression of international environmental law. The first is that the focus on implementation means that international environmental law will be increasingly concerned with procedural, constitutional and institutions challenges, access to and dissemination of environmental information, law-making techniques, environmental governance, improved participation from members of the international community and new environmental compliance mechanisms. The second consequence is that as environmental issues become increasingly integrated into economic, social and developmental institutions and law, international environmental law will continue to broaden. This will in turn create new challenges for lawyers and others involved in its development and application.221

Procedural obligations, to some degree, have also shifted the locus of international decision-making authority in relation to environmental risks. States that may be adversely affected by a risk in future have a rightful entitlement to participate in the decision-making process when the activity is being conducted. This position places affected states in a strong position to voice their opinions and collaborate jointly to ensure that the interests of both parties and the environment is holistically considered prior to harm being caused.222

221 Sands Greening International Law 20-87.
Breaches of all types of international obligations under state responsibility, which amount to delicts or crimes under international law, will continue to be an ongoing concern in future.\textsuperscript{223}

\section*{6.5 Conclusion}

To summarise, the main trends and emerging practices derived from international environmental law was discussed. Environmental protection and prevention of transboundary harm is of paramount importance in addition to applying the principles of equitable and reasonable utilisation and sustainable development.\textsuperscript{224} The \textit{Precautionary Principle} has emerged as a rapidly growing principle being incorporated into treaties to further support the \textit{Principle of State Responsibility}.\textsuperscript{225} A thorough environmental impact assessment, as a pertinent example of applying the \textit{Precautionary Principle} should be conducted with the implementation of effective control measures prior to the commencement of an activity that could affect another state. Experts suggest that treaty developments involving compensation for transboundary harm could eventually lead to more of a due diligence requirement for states to prevent significant environmental harm. Thus, a state which has caused significant transboundary environmental harm to another state could be held legally responsible and liable for compensation, regardless of its culpability.\textsuperscript{226}

\section*{7 Findings and recommendations}

\subsection*{7.1 Introduction}

The aim of this chapter is to provide a summary of the findings recognised from the above study and to provide recommendations on fulfilling a state’s international
obligation to prevent transboundary environmental harm as instructed by international environmental law.

7.2 State responsibility on transboundary harm as per the Principle of State Responsibility

In every system of law, responsibility as a legal institution plays a vital role because it organises and reveals the “level of integration of this system”, as well as the “prevailing conceptions regarding the nature of rights and obligations”, the consequences of their infringement and the ethical and social foundations as a whole. Therefore, the international community has witnessed a real evolution of state responsibility pertinent to the prevention of transboundary harm.227

International environmental law on state responsibility has witnessed a departure from strict adherence to domestic systems in legal comparison towards an integrated view of “transnational legal systems” in legal comparison.228 The compound “primary obligation” identified by the International Law Commission on international state liability refers to four basic duties, namely to prevent, inform, negotiate, and repair.229 The emphasis is on preventive measures and the new obligation to notify and consult with states prior to conducting an activity which may affect that state.230 The rapid development of the Principle of State Responsibility clearly places an on-going legal obligation on states to prevent transboundary harm to another state as well as the environment as a whole.

The works of the International Law Commission on international responsibility, as well as the practice of some states, have indicated a common feature - emphasis on the obligations of the responsible state has evolved to more emphasis towards an awareness and definition of the rights of the injured state affected by

227 Dupuy 1989 https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1097&context=mjil.
228 Sands Greening International Law 20-87.
transboundary environmental harm. This has further placed a greater obligation on states to act in good faith and with due diligence to prevent transboundary harm.\textsuperscript{231}

As witnessed in case law, the legal consequences of transboundary environmental harm can be summarised into three core methods. These methods are liability \textit{ex delicto} (states are responsible for transboundary harm if they failed to take reasonable measures to prevent the harm), liability \textit{sine delicto stricto sensu} (states may be responsible to pay compensation for transboundary harm even in the absence of fault or negligence) and liability \textit{sine delicto lato sensu} (transboundary harm may be allowed if it is reasonable and equitable).\textsuperscript{232}

Furthermore, state responsibility can be summarised in three levels. The first and most traditional level is pertinent to responsibility on the basis of fault or lack of due diligence. At the second level, strict responsibility is related to an obligation of the result; the obligation not to harm the environment and the violation of which will engage responsibility regardless of fault. The third and most stringent level pertains to absolute responsibility and liability for acts not prohibited by international law irrespective of fault or of the lawfulness of the activity in question.\textsuperscript{233}

The \textit{Precautionary Principle} (further discussed in Chapter 3.2.5) has demanded from an international law perspective that it be strictly applied prior to any activity being conducted in a state’s territory.\textsuperscript{234} As a strict recommendation, the \textit{Precautionary Principle} in conjunction with an environmental impact assessment, must be effectively applied to ensure that states fulfil their legal obligation to prevent transboundary harm to other states as per the \textit{Principle of State Responsibility}.\textsuperscript{235} A further recommendation, as supported by the \textit{Principle of Good Neighbourliness}, is

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\item \textsuperscript{231} Dupuy 1989 https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1097&context=mjil.
\item \textsuperscript{232} Esposito 2010 www.digitalcommons.pace.edu/pilronline.
\item \textsuperscript{233} Mendis 2006 http://www.un.org/Depts/los/nippon/unnff_programme_home/fellows_pages/fellows_papers/mendis_0607_sri_lanka.pdf.
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\end{itemize}
to involve the neighbouring state at the start of conducting the environmental risk assessment process. This will also provide an opportunity for the involved states to provide suggestions and comments and resolve any disputes mutually before any activity occurs. State responsibility has evolved to inform and upskill the injured state when transboundary environmental harm has been caused. Therefore, ensuring due diligence and good relations with the potentially affected state prior to conducting an activity will prove to be mutually beneficial for all involved states. Furthermore, the *Precautionary Principle* demands that each state recognise their legal and moral responsibility to ensure global protection of the environment in which we live in.\textsuperscript{236}

7.3 Conclusion

As per the *Principle of State Responsibility*, states have two key legal obligations to fulfil, namely to prevent transboundary harm to another state and to the global environment. The *Precautionary Principle* has gained rapid momentum in international environmental law as a means to firmly support the *Principle of State Responsibility* in ensuring the prevention of transboundary environmental harm to other states and the international community.

8 Conclusion

In the above study, the historical context and nature of the *Principle of State Responsibility* was discussed. Trends, findings and recommendations were provided based on the historical development and present development of the *Principle of State Responsibility*. International environmental law has teamed international lawyers, scientists and diplomats in a unique way to address transboundary environmental harm.\textsuperscript{237} There have been a few court cases over the years which involved the claim of transboundary environmental harm between parties thus making it a growing worldwide issue.

\textsuperscript{237} Sands Greening International Law 20-87.
Based on the above study, the *Principle of State Responsibility* has received tremendous support through several international environmental law instruments such as treaties and principles. Historical acceptance of states using their natural resources and biodiversity without any due care for neighbouring states and the environment has been abolished. A legal obligation clearly exists upon states to conduct their territorial activities in such a way to prevent transboundary harm to another state and the global commons. It is evident from international law and the case law judgements that if states fail to ensure that their actions do not cause transboundary environmental harm to other states, they will be held legally liable for their actions. Furthermore, the ongoing concern of global environmental challenges has broadened our global environmental view to realise that domestic sovereign impacts can have catastrophic global impacts in future if we do not address these challenges.

This study has also proven that the development of the *Principle of State Responsibility* has currently managed to keep up with addressing modern-day environmental challenges. However, the *Principle of State Responsibility* must continue to constantly progress to promote the prevention of transboundary environmental harm and to effectively address future global environmental challenges. The importance of conducting development in an environmentally friendly, economically viable and socially beneficial manner according to the *Principle of Sustainability* must also be strictly practiced to preserve our environment for the future.

International environmental law has tremendously developed over the years to continually embed an environmental consciousness in our minds as a legal and moral duty that we all have towards our environment. Based on the growing international consensus on state responsibility, the prevention of transboundary environmental harm as per the *Principle of Responsibility* will surely continue to be an imperative environmental action in the years to come.
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