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The World is Sinking: PossibleStrategies for United States International Accountability to Pacific Island Nations for Global Warming Contributions

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The World is Sinking:

Possible Strategies for United States International Accountability to Pacific Island Nations for Global Warming Contributions

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Submitted in partial fulfillment of the requirements of the King Scholar Program
Michigan State University College of Law under the direction of
Professor David S. Favre
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I. Introduction

-How these low hollow coral islands bear no proportion to the vast ocean out of which they abruptly rise; and it seems wonderful that such weak invaders are not overwhelmed, by the all-powerful and never-tiring waves of that great sea.
-Charles Darwin, commenting the tiny coral atoll islands¹

-Oceanic states composed of atolls . . . face severe consequences as a result of sea level rise. They can be wiped of the globe literally if the sea levels continue to rise at their current rates.

-Research team of meteorological scientists²

Global warming: Myth or Reality? Depending on whether the current temperature is hot or cold, each person will have a different opinion³ and despite the plethora of evidence literally pouring in on the effects of global warming, the debate continues.⁴ Unfortunately, if you speak to many Pacific Islanders, such as those living in Tuvalu located about half way between Australia and Hawaii, there is no debate: the ravaging effects of global warming can be seen even today and these effects are devastating an entire country and a way of life.⁵ The tiny nation of Tuvalu emits only a miniscule amount of deadly greenhouse gases (GHGs) that yield climate change, yet they are in a state of crisis specifically because of these GHGs. Many if not all Tuvaluan's fear their homes will soon be either underwater or washed away as a result of the global warming phenomenon. The nation itself has even made plans for their citizens to become environmental refugees in New Zealand because of either current sea level rise or their fear of the inevitable. Yet despite these tumultuous times, situated roughly five thousand miles away, lies a gluttonous giant producing roughly 23% of the annual global GHG emissions while only representing 5% of the global population: the United States and there appears to be no end in sight. While the United States government attempts to downplay the effects of global warming for fear that abatement will result in economic downturn and less air conditioning, little to no action is taken in reducing these excessive country-wide GHG emissions.⁸ While this glutton

continues without end, however, the phenomenon of global warming is beginning a trend toward complete devastation of Pacific Island Nations with affects ranging from increased sea level flooding, a lack of fresh water supply, increased frequency and magnitude of storms, to ultimately an uninhabitable homeland.

When one realizes the state of fear that exists for these nations it is only natural to search for any kind of remedy for their suffering. For these nations who will not only be the first if not the hardest hit by climate change, there must be justice. Nations, including the United States, which continue to destroy the planet without regard to consequence must be held liable by any means available so as to end the cycle that is turning pristine and exotic nations such as Tuvalu into proverbial guinea pigs whose untimely fate will likely be the fate of the world. As such, this thesis will first brush the surface of the most recent scientific data on climate change while elaborating on the already evident affects global warming is having on Pacific Island Nations. For sake of clarity, Tuvalu will be the focus. A discussion on possible jurisdictional strategies for bringing the United States to atone for their actions will follow as will a practical application of international laws and standards that will likely be applied to the case if jurisdiction can be found. The final question and focus is whether court action would, in theory, prove advantageous to the islands, what pitfalls they may encounter, and what remedies would be available to Tuvalu in this hypothetical lawsuit.

II. Current State of the Environment: The Science

A. Statistics and Research

1. Overview

The focus of this thesis on state responsibility and global warming must, necessarily, include a discussion of recent scientific data on the subject. However, an in depth scientific

discussion is beyond its scope. The problem lies in finding an exact scientific basis for global warming as, depending on which special interest group one receives their information from, discussions of "science" will differ. Fortunately, the Intergovernmental Panel on Climate Change (IPCC), a group established by the World Meteorological Organization and the United Nations Environment Programme, was established specifically for the task of objectively and neutrally assessing the scientific and technical information related to anthropogenic climate change, its potential impacts, and options for mitigation. Specifically, the IPCC collects and reviews scientific, peer reviewed data and compiles it for the public after first being reviewed by experts and governments. 10 Recently, the IPCC has released its Fourth Assessment Report and although the complete report has yet to be published, several summary reports are available for review. 11 In particular, the IPCC has published the Working Group I report on the Physical Science Basis of Climate Change. 12 The conclusion of this report establishes that the "[w]arming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level." This observed warming trend, according to the report, is "very likely [around 90%] due to the observed increase in anthropogenic greenhouse gas concentrations."¹⁴ As such, there are stark predictions for the future of the globe with the first victim being Tuvalu and those nations similarly situated. Granted, science cannot see clearly into the future and Mother Nature always has a way of throwing a wrench into predictions. However, given the already visible ramifications of global warming and the international standard that scientific uncertainty is not a justification for inactivity, significant measures must be taken to counteract the phenomenon already set in motion.

2. Evidence of Global Warming

Unfortunately, the phrase "global warming" is not a misnomer. It is a fact that eleven of the last twelve years rank among the twelve warmest years on record¹⁵ and the linear warming trend for the last 50 years has nearly doubled when compared to the trend in the last 100 years. 16 For those skeptics that argue that global warming is a myth, it is true that the average earth's temperature has not increased over one degree (1°) in recorded history. However, this information, does not account for all variables. With the data available, the Earth's "[t]he total temperature increase" is 0.76°C by looking at the years 1850-1899 to 2001-2005. The However, this data also shows the ocean has kept these numbers low as it "has been absorbing more than 80% of the heat added to the climate system." Not only does this warming of the oceans have an impact on the marine ecosystem, but also causes seawater to increase in volume or expand. ¹⁹ While humans may not detect the average temperature increasing at exponential rates, for coral atoll nations such as Tuvalu, sea water expansion, effectuating sea level rise, is catastrophic.²⁰ In fact, the years 1961 to 2003 have seen an average global sea level rise at a rate of 1.8 millimeters (mm) per year. 21 This average rate, however, drastically increased in the last decade to around 3.1 mm per year.²² Adding insult to literal injury, with the increasing temperatures comes melting of mountain glaciers and snow cover which also increases the actual amount of water in the oceans.²³ Proving that all things in nature are related, this rise in sea level impacts the water levels associated with storm waves and surges, increasing them as well.²⁴

3. Current Evidence, Predictions, and Simulations

Further evidence of global warming exists as well including increased incidence of droughts, significant coral bleaching, increasing intensity of hurricanes, greater frequency of mosquito-borne diseases, increasing salinity of soils due to higher sea levels impacting

cultivation of crops, increased coastal erosion, melting of polar ice caps and rising sea levels. ²⁵ Though many larger and wealthy countries may not be as impacted by these consequences, in Tuvalu, where physical space is scarce, adaptation by retreat to higher ground or using building set-backs will have little practical utility. ²⁶

So what does the future hold? During the IPCC study, simulations were conducted to "provide a quantitative basis" as to the likelihood and impacts of future climate change.²⁷ The following IPCC projections are staggering:

- Warming of around 0.2°C per decade for the next two decades;
- Increasing acidification of the ocean;
- Arctic and Antarctic sea ice shrinking resulting, in some scenarios, to Arctic latesummer sea ice disappearing before the end of the 21st century;
- Hurricanes and tropical cyclones increasing in intensity while heat waves continue to become more frequent;
- Because of the time necessary to remove anthropogenic carbon dioxide from the atmosphere, warming and sea level rise will continue for more than a millennia;²⁸
- In less than a century, the global seas will rise an average of 9-88 centimeters.²⁹

Unfortunately, despite these projections, no action as been taken and the concentrations of GHGs are not subsiding. In 2005, the United States Energy Information Administration estimated that the United States produced 7,100 million metric tons of carbon dioxide.³⁰ Point of fact, since the industrial revolution, where no precautions were existent, the carbon dioxide concentration in the atmosphere has rose from 280 parts per million (ppm) to around 380 ppm.³¹ If current gluttonous trends continue, predictions state that by 2100, the concentration of carbon dioxide in the atmosphere will have risen to about 800 ppm.³² Given current knowledge of climate change ramifications, these predictions are appalling, unacceptable, and will be devastating first and foremost to nations such as Tuvalu.

B. Who is to be affected first: Consequences of Inaction

If one has ever lived through a flood, they are well aware of the destruction caused: the water invading a home, rotting and washing away valuable and priceless possessions. While the citizens of the United States may only fear flooding on occasion, imagine this encroaching destruction as a part of regular yearly life. The fear of permanent flooding can be so violative that even one who has resided in their home for decades and whose heritage lies within a small nation can be forced to relocate and abandon everything they have known their entire life. Regrettably, those perpetrators of this destruction are continually turning a blind eye to the damage and refuse abatement for the sake of comfort. Flooding by sea level rise is one of the catastrophic consequences of global warming that is already encroaching upon many nations. Inlanders have nothing to fear, but what if there is no higher ground to reach?

1. Tuvalu

-We live in constant fear of the adverse impacts of climate change. For a coral atoll nation, sea level rise and more severe weather events loom as a growing threat to our entire population. The threat is real and serious, and is of no difference to a slow and insidious form of terrorism against us.

- Saufatu Sopoanga, Prime Minister of Tuvalu³³

This fourth smallest country in the world based on land area³⁴ consists of nine (9) coral atolls in the South Pacific Ocean.³⁵ Simply put, atolls are "rings of coral reefs enclosing a lagoon. Around the rim of the reef are small islands, usually with average heights above sea level of only a few meters."³⁶ The highest elevation of Tuvalu, and the main justification as to why it is inhabitants are in constant fear of global warming and resultant rising sea levels, is only a mere five (5) meters above sea level.³⁷ Given its small size, only around ten (10) square miles, sea level rise and storm surges pose catastrophic perils for the island's 10,000 inhabitants.³⁸ Within the last ten years, Australia's National Tidal Center (NTC) has recorded a yearly 4.5 mm

rise on the banks of Tuvalu.³⁹ "Extreme sea level, storm surges and high wave energy events . . . increasingly lead to wave overtopping and flooding of atolls and low-lying coastal fringes [such as Tuvalu], [which] threaten[s] lives, infrastructure and property."⁴⁰ Inhabitants of Tuvalu have accounted that, recently within the last several years "during high tides, . . .water comes right across the ground" and into Tuvaluan houses. 41 The Assistant Secretary of Foreign Affairs, Pooni Laupepa, has also commented that the storms Tuvalu experiences are getting worse and more frequent. 42 Furthermore, sea level rise lends itself to increased salinity of groundwater. 43 Such a result is devastating, "especially on atolls where groundwater is often the only source of freshwater for human consumption and agriculture."44 Increased salinity has already forced Tuvaluan families "to grow their root crops in metal buckets instead of in the ground" and "damage to coral reefs from more frequent and intense coral bleaching and wave damage[], . . .[will ultimately lead] to loss of wave protection, [and] loss of fisheries."⁴⁶ Heat is another factor in this equation as "rising sea temperatures associated with El Nino in 1998 bleached corals around the world from here to the Great Barrier Reed off Australia."⁴⁷ The frequency and drastic affects of climate change to Tuvalu are astonishing. "[H]igh tides and resultant floods that used to visit Tuvalu in February are occurring nearly half the year, from November to March."48 And as for storms, "whereas in the past big cyclones rampaged through these islands only once or twice a decade . . . the 1990s saw [seven] 7 of them."⁴⁹

The fact that these nations appear to be sitting ducks in the middle of a raging storm is horrifying. However, given that "Small Island States are not major contributors to the total emission of greenhouse gases," the fact that they may be "severely affected by consequent sealevel rise and climate change" is simply unjust.⁵⁰ To add insult to serious injury, in most cases

these islands have limited resources and, therefore, are "less able to adapt to climate change than other states, unless they receive foreign aid to do so." ⁵¹

What can Tuvalu possibly do to change their fate? Domestic action clearly cannot occur as larger, more powerful and influential nations are the direct cause of their injury. Pleas for assistance are seemingly inaudible to these nations as evidenced by slothful inaction to a desperate situation. What appears the only course of action for the inhabitants and the nation as a whole is to hold the United States and other major carbon dioxide emitters liable for their failure to take necessary steps to cease the eventual eradication of a heritage, of a people, of an entire nation.

III. Jurisdiction: Possibilities for Global Jurisprudence

To delve into the global jurisprudential ramifications of Tuvalu bringing any action against the United States, it is first necessary to determine which venues would have jurisdiction over the parties as well as the subject matter in such a case. Given that seeking a "remedy" against the United States may be an ambitious goal, this paper will also focus on venues for Tuvalu to bring the United States to the bargaining table with the goal of forcing United States actions to international spotlight. This is a major hurdle for any nation or entity seeking remedy though international means much less the fourth smallest nations in the world battling a superpower. Steps must be taken, however, and as such this section will begin discussion on the International Court of Justice (ICJ) and then delve into several treaties that may allow Tuvalu to bring the United States into arbitration.

A. The International Court of Justice (ICJ)

The most logical starting point for a discussion on international jurisprudence is clearly the ICJ. Given the history of the court, "[i]t would likely be the most politically visible and authoritative adjudicatory forum." Tuvalu previously proposed such action against the United States within the ICJ in 2002 while seeking collaboration with other small island nations. To date, no information is available regarding such a suit. Regardless, if Tuvalu were to follow through, there are two (2) ways for the ICJ to obtain jurisdiction over subject matter or a state: contentious jurisdiction or advisory opinions. Each of these will be taken in turn.

1. Contentious Jurisdiction

Simply put, the ICJ, acting as a world court, decides international disputes between states that are submitted to it.⁵⁶ Within contentious jurisdiction, and as set forth in Article 35 of the ICJ Statute, any state that is a party to the Statute can bring a claim in the ICJ against another state.⁵⁷ However, "[i]n accordance with the principle of state sovereignty [the largest hindrance to any international action], jurisdiction by the Court over a defendant state must ultimately be based upon the consent of that state."58 If jurisdiction is consented to by a state, then the court has the authority to hear legal disputes regarding "the interpretation of a treaty, questions of international law, the existence of any fact which, if established, would constitute a breach of an international obligation, and the nature or extent of the reparation to be made for the breach of an international obligation."59 As such, two issues need to be resolved: Whether the aforementioned discussion on liability for global warming would fall within ICJ contentious jurisdiction and secondly, whether the United States would consent to this jurisdiction. First, and as will be elaborated on below, Tuvalu could successfully argue ICJ jurisdiction over the subject matter of potential suit given international obligations arising out of the theory of state responsibility or even under certain treaties of which the United States and Tuvalu are parties. Whether the United States

breached its international obligation of environmental protection as discussed in the Restatement (though not binding in and of itself) could also be brought before the court. The essential problem lies, however, in the second inquiry of consent. Point of fact, and as established in the ICJ Statute, no state can be a party to proceedings before the ICJ unless it has consented to ICJ jurisdiction. Practically speaking, such consent on the part of the United States will not be forthcoming. The United States has failed to consent to ICJ jurisdiction in other cases brought against it and will likely reject jurisdiction in this case given any potentially unfavorable outcome.

2. Advisory Opinion

Article 65 of the ICJ Statute may provide another venue for elaboration of international obligations in the global warming context as it does not require asserting jurisdiction over the United States per se.⁶² Under this Article, the ICJ may give an advisory opinion on any question of law to any body authorized under the United Nations Charter (Charter) to request such an opinion.⁶³ Under the Charter, such bodies include the United Nations General Assembly, the Security Council, or any United Nations specialized agency that both receives authorization from the General Assembly and whose scope of activities revolves around the particular legal issue in question.⁶⁴ Given the United States permanent seat on the United Nations Security Council and, therefore, permanent veto ability, the only way an opinion on Tuvalu's legal issues would be requested of the ICJ is if the General Assembly either requests such legal opinion or authorized another United Nations specialized agency to request such legal opinion.⁶⁵

Several initial determinations must be made however. Under Article 18 of the Charter, the General Assembly must have a two-thirds majority of the members present and voting to decide "important" questions.⁶⁶ These important questions generally revolve around

maintaining international peace and security or election of Security Council non-permanent members.⁶⁷ It is questionable whether requesting an ICJ advisory opinion on a legal issue requires such a two-thirds vote as the ICJ has previously agreed to render an advisory opinion dealing with nuclear weapons with less than two-thirds of the General Assembly voting in favor.⁶⁸ The main problem lies, therefore, in obtaining such a General Assembly vote less than a two-thirds majority.⁶⁹ Given both the controversial nature of such a case and the many countries that are a part of the General Assembly that are GHG producing nations in and of themselves, a favorable vote might depend "on how narrowly the question presented to the ICJ could be framed."⁷⁰ "These countries might well be reluctant to charge the ICJ with coming to a determination that could implicate the legality of their own emissions."⁷¹

Other United Nations specialized agencies, such as the World Health Organization (WHO) or even the Food and Agricultural Organization could attempt to bring these legal questions before the ICJ wherein the General Assembly would not require a two-thirds vote. However, given past ICJ decisions regarding the competency of these specialized agencies to seek an advisory opinion, such attempts by these bodies may not be likely. In any event, even if the General Assembly or appropriate United Nations specialized agency brought the legal question of global warming and international obligations to stop the phenomenon before the ICJ, advisory opinion jurisdiction would not allow Tuvalu to bring a suit directly nor would the decision directly implicate or bind the United States. Advantages to an advisory opinion do exist, however. Clarification of the legal issues present and as set forth below, could give Tuvalu that much more leverage against the United States when seeking a remedy for contributing to the global warming phenomenon and, in fact, may be a good starting point.

B. United Nations Framework Convention on Climate Change (UNFCCC)

Another straightforward option may exist for Tuvalu to bring the United States to the bargaining table, though hope for success is again minimal. The United Nations Framework Convention on Climate Change (UNFCCC or Convention), of which both Tuvalu and the United States are parties, has created a dispute resolution framework applicable to states parties to the UNFCCC.⁷⁴ Article 14(5) of the Convention provides for a mandatory dispute resolution mechanism should negotiation between parties in a dispute under the Convention not settle the dispute, namely conciliation.⁷⁵ Should one of the parties so request, a conciliation commission will be created and composed of "an equal number of members appointed by each party concerned and a chairman chosen jointly by the members appointed by each party."⁷⁶ This commission shall then "render a recommendatory award, which the parties shall consider in good faith."⁷⁷ The usage of the phrase "good faith" could easily dishearten a nation hoping to find accountability for destruction of their nation, but, given the generally nonbinding nature of international jurisprudence, a conciliation commission may be a venue to bring the parties to the same table and bring international attention to Tuvalu's plight. Yet, a fundamental problem lies with this option as well. The Convention provides that the Conference of the Parties adopt conciliation procedures as soon as practicable; this has not vet occurred.⁷⁸ Perhaps if these conciliation procedures materialize, it may prove a viable option for Tuvalu. "While proceedings before the conciliation commission would have a much lower profile than those before the ICJ, and its determination would not be binding, a conciliation case might be able to help establish that the United States is not complying with its obligations under the UNFCCC."79 Such obligations include both nonbinding GHG emission targets and assisting "developing

country parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation to those adverse effects."80

C. Law of the Sea: Straddling Fish Stocks

Another, perhaps more promising, avenue Tuvalu can explore is provided for under the Straddling Fish Stocks Agreement under the Convention of the Law of the Sea (Straddling Fish Stocks Agreement). 81 The Law of the Sea Convention has a system of binding dispute resolution within its texts. 82 Though the United States is not a signatory to the Convention on the Law of the Sea, 83 it is a party to the Straddling Fish Stocks Agreement which "provides that disputes arising under it be settled through the Law of the Sea's Dispute Settlement Provisions."84 Under these dispute settlement provisions, if a state does not chose by written declaration a means for settlement of disputes, and unless the parties to a dispute agree otherwise, then the parties to the dispute can only be sent to arbitration.⁸⁵ Procedures for arbitration are set forth in Annex VII to the Convention on the Law of the Sea and not only mandate finality of an award but also mandate the binding nature of the arbitration to both of the parties. 86 In the best case scenario, Tuvalu, though first having to agree to the Straddling Fish Stocks Agreement, would be able to arbitrate these global warming issues and have the United States bound to the arbitrators' decision. The problem, of course, is that by its very nature, the Straddling Fish Stocks Agreement is not intended to cover the global warming phenomenon. This does not leave Tuvalu stranded however. A novel argument can be made that given the science of global warming and its effects on the seas and fisheries, and given that the Straddling Fish Stocks Agreement is intended to protect certain species of fish, any dispute between Tuvalu and the United States over the impact of global warming endangering fish stocks must be brought to binding arbitration as intended in the Agreement.⁸⁷

Again, though not as public as a suit within the ICJ, such binding arbitration may constitute a wake up call to the United States or other GHG producing nations. It can further wake up the world to the plight of Tuvalu and other Pacific Island Nations in desperate peril as a result of global warming.

IV. Laws and International Treaties and their Applicability to the United States

Regardless of whether an international venue for suit can be found, it is necessary to understand the international laws and obligations that impact any discussion on global warming. Fortunately, there is an excessive amount of material within international jurisprudence on transboundary pollution. This material, however, is generally considered soft international law, and as such, is not considered formally binding even if a proper forum for adjudication can be found.⁸⁸ "Ultimately the principle behind holding countries liable for transboundary pollution is drawn from on of the most basic precepts of all legal systems, that legal actors should be responsible for the harm they do to others."89 Generally, this theory is known as state responsibility. The concept of state responsibility with regard to environmental degradation has two main functions. 90 First, to compliment existing law and help enforce the prevention of environmental harm as is obligated by such international law.⁹¹ Second, to provide injured states, individuals, and the environment with redress in the form of compensation for such harm and abatement of future harm. 92 This section will focus on these international laws of state responsibility which an international tribunal will likely apply if suit is brought. The outline of the discussion will revolve around §601 of the Restatement of Foreign Relations Law of the United States (Restatement §601) and its applicability to transboundary pollution, international environmental harm, global warming, and Tuvalu. Section IV: Practical Application will analyze the specific rules and its relation to the case at bar. It is first important to note, however, that though not binding in and of itself, the Restatement is looked upon as persuasive authority. As such, it is a good indicator as to what courts may look at or decide when approaching the legal question of state responsibility for global warming. For purposes of this discussion, it is a good indicator as to what international obligations the United States may be violating.

A. Overview: Restatement of Foreign Relations of the U.S. §601-§602

Because the global environment, such as the air we breath and the oceans of the world, is not simply a resource belonging to one particular nation, consideration must necessarily be given to those affected outside the boundaries of the state where the pollution may be originating.

Restatement §601 relating to State Obligations with Respect to the Environment embodies this notion. The rule specifically states:

A state is obligated to take such measures as may be necessary, to the extent practicable under the circumstances, to ensure that activities within its jurisdiction or control (a) conform to generally accepted international rules and standards for the prevention, reduction, and control of injury to the environment of another state or of areas beyond the limits of national jurisdiction; and (b) are conducted so as not to cause significant injury to the environment of another state or of areas beyond the limits of national jurisdiction. ⁹³

Simply put, a state is *obligated* to take necessary measures to make sure its actions comply with international law and do not cause injury to others. For the sake of clarity, Restatement §601 can be broken down into its three (3) elements to determine liability. First, there must be an activity within the state's jurisdiction or control. Second, there must be a breach of international rules and standards. Finally, there must be significant injury to the aggrieved party. Each of these elements will be considered in turn.

1. Activity within the Jurisdiction or Control

When determining whether a state, in this case the United States, can be held liable for destruction to the environment of another state, for example, by transboundary GHG emissions and the resultant climate change, the activity does not necessarily have to be on the part of the state itself. Rather the activity, as it occurs within the United States, can be a direct result of a private entity acting within the state or within the state's jurisdiction. Comments to Restatement §601 are instructive and specifically express that a state is responsible for not only its own activities but also "those of individuals or private or public corporations under its jurisdiction." 95 In addition to this, inaction may even result in liability. For example, a state can be held liable for not promulgating and enacting important necessary legislation to cease the environmentally damaging activity occurring within the state. 96 The state can also be responsible for "not preventing or terminating an illegal activity, or for not punishing the person responsible for it."97 Though, on its face, this rule seems fairly straightforward, the issue of responsibility and, to take it another step, liability, may be difficult in transboundary pollution cases as there is no single, isolated activity that is the ultimate cause of destruction. 98 Neither is the perpetrating state the only culprit as in the case at hand, nearly three-quarters (3/4) of the harmful emissions are products of other nations including, and even though exceptionally minimal, the injured state.⁹⁹ This apportionment of responsibility could play a role in either determining liability in and of itself, but, more likely, in determining allocation of damages. In either event, such an argument could be made by Tuvalu in a potential suit against the United States with the ultimate determination on the issue being made by a tribunal.

2. Conforming to International Rules and Standards

The second aspect of state responsibility is the mandate that the United States conform to international rules and standards. Generally, this means that the United States is bound to follow both the accepted rules of customary international law and those rules that are proscribed by international conventions. ¹⁰⁰ If a specific international rule, such as a treaty between the offender nation and the aggrieved nation, is violated, any state can object to the violation. ¹⁰¹ If a state is injured as a result of the violation of an international rule, then the injured party is entitled to damages or other relief from the offending nation. ¹⁰² More importantly, if there is a threat of injury to another state, the threatened state or a state acting on its behalf, "is entitled to have the dangerous activity terminated." ¹⁰³ The discussion of remedies will ensue in Section VI of this thesis but with this in mind, it is necessary to delve into several international rules and standards that are relevant to Tuvalu's current situation.

a) Principle 21 of the 1972 Stockholm Declaration

The first of such rules is Principle 21 of the Stockholm Declaration. Principle 21 pronounces that states have 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." The Stockholm Declaration in and of itself, though essential to any international environmental law discussion, is not considered binding international law. Principle 21, on the other hand, has become so entwined and generally accepted in the international arena that it was declared by the International Court of Justice (ICJ) nearly a decade ago to be customary international law. It remains today "an important statement of customary international environmental law," and therefore, binding on all nations.

b) The Precautionary Principle and Shifting the Burden of Proof

Another of these international rules and standards applicable to the United States is the Precautionary Principle as set forth in the 1992 Rio Declaration on the Environment and Development (Rio Declaration). The precautionary principle developed as national and international reaction to large threats affecting multiple nations, such as the threat of global warming, was simply not reactive enough for human kind protection. This principle embodies the notion that scientific uncertainty is not a release of liability for failure to prevent international environmental harm. As set forth in Principle 15 of the Rio Declaration, the precautionary principle states:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. ¹¹⁰

As such, when a threat of harm to the environment arises, preventative measures must be taken even if the "cause and effect relationships are not fully established scientifically." As with most environmental issues, complex science is involved to determine the cause and effect relationship of certain activities. The precautionary principle simply "addresses how environmental decisions are made in the face of scientific uncertainty." Such a principle is indispensable to a discussion on global warming as many nations dismiss their obligations to the environment by hiding under the cloak of uncertainty and unpredictability. Significantly, commentators on this subject argue that this principle not only imposes an obligation in the face of uncertainty but also has the effect of shifting the burden of proof from those who seek relief to those who wish to continue the destructive activity. Also fundamental to the precautionary principle is the direct relationship that exists between the level of action a state must take and the

extent of possible extraterritorial harm that may occur.¹¹⁵ This principle has become engrained in any international discourse on the environment and though not binding per se, over fifteen (15) years ago it was stated that the precautionary principle was rapidly being accepted within international forums:

The speed with which the precautionary principle has been brought on to the international agenda, and the range and variety of international forums which have explicitly accepted it within the recent past, are quite staggering. There is no question but that it is now the most important new policy approach in international environmental co-operation. ¹¹⁶

With the international importance and wide acceptance of this principle, though not specifically stated as customary international law to date, it appears only a matter of time before it is accepted as such and, therefore, would likely play a significant role in any action Tuvalu may take against the United States.

3. Significant Injury

The final element of significant injury to the violated nation is a seemingly amorphous topic in which one has no direct precedent to rely on. No specific definition can be extrapolated from this rule. However, "references to 'significant' impact on the environment are common in both international law and United States law." Clearly, the term 'significant' bars cases of only minimal damage and the exact level of what constitutes significant injury will ultimately be a judicial decision. It will be likely that this judicial decision will balance the injury caused to a state against the essential nature of the activity causing the damage to the perpetrator state.

B. Human Rights Law

Though not necessarily straightforward in application or in judicial response, given the profound impact on the lives of the people in Tuvalu, it is natural that a discussion of human rights law should be touched upon as applicable to this situation. Depending on the jurisdiction or dispute resolution venue Tuvalu chooses, there are two (2) specific human rights laws that are most applicable to the situation: the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights. Under each of these Covenants, given the straightforward nature of the rights specified within them, other than application to Tuvalu, not much explanation is required. However, basic human rights laws and their applicability to environmental harms and as a way to seek justice for injury and damage is really not at all clear and has, in fact, had mixed success within international forums. Regardless, given the natural convergence between human lives and the global environment, a sound argument can be made that with any environmental degradation, the most basic human rights can be violated.

1. International Covenant on Civil and Political Rights (ICCPR)

The International Covenant on Civil and Political Rights is a binding agreement that the United States has both signed and ratified. Given the nature and clear infringement of these rights and occurs with the environmental degradation specifically in the case of Tuvalu, application of the ICCPR seems fairly unambiguous. Within the ICCPR is embodied the following immutable rights specifically relevant to the topic of environmental degradation of a nation as a result of global warming: the inherent right to life for every human being, the right to liberty and security of person, the right to liberty of movement and freedom to chose one's own residence, and the right not to be subjected to arbitrary interference with their home.

2. International Covenant on Economic, Social and Cultural Rights

Unlike the ICCPR, the United States is only a signatory to the International Covenant on Economic, Social and Cultural Rights. As such, though not specifically bound by its terms, the United States is obligated to refrain from acts which would defeat the object and purpose of the treaty. Throughout the International Covenant on Economic, Social and Cultural rights, the following rights as applicable to this situation are set forth: the right to work, the right to adequate standards of living including adequate food and housing, the right to the highest attainable standard of physical and mental heath, and the right to take part in cultural life.

V. Tuvalu and Application of the Law:

A. Restatement §601, Principle 21, and the Precautionary Principle

Each of these above stated rules, even when read alone, appear to hold some promise for Pacific Island Nations and Tuvalu. As such, it is necessary to apply each of these obligations to the situation at hand to determine whether, ultimately, the United States could be held liable for its environmental damage, inaction, and intentional blindness to its violative activity.

1. Activity within the Jurisdiction or Control

The first discussion of our application is fairly straightforward and as such needs little discussion. As stated previously, the United States is responsible for 23% of greenhouse gas emissions while only representing 5% of the population. This substantial release of toxins solely occurs within the United States jurisdiction and control. Whether it be caused by the United States government directly is not relevant. Private or even public corporations within United States jurisdiction that continue to release emissions will ultimately impart liability on the United States for harm to other nations. Even more significant in this case, is that a state can

be held liable for not enacting necessary legislation to prevent harm. ¹³⁹ In this regard, it is probative that not only has the United States failed to take important international action by failing to ratify target agreements such as the Kyoto Protocol, it has also been outspoken as to its contempt for such agreements citing unjust penalties to the United States and lack of requirements for developing nations. ¹⁴⁰ Granted, the United States could defend its actions based on international agreements such as the UNFCCC as proof of achievement in the area of climate change, however this non-binding Convention that only obligates countries to aim for better emission standards can hardly constitute the preventative action that would be necessary here. 141 Furthermore, allegations that the Bush Administration has pressured scientists to downplay and mislead the public when discussing global warming can hardly make United States actions seem forthright and honest. 142 In the face of ever increasing scientific data regarding not only the human element of global warming but also the progressively dismal calculations as to global warming effects, failure to take this data into account and implement new legislation to reduce GHG emissions must be seen as negligent at its best and criminal at its worst.

2. Conforming to International Rules and Standards

Whether or not the United States has conformed to the rules and standards of the international arena is the next question to be asked. The application of Principle 21 to Tuvalu makes a fairly clear case. One important caveat to this rule is that the obligation of responsibility for activities causing damages to the environment of other states is no where near strict liability and foreseeability of harm is necessary before liability can attach. However, in this case, strict liability is unnecessary. Given the exceptional scientific advancements over the years, and with the plethora of scientific data that exists as to the causes and affects of global warming

coupled with the necessity of precaution, harm as a result of anthropogenic carbon dioxide emission is now clearly foreseeable. As one scientist stated several years ago:

The overwhelming majority of scientific experts, whilst recognizing that scientific uncertainties exist, nonetheless believe that human-induced climate change is inevitable. Indeed, during the last few years, many parts of the world have suffered major heat waves, floods, droughts, fires and extreme weather events leading to significant economic losses and loss of life. While individual events cannot be directly linked to human-induced climate change, the frequency and magnitude of these types of events are predicted to increase in a warmer world. 144

From the language of Principle 21 as well as the Restatement, a direct link between specific events, such as an individual drought or storm that cannot be extrapolated from specific anthropogenic GHG emission is not necessary. Given the majority of scientists linking global warming to climate change and the predictions of devastation as a result, the element of foreseeability is fulfilled. It has become clear that "[t]he question is not whether climate will change in response to human activities, but rather how much . . .how fast . . and where." ¹⁴⁵

Knowing, as we do, that greenhouse gas emissions are causing rapid changes in the environment, Principle 21 mandates an international obligation to not only cease the activity causing foreseeable future harm, but also to implement necessary domestic legislation to curtail these emissions. As such, the world's largest producer of GHGs tipping the scales at roughly one-quarter (1/4) of the emissions produced is bound by this obligation. Yet, the United States is blatantly failing to do so. Concededly, some domestic legislation to curtail emissions has been implemented within the United States and has, in fact, made an impact on the global environment. Yet it appears fairly certain with not only bleak predictions but also the certainty with which many scientists speak as to the effects of anthropogenic global warming that the interpretation of "necessary legislation" must take on a different and more stringent meaning. By failing to promulgate new, more rigorous, legislation and by failing to implement target

agreements such as Kyoto, the United States has necessarily failed in their responsibility and obligation not to harm the environment of other nations.

The precautionary principle, that absolute science is not a defense for inaction, when read in conjunction with Principle 21 only further solidifies the above stated principle. Even the National Research Council of the United States has submitted that "[g]reenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise." Even if, as the United States government contends, anthropogenic climate change is not absolute science, the precautionary principle can easily overcome this defense.

3. Significant Injury

Finally, Tuvalu must prove that they, as a nation or as individuals within the nation, have suffered "significant injury" within the meaning of the Restatement §601. As above, "significant injury" cannot mean minimal damage. 148 Granted, the entire argument this thesis is based on deals with the threat of harm that Tuvalu may face in the near future and the amount of damages are growing daily. 149 Much of this thesis has already discussed the possibility of *severe* significant harm that is predicted in Tuvalu's relatively near future. These predictions, such as the loss of an entire nation, though not concrete, reasonably pose a threat of substantial harm and, under Restatement §601, must therefore not be allowed to occur by the violating state. Regardless of whether or not an international tribunal would allow evidence of possible future injury, the current injury alone, such as frequent flooding, increased storm surges, erosion of a small nation with little ability to lose coastline, and increased salinity of groundwater affecting the growing of traditional crops, must constitute and embody what is legally defined as "significant injury." In either event, when discussing significant harm, the fact that a nation may

soon be engulfed by the sea and that fact that inhabitants have already began to take refuge within other nations must be taken into account when determining whether significant injury has in fact occurred.

B. Human Rights Law

We next must turn to the application of human rights law to the case of Tuvalu. This application will be generally straight forward and, as such, does not need much elaboration other than emphasis on the of application to Tuvalu's case. In this regard, guidance can be found from the recent application of the Inuit indigenous people of North to the Organization of American States (OAS). Currently, these same basic human rights are the foundation for a suit within the OAS against the United States as the world's largest producer of GHGs. The Inuit peoples are threatened with similar harm as Tuvalu, losing homeland and culture. Because of its recent inception, no decision has been rendered in this case, but any outcome in the OAS case can clearly provide an example of arguments Tuvalu can make and also give foresight into the viability of such arguments.

1. International Covenant on Civil and Political Rights (ICCPR)

To scratch the surface, we will begin with the right to liberty and security of person. ¹⁵² Given the impending doom to the Tuvaluan people caused by the rise in the sea level and increase in storm intensity, personal security and personal liberty cannot exist. Tuvaluan citizens only wishing to live out their days within their homeland can hardly embrace personal security when the sea is creeping over their borders, making their homeland not only smaller but more susceptible to storms and waves. Even as environmental refugees in New Zealand, Tuvaluan's can have no personal security or liberty. ¹⁵³ The right to liberty of movement and freedom to

choose one's own residence including the right not to be subjected to arbitrary interference with one's home has also been violated where individuals wishing to live where they and their ancestors have for years are forced to flee.¹⁵⁴

2. International Covenant on Economic, Social and Cultural Rights

Through this Covenant, the United States is obligated to refrain from acts that defeat the object and purpose of the following rights: the right the right to work, ¹⁵⁵ the right to adequate standards of living including adequate food and housing, ¹⁵⁶ the right to the highest attainable standard of physical and mental heath, ¹⁵⁷ and the right to take part in cultural life. ¹⁵⁸ Yet these rights are insidiously being violated daily by the slow form of terrorism known as global warming. How can one enjoy their inherent right to when a nation that as relied economically on fishing for generations is now threatened by coral reef bleaching? Adequate standards of living and adequate housing are unobtainable rights when constant flooding threatens existence much less comfortable living in one's own home. In this regard, an argument toward intergenerational rights, intergenerational equality, and the necessity of protecting both the present and future of the environment can also be made whereas instead of focusing on the aforementioned rights as applicable today, these rights would be applied to future generations whose lives will be impacted to an unimaginable extent by global warming. ¹⁵⁹

VI. Remedies for Violation of Environmental Obligations: What can Tuvalu request?

Given the lack of definitive damages to future generations, a difficult argument still must be made by Tuvalu in order to seek damages against the United States for GHG emissions. The Restatement section § 602 contains a provision relating to the remedies available to an injured state. If a state is found liable to another state for environmental damage, the injured state

may request prevention, reduction, or termination of the activity that poses a threat or an injury to the nation.¹⁶¹ The injured state may also receive reparations for damage caused by the perpetrating nation."¹⁶² For ease of discussion, this section will be separated into the different remedies that Tuvalu could seek against the United States.

A. Monetary Damages and the Problems with Apportionment

With regard to damages that Tuvalu can seek against the United States, the problems of proof and causation stand may stand as daunting obstacles. "[B]oth assessing prospective damages from global warming and apportioning the extent to which they are attributable to the United States would not be easy." 163 Yet given the ever increasing science on the subject such proof is entirely possible. Assuming that Tuvalu could obtain the proper jurisdiction to hold the United States liable for its emissions there are several important issues to keep in mind. Though the entire world has continued to release greenhouse gases into the air, the United States continues as the largest producer of these emissions. As such, a state can only be held liable for the injury caused as a result of its own activity. 164 This would mean an apportionment to the United States for nearly one-quarter (1/4) of the GHG emissions they spew into the air every year, and as analogous to comparative liability in domestic tort cases, the United States may only be held liable for one-quarter (1/4) of Tuvalu's damages. This idea is backed by the Restatement §602 that states: "[w]here more than one state contributes to the pollution causing significant injury, the liability will be apportioned among the states, taking into account, where appropriate, the contribution to the injury of the injured state itself." In this regard, when dealing with potential damages constituting the entire loss of a nation, even a portion of liability could be staggering in relative terms. Furthermore, the backlash of such a suit could have interesting consequences and though a favorable judgment for Tuvalu may not ultimately be punitive to the

United States, it may open Pandora's Box when dealing with environmental litigation and be used as an eye opener for the United States to realize their destructive activities across the world will no longer go unheeded.

Additional to not being liable for all damage caused, certain difficulties will also inevitably arise when trying to calculate non-economic damages to a nation. Granted, the loss of homes and specific property within the state may have specific monetary value. The problem arises when attempting to calculate the intangibles such as the loss of a heritage that has existed on this island for nearly two millennia. This problem also arises when dealing with the prospective future damages Tuvalu may have as a result of global warming. As a definitive class of future individuals affected by global warming cannot be readily ascertained, it is unlikely such prospective damages can be awarded. 167

Difficulty also arises in calculation of liability when taking into account that "[a]nthropogenic emission of greenhouse gases have occurred since the time humans discovered fire, and particularly since the beginning of the industrial age." As such, apportionment of liability may again prove arduous. Monetary damages, however, may not be the most suitable relief requested for the case at bar. Money cannot compensate a person whose entire life must be uprooted as their nation is being engulfed by the sea. As such, focusing on abatement of continued greenhouse gas emission, though perhaps not the panacea for Tuvalu itself, may save other nations whose fate may be less clear.

B. Forced compliance with international obligations

As a main goal of bringing a suit against the United States would not be solely damages but also bringing the harms and disastrous effects of global warming into international spotlight, any international attention in this matter can be deemed progress. However, another option for Tuvalu would be to seek United States compliance in reducing emissions as set forth in international obligations and as suggested in the Restatement and International Human Rights Laws. Given that the United States is not a signatory to the Kyoto Protocol and because the UNFCCC does not provide "binding limits on emissions, . . . [but] generally provide[s] that . . . parties take measures that limit their GHG emissions" it will be difficult for any substantive changes to be made. ¹⁶⁹ Pursuant to the principles of state sovereignty, no jurisdiction sought by Tuvalu could force domestic legislation upon the United States. However, one such international requirement imposed upon the United States is set forth in article 4(4) of the UNFCCC wherein developed parties such as the United States are obligated to "assist the developing country parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation to those adverse effects." Though the science does not appear to show Tuvalu being able to adapt to the global warming phenomenon, foreign aid to care for the people, trying to determine ways to adapt, and the resulting international attention could be beneficial for the country.

C. Injunction

Another option, though not every viable, is the option of an injunction to put an end to the harm that is currently being perpetrated on this nation. The problem lies, however, in both the authority to force such an abatement of transboundary pollution and the ability of the United States to end such practices. Granted, the harm caused on the nation of Tuvalu is predicted to be unprecedented and horrific. However, if a court of competent jurisdiction were found, it cannot simply force the United States to end all GHG producing industries. Such action is not only impractical, it would also have an economic crippling effect on the United States and, therefore, such injunction could never be instituted.

VII. Conclusion: Practicality

[T]he sea-level inhabitants of Oceana and other low-lying lands, are surrogates for all of humanity. Save them, and developed nations ultimately save themselves and many features of life as presently known on the planet.

-Henry McGee in *A New Legal Frontier in the fight against Global Warming* 171

One of the main obstacles that small developing Island Nations such as Tuvalu may face is its size, not only in regard to its ability to compensate for future climate changes but also in regard to public policy and international relations. In all practicality, should the powerful United States be confronted by Tuvalu demanding reforms within the developed state itself, contempt may be the only emotion those within the developed nation feel, not compassion. Further, if a lawsuit is brought against the United States it is inevitable, as it has been attempted in the past, that the United States will undoubtedly be hostile to giving up its sovereignty and will not allow damages to be forced upon them. In fact, to a superpower such as the United States, the thought that the nation of Tuvalu, with a population of around 10,000 constituting only 10 square miles of land mass, could impact much less control United States domestic policy would be enraging. However, the probative value of such a suit based on the aforementioned legal arguments coupled with the current political climate and the beginning of mainstream acceptance of global warming could possibly show that any action on the part of Tuvalu may bring hope to their plight.

Clearly, international attention needs to be brought to the global warming phenomenon and the devastating effects upon nations such as Tuvalu. The world must wake up to the plight of these nations as their fate will necessarily be the fate of the world. Any international attention and any attempt to hold the United States liable for its GHG emissions will likely have the comparatively miniscule effect of shinning an international spotlight on the issues while internationally embarrassing the United States in its hubris. While not the best outcome for

Tuvalu, this spotlight could prove the beginning of a monumental domestic change in United

States and global policy that must occur for the ultimate salvation of our existence.

The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies. (Id. at \P 2).

¹ Julia Whitty, *All the Disappearing Islands: As the Ice Caps Melt and Oceans Rise, Will Tuvalu Become a Modern Atlantis?*, vol. 28 issue 4, MOTHER JONES, July 1, 2003, *available at* 2003 WLNR 8850660.

² Henry W. McGee, Symposium: A New Legal Frontier in the fight Against Global Warming: Article: Litigating Global Warming: Substantive Law in Search of a Forum, 16 FORDHAM ENVTL. L. J. 371, 384 (2005) (citing Tariq Masood Ali Khan et al., Relative Sea Level Changes in Maldives and Vulnerability of Land Due to Abnormal Coastal Inundation, 25 MARINE GEODESY 133, 134 (2002)).

³ Throughout this paper the terms global warming and climate change shall be used interchangeably.

⁴ For an "interesting" and recent article on the myth and hype of global warming, *See* Russell Lewis, *Global Warming False Alarms*, Institute of Economic Affairs, (Mar. 6, 2007), *available at* http://www.iea.org.uk/files/upld-book403pdf?.pdf.

⁵ Tuvalu, CIA – The World Factbook, *at* https://www.cia.gov/cia/publications/factbook/geos/tv.html (last visited March 23, 2007) [hereinafter Factbook].

⁶ Pacific islanders flee rising seas, BBC News Online (Oct. 9, 2001) available at http://news.bbc.co.uk/2/low/science/nature/1581457.stm.

⁷ Emissions of Greenhouse Gases in the United States 2005, Energy Information Administration (Nov. 2006), available at http://www.eia.doe.gov/oiaf/1605/ggrpt/pdf/emissions_tbls.pdf (tabulating the world energy-related carbon dioxide emissions by region)[hereinafter US Gas Emissions]; *U.S. and World Population Clocks*, United States Census Bureau, available at http://www.census.gov/main/www/popclock.html (estimating the total global population today as 6,585,071,126 and the population of the United States being 301,476,499) [hereinafter Census Bureau]; for the distance between San Francisco and Tuvalu, How far is it from San Francisco CA to ? – Distance Calculator, available at http://www.findlocalweather.com/how far is it/ca/san+francisco.html.

⁸ Scientists: White House pressured us to downplay global warming, USA Today, Jan. 31, 2007, at 5A [hereinafter USA Today].

⁹ Principles Governing IPCC Work, Intergovernmental Panel on Climate Change, Apr. 2006, at ¶ 1-3, available at http://www.ipcc.ch/about/princ.pdf. The specific language in the document states:

¹⁰ About IPCC: Mandate and Membership of the IPCC, Intergovernmental Panel on Climate Change, available at http://www.ipcc.ch/about/about.htm.

¹¹ See, Working Group I, Climate Change 2007: The Physical Science Basis: Summary for Policymakers, Intergovernmental Panel on Climate Change, (Feb. 2007), available at http://www.ipcc.ch/SPM2feb07.pdf [hereinafter Working Group I].

¹² See, Id.

¹³ *Id.* at 5.

 $^{^{14}}$ *Id.* at 10. The report used the following terms to indicate the likelihood of an event: virtually certain > 99%, extremely likely > 95%, very likely >90%, likely >66%, more likely than not > 50%, unlikely <33%, very unlikely < 10%, extremely unlikely < 5%. *Id.* at n. 6.

¹⁵ *Id.* at 5. The records have been kept since 1850.

¹⁶ *Id.* at 5.

¹⁷ *Id.* at 5.

¹⁸ Working Group I, *supra* note 11, at 7.

¹⁹ J. Chris Larson, *Racing the Rising Tide: Legal Options for the Marshall Islands*, 21 MICH. J. INT'L L. 495, 500 (2000).

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<sup>20</sup> Working Group I, supra note 11, at 7.
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²² *Id*.

²³ *Id.*; *See also* Larson, *supra* note 19, at 500.

²⁴ Climate Changes: Causes and its Effects, in 1 GLOBAL WARMING, AND CLIMATE CHANGES: TRANSPARENCY AND ACCOUNTABILITY 120 (Gopal Bhargava ed., 2004).

²⁵ McGee, *supra* note 2, at 381.

²⁶ Climate Change 2001: Working Group II: Impacts, Adaptation and Vulnerability, 17.2.2.1: Sea-Level Rise, Intergovernmental Panel on Climate Change, available at http://www.grida.no/climate/ipcc_tar/wg2/626.htm. ²⁷ Working Group I, *supra* note 11, at 7.

²⁸ *Id.* at 12.

²⁹ Climate Change 2001: Working Group II: Impacts, Adaptation and Vulnerability, Technical Summary 3.5 Scenarios for the 21st Century, Intergovernmental Panel on Climate Change, available at http://www.grida.no/climate/ipcc tar/wg2/029.htm.

Executive Summary: Emissions of Greenhouse Gases in the United States 2005, Energy Information Administration, available at http://www.eia.doe.gov/oiaf/1605/ggrpt/pdf/executive_summary.pdf.

³¹ A survey on climate change, The Heat is on, THE ECONOMIST, at 3 (Sept. 9, 2006).

³³ Prime Minister Saufatu Sopoanga, Address at the 58th Session of the United Nations General Assembly New York, (Sept. 24, 2003), available at http://www.tuvaluislands.com/warming.htm.

³⁴ About Tuvalu, Tuvalu National Homepage, at http://www.tuvaluislands.com/about.htm (last visited Mar 24, 2007).

³⁵ Factbook, *supra* note 5.

³⁶ A. Barrie Pittock, Climate Change: Turning Up The Heat, 273, (CSIRO publishing 2005).

³⁷ Factbook, supra note 5. See, Rebecca Elizabeth Jacobs, Comment: Treading Deep Waters: Substantive Law Issues in Tuvalu's Threat to Sue the United States in the International Court of Justice, 14 PAC. RIM L. & POL'Y J. 103, 107 (Jan. 2005).

³⁸ Tom Price, The Canary is Drowning: Tiny Tuvalu Fights Back Against Climate Change, Global Policy Forum (Dec. 3, 2002) at http://www.globalpolicy.org/nations/micro/2002/1203canary.htm (last visited Mar. 23, 2007).

³⁹ Elizabeth Pollock, *Tuvalu: That Sinking Feeling, Global Warming and Rising Seas*, Frontline, World PBS Documentary (Dec. 6, 2005). The documentary can be viewed at

http://www.pbs.org/frontlineworld/rough/2005/12/tuvalu_that_sin_1.html; But see, Bruce C. Douglas, Long-Term Sea-Level Variation, in Natural Climate Variability on Decade-to-Century Time Scales, National Research Council, 264 (National Academy Press, 1995) (indicating that tide-gauge data by itself cannot be the only indicator of climate change and that records of 50 + years on tide-gauges would be needed.)

⁴⁰ PITTOCK, *supra* note 36, at 274.

⁴¹ Tom Price, *supra* note 38.

⁴² Pollock, *supra* note 39.

⁴³ PITTOCK, *supra* note 36, at 274.

⁴⁴ *Id*.

⁴⁵ Price, *supra* note 38.

⁴⁶ PITTOCK, supra note 36, at 274

⁴⁷ Price, *supra* note 38.

⁴⁸ Whitty, *supra* note 1.

⁴⁹ *Id*.

⁵⁰ PITTOCK, *supra* note 36, at 274.

⁵² Andrew L. Strauss, The Legal Option: Suing the United States in International Forums for Global Warming Emissions, 33 ENVTL. L. REP. 10185, 10185.

⁵³ Jacobs, *supra* note 37, at 105.

⁵⁴ For a list of all previous and pending ICJ cases and advisory opinions, See *List of Cases referred to the Court* since 1946 by date of introduction, International Court of Justice, available at http://www.icjcij.org/docket/index.php?p1=3&p2=2. ⁵⁵ *Jurisdiction*, International Court of Justice website, *at* http://www.icj-

cij.org/jurisdiction/index.php?p1=5&PHPSESSID=6e810ee41a001267a7303f7eec72c109.

⁵⁶ *Id*.

⁵⁷ Statute of the International Court of Justice, 3 Bevans 1179; 59 Stat. 1031; T.S. 993; 39 AJIL Supp. 215, art. 35 (1945) [hereinafter ICJ Statute]; *Jurisdiction: Contentious Jurisdiction*, International Court of Justice website, *at* http://www.icj-cij.org/jurisdiction/index.php?p1=5&p2=1 (defining international legal disputes as "a disagreement on a question of law, or fact, a conflict, a clash of legal views or of interests).

⁵⁸ Strauss, *supra* note 52, at 10185.

⁵⁹ ICJ Statute, *supra* note 57, at art. 36(2).

⁶⁰ *Id*.

⁶¹ See Jacobs, supra note 37, at 115. The United States has previously argued the ICJ does not have jurisdiction over the United States. See, Mexico v. United States of America, Case Concerning Avena and other Mexican Nationals, International Court of Justice, 2004 ICJ Lexis 11 (Mar. 31, 2004), Nicaragua v. United States of America, Case Concerning Military and Paramilitary Activities in and Against Nicaragua, International Court of Justice, 1986 ICJ Lexis 4 (June 27, 1986). As a side note, there have been states that have consented to compulsory jurisdiction of the ICJ, including the United Kingdom and Australia. As such, a suit against these nations could be more feasible. Se, Declarations Recognizing the Jurisdiction of the Court as Compulsory, International Court of Justice website, at http://www.icj-cij.org/jurisdiction/index.php?p1=5&p2=1&p3=3

⁶² ICJ Statute, *supra* note 57, at art. 65(1).

 $^{^{63}}$ *Id*.

⁶⁴ Charter of the United Nations, 59 Stat. 1031; TS 993; 3 Bevans 1153, *entered into force* Oct. 24, 1945, at art. 96 (1) –(2) [hereinafter U.N. Charter].

⁶⁵ See, Strauss, supra note 52, at 10187...

⁶⁶ Charter of the United Nations, June 26, 1945, 59 Stat. 1031, T.S. NO. 993, 3 Bevans 1153, *entered into force* Oct. 24, 1945 at Article 18 section 2.

⁶⁷ U.N. Charter, *supra* note 64, at art. 18(2).

⁶⁸ Strauss, *supra* note 52, at 10187.

⁶⁹ See, Id.

⁷⁰ *Id*.

⁷¹ *Id*.

⁷² U.N. Charter, *supra* note 64, at art. 96(1)-(2); *See* Strauss, *supra* note 52, at 10187.

⁷³ See Legality on the Threat or Use of Nuclear Weapons (United Nations), 1996 ICJ LEXIS 7, 24 (ICJ 1996) (holding that the WHO was authorized to deal with the "effects on health of the use of Nuclear Weapons, or of any hazardous activity, and to take preventative measures aimed at protecting the health of populations in the event of such weapons being used or such activities engaged in....[but] the competence of the WHO to deal with them is not dependent on the legality of the acts that caused the them.") [hereinafter Legality of Nuclear Weapons]; See also, Jacobs, supra note 37, at 117-118.

⁷⁴ List of Annex I Parties to the Convention, United Nations Framework Convention on Climate Change, available at http://unfccc.int/parties_and_observers/parties/annex_i/items/2774.php (listing the United States as a party to the convention); List of Non-Annex I Parties to the Convention, United Nations Framework Convention on Climate Change, available at http://unfccc.int/parties_and_observers/parties/non_annex_i/items/2833.php (listing Tuvalu as a party to the convention); United Nations Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc. No. 102-38 (1992), 31 I.L.M. 849, at art. 14 [hereinafter UNFCCC].

⁷⁵ UNFCCC, *supra* note 74, at art.14(5); the mandatory language states as follows: "the dispute *shall* be submitted . . . to conciliation" (emphasis added).

⁷⁶ *Id.*, at art. 14(6).

⁷⁷ *Id*.

⁷⁸ *Id.* at art 14(7); *See* Strauss, *supra* note 52, at 10188.

⁷⁹ Strauss, *supra* note 52, at 10188.

⁸⁰ See William C. Burns, Global Warming – The United Nations Framework Convention on Climate Change and the Future of Small Island States, 6 DICK. J. ENVTL. L. POL'Y 147, 174-176 (1997); UNFCCC, supra note 74, at art. 4(4).

⁸¹ The Agreement for the Implementation of the Provisions of the U.N. Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, August 4, 1995, 34 ILM 1542 (1995); 2167 UNTS 88 [hereinafter Straddling Fish Stocks].

⁸² United Nations Convention on the Law of the Sea, Dec. 10, 1982, art. 287(5), 1833 UNTS 3; 21 ILM 1261 (1982) [hereinafter Law of the Sea].

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<sup>83</sup> See, Chronological lists of ratifications of, accessions and successions to the Convention and the related
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available at
http://www.un.org/Depts/los/reference_files/chronological lists of ratifications.htm#The%20United%20Nations%
20Convention%20on%20the%20Law%20of%20the%20Sea [hereinafter LoS Ratifications].
<sup>84</sup> Strauss, supra note 52, at 10188; For the provision of the Straddling Fish Stocks referring to dispute settlement
See, Straddling Fish Stocks, supra note 81, at art. 30; For a list of adherents to the Straddling Fish Stocks Agreement
See, LoS Ratifications, supra note 83.
<sup>85</sup> Law of the Sea, supra note 82, at art. 287(5); See, Jacobs, supra note 37, at 116.
<sup>86</sup> Law of the Sea, supra note 82, at art. 11.
<sup>87</sup> Strauss, supra note 52, at 10188.
<sup>88</sup> See, Id. at 10189.
90 RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE
RESPONSIBILITY, 232 (Martinus Nijhoff Publishers, 2005).
<sup>92</sup> Id.
^{93} Restatement (Third) of Foreign Rel. Law \S601 (1987)
95 RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601 cmt. d (1987)
<sup>96</sup> Id.
<sup>97</sup> Id.
<sup>98</sup> Id.
<sup>99</sup> US Gas Emissions, supra note 7. See also, Id.
<sup>100</sup> RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601 cmt. b (1987)
<sup>101</sup> Id.; See, above discussion on jurisdiction through international conventions.
102 RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601 cmt. b (1987)
<sup>104</sup> United Nations Conference on the Human Environment, Stockholm, Sweden, June 5-16, 1972, U.N. Doc.
A/Conf.48/14/Rev. 1(1973); 11 ILM 1416 (1972) at Principle. 21. available at http://
www.unesco.org/iau/sd/stockholm.html [hereinafter Stockholm Declaration].
<sup>105</sup> See, McGee, supra note 2, at 393.
<sup>106</sup> Legality of Nuclear Weapons, supra note 73, at 226.
<sup>107</sup> DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 177 (Foundation Press 2002);
Customary international law is defined as resulting "from a general and consistent practice of states followed by
them from a sense of legal obligation." RESTATEMENT (THIRD) OF FOREIGN REL. LAW §102(2) (1987); See also, ICJ
Statute, supra note 57, at art. 38(1) (requiring the Court to apply "international custom, as evidence of a general
practice accepted as law"); See also, Legality of Nuclear Weapons, supra note 73; See also, EDITH BROWN WEISS,
IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL
EQUITY 87, (United Nations University, 1989).
<sup>108</sup> McGee, supra note 2, at 393.
<sup>109</sup> Rio Declaration on Environment and Development, adopted June 14, 1992, UN Doc. A/CONF.151/26 (vol. I); 31
ILM 874 (1992) [hereinafter Rio Declaration].
<sup>111</sup> McGee, supra note 2, at 393.
<sup>112</sup> HUNTER, supra note 107, at 405.
<sup>114</sup> Id. at 406.
<sup>115</sup> David Freeston, The Precautionary Principle, in International Law and Global Climate Change (Robin
Churchill & David Freestone eds.) (Kluwer Academic Publishers Group, 1991).
<sup>116</sup> Id. at 36.
117 See, RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601 cmt. c (1987)
<sup>118</sup> Id.
<sup>119</sup> Id.
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¹²⁰ *Id*.

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<sup>121</sup> Id.
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¹²² For a more in depth discussion on human rights and its applicability to the environment, *See* HUMAN RIGHTS APPROACHES TO ENVIRONMENTAL PROTECTION, (Alan Boyle and Michael Anderson eds) (Clarendon Press, 1996) ¹²³ International Covenant on Civil and Political Rights, G.A. res. 2200 (XXI), 21 U.N. GAOR Supp. (No. 16) U.N. Doc. A/6316 (1966), 999 U.N.T.S. 171, *entered into force* March 23, 1976 [hereinafter ICCPR]; International Covenant on Economic, Social and Cultural Rights, G.A. res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16), U.N. Doc. A/6316 (1966), 993 U.N.T.S. 3, *entered into force* January 3, 1976 [hereinafter Economic Covenant].

¹²⁴ Michael R. Anderson, *Human Rights Approaches to Environmental Protection: An Overview, in* HUMAN RIGHTS APPROACHES TO ENVIRONMENTAL PROTECTION, 5 (Alan Boyle and Michael Anderson eds) (Clarendon Press, 1996). ¹²⁵ *International Covenant on Civil and Political Rights*, Ratification and Reservations, Office of the United Nations High Commissioner for Human Rights, *available at* http://www.ohchr.org/english/countries/ratification/4.htm (April 19, 2007)

¹²⁶ ICCPR, *supra* note 123, at art. 6.

- ¹²⁷ *Id.* at art. 9
- ¹²⁸ *Id.* at art. 12.
- 129 *Id.* at art. 17.
- ¹³⁰ International Covenant on Economic, Social and Cultural Rights New York 16 December 1966, Ratifications and Reservations, Office of the United Nations High Commissioner for Human Rights available at http://www.ohchr.org/english/countries/ratification/3.htm
- ¹³¹ Vienna Convention on the Law of Treaties, art. 18, UN Doc. A/Conf.39/27; 1155 UNTS 331; 8 ILM 679 (1969); 63 AJIL 875 (1969) (stating that:
- "A State is obliged to refrain from acts which would defeat the object and purpose of a treaty when:
- (a) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification, acceptance or approval, until it shall have made its intention clear not to become a party to the treaty; or (b) it has expressed its consent to be bound by the treaty, pending the entry into force of the treaty and provided that such entry into force is not unduly delayed.")
- Economic Convention, *supra* note 123, at art. 6.
- ¹³³ *Id.* at art. 11.
- 134 *Id.* at art. 13.
- 135 *Id.* at art. 15.
- ¹³⁶ US Gas Emission, *supra* note 7; Census Bureau, *supra* note 7.
- 137 RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601 cmt. d (1987).
- ¹³⁸ *Id*.
- ¹³⁹ *Id*.
- ¹⁴⁰ Jacobs, *supra* note 37, at 115.; *See*, *Q&A*: *The US and Climate Change*, BBC News, Feb. 14, 2002, *at* http://news.bbc.co.uk/2/hi/americas/1820523.stm.
- ¹⁴¹ Jacobs, *supra* note 37, at 114.
- ¹⁴² USA Today, *supra* note 8; *See also*, Andrew C. Revkin and Katharine Q. Seelye, *Report by E.P.A. Leaves out Data on Climate Change*, N.Y. TIMES, at A1, (June 16, 2003), *available at* WLNR 4633275.
- ¹⁴³ Freeston, *supra* note 115, at 31.
- ¹⁴⁴ Robert T. Watson, Chair of Intergovernmental Panel on Climate Change, Presentation at the Sixth Conference of Parties to the United Nations Framework Convention on Climate Change, (Nov. 13, 2000), *at* http://www.ipcc.ch/press/sp-cop6.htm.
- ¹⁴⁶ Emissions of Greenhouse Gases in the United States 2005, Energy Information Administration, (Nov. 2006), available at http://www.eia.doe.gov/oiaf/1605/ggrpt/pdf/emissions_tbls.pdf (tabulating the world energy-related carbon dioxide emissions by region).
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- ¹⁵⁰ George Gedda, *Inuits cite U.S. in Arctic thaw: Rights panel hears global warming complaint from Northern Canada group*, ALBANY TIMES UNION, March 2, 2007, available at 2007 WLNR 4061410.

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<sup>151</sup> Id.
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- ¹⁵³ Alex Kirby, *Pacific islanders flee rising seas*, BBC News (Oct. 9, 2001), *available at* http://news.bbc.co.uk/2/hi/science/nature/1581457.stm.
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- 155 Economic Covenant, *supra* note 123, at art. 6.
- ¹⁵⁶ *Id.* at art. 11.
- ¹⁵⁷ *Id.* at art. 13.
- ¹⁵⁸ *Id.* at art. 15.
- For a discussion on intergenerational equity, See Jacobs, supra note 37; See also, WEISS, supra note 107, at 87.
- ¹⁶⁰ RESTATEMENT (THIRD) OF FOREIGN REL. LAW §602 (1987).
- ¹⁶¹ *Id*.
- ¹⁶² *Id*.
- ¹⁶³ Strauss, *supra* note 52, at 10191.
- ¹⁶⁴ RESTATEMENT (THIRD) OF FOREIGN REL. LAW §601, cmt. d (1987).
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- ¹⁶⁷ For a discussion on Tuvalu's right to present and future damages, *See* Jacobs, *supra* note 37, at 119.
- ¹⁶⁸ VERHEYEN, *supra* note 90, at 232.
- ¹⁶⁹ Strauss, *supra* note 52, at 10187.
- ¹⁷⁰ UNFCCC, *supra* note 74, at art. 4(4).
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