



P.O. Box 610044, Redwood City, CA 94061
tel (650) 877-2710
www.earthlawcenter.org

November 9, 2015

John H. Knox
UN Special Rapporteur on Human Rights and the Environment
Henry C. Lauerman Professor of International Law
Wake Forest University School of Law

VIA ELECTRONIC MAIL: srenvironment@ohchr.org

Re: Implementation of human rights obligations relating to the environment

Dear Special Rapporteur Knox:

Earth Law Center (ELC) welcomes the opportunity to provide input on methods to promote the implementation of human rights obligations relating to the environment. ELC works globally to advance in law the inherent rights of ecosystems and species to exist, thrive and evolve.

In developing methods to implement human rights obligations relating to the environment, we urge your office to include strategies related to recognition in law of the rights of nature. Recognition in law of inherent rights – such as life, liberty and the pursuit of happiness – is essential to achieving a goal of healthy relationships. For example, before universal suffrage women could not enjoy a fully thriving relationship with a society that excluded their voices from consideration. Similarly, before the fall of apartheid, the majority of South Africans were excluded from the governance of their own communities; in fact, the word apartheid literally means separation.

By passing rights-based laws, we are correcting our error of ignoring those inherent rights in the past. The United Nations committee drafting the Universal Declaration of Human Rights wrote of inherent rights as follows: "the supreme value of the human person ... did not originate in the decision of a worldly power, *but rather in the fact of existing*".¹ Cultural historian Thomas Berry expands on this point to include the natural world, stating that: "*Rights come with existence. That which confers existence confers rights.*"² The logic of our inherent human rights extends to the natural world with which we co-evolved. Recognition of nature's inherent rights to exist, to have habitat, and to "fulfill its role in the ever-renewing processes of the Earth community" is essential for us to build flourishing relationships with the natural world.

To this end, we call to your attention two upcoming sources of information for your consideration. First, the Global Alliance for the Rights of Nature, along with European partners,

¹ Statement by Herman Santa Cruz, Chile, Member of the Drafting Subcommittee for the Universal Declaration of Human Rights, in United Nations, "The Universal Declaration of Human Rights: History of the Document," at: <http://www.un.org/en/documents/udhr/history.shtml> (emphasis added).

² Thomas Berry, "Every Being Has Rights," in Hildegard Hannum (ed.), *Twenty-Third Annual EF Schumacher Lectures* (EF Schumacher Society, Stockbridge, MA 2003).

is co-sponsoring an International Tribunal on the Rights of Nature to be held December 4-5 in Paris, France. This Tribunal is the third in a series of worldwide tribunals examining violations of nature's rights and human rights. A broadly representative panel of expert judges provides recommendations on the cases brought, recommendations that may prove useful for your work.³

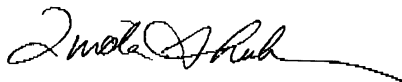
The second source of information is an upcoming, extensive report by ELC, also to be released in Paris to coincide with the U.N. COP21 climate negotiations. The report reviews and analyzes data compiled from 100 cases worldwide of "co-violations" of rights of nature and human rights (including specifically indigenous rights). We define a "co-violation" of rights as a *situation in which governments, industries, or others violate both the rights of nature and human rights, including indigenous rights, with the same action*. ELC has developed an interactive map of these and related cases, available at <http://www.earthlawcenter.org/co-violations-of-rights>.

With a team from Yale Law School's Environmental Protection Clinic, ELC reviewed these cases in detail and compiled trends and specific recommendations for action from the information we found. As the attached Executive Summary and descriptive flier for the upcoming report indicate, the human rights and indigenous rights violations that your office is examining often co-arise with environmental harms so serious that they must too be called rights violations. The report concludes that we must recognize and act on all categories of rights violations – including nature's rights – to understand and address the root cause of the problem. This root cause is an overarching governance system (particularly our economic system) that treats the natural world, and often humans, as primarily "resources" for short-term profit. The report makes a number of specific recommendations to start to shift this worldview to one that recognizes people and nature as rights-bearing partners. We expect that these recommendations will be useful to you in your work.

This report will be completed in the next two weeks, and I would be pleased to forward you the final copy at that point. In the meantime, I attach background information; please do not hesitate to reach out with initial questions.

Thank you for the critically important work that you do to advance human rights and the well-being of the Earth.

Best regards,



Linda Sheehan
Executive Director
lsheehan@earthlaw.org

Attachments: *Fighting for Our Future*, Overview and Executive Summary

³ See <http://therightsofnature.org/rights-of-nature-tribunal/> for Tribunal information. For additional details, see Cormac Cullinan, "A Tribunal for the Earth: Why It Matters" (2015), at <http://therightsofnature.org/a-tribunal-for-earth-why-it-matters/> (South African attorney Cullinan will chair the upcoming Tribunal in Paris).



UPCOMING REPORT: December 2015

“Fighting for Our Shared Future”

Earth Law Center is pleased to announce the December 2015 release of “Fighting for Our Shared Future: Protecting Both Human Rights and Nature’s Rights”

The problem: The well-being of humans and nature are inextricably linked. Across the globe, we injure both people and ecosystems by treating the natural world as property to fuel incessant economic growth. These injuries have risen to the level of simultaneous violations, or “co-violations,” of human rights and nature’s rights.

Trends: *Fighting for Our Shared Future* will document over 100 examples around the world of co-violations of nature’s and people’s rights. The report then analyzes these cases for trends to help identify appropriate solutions.

Climate change: The report will highlight rights violations caused by climate change in particular. Enforceable, rights-based language must be included in a binding climate change treaty or risk such co-violations continuing.

Recommendations: Many co-violations are fueled by our legal and economic systems, which legalize and even encourage environmental destruction for profit. By creating governance systems that respect and fully enforce human and environmental rights, we can live sustainably, consistent with nature’s laws and needs. The report will offer recommendations to set us on this path.

In-Depth Case Studies:

Ecuador. José Isidro Tendetza Antún, an indigenous activist, was murdered days before he was set to testify about the Mirador copper and gold mine, which is expected to clear-cut at least 2,000 hectares of forest in a biodiversity hotspot.

Lake Chad. The lake has shrunk to nearly 1/20th its original size due to climate change and water mismanagement, causing an immense decline in biodiversity and forcing many human environmental refugees to flee.

Sarnia, Ontario. Aamjiwnaang First Nation people and local aquatic ecosystems both suffer from the petrochemical industry’s spills, leaks, and toxic emissions in an area dubbed the “Chemical Valley.”

Northern Europe. In the area’s “last wilderness,” a flood of new mining permits threatens a pristine network of rivers, lakes, and mountains, as well as Lapland and Sami indigenous communities that rely on reindeer herding and fishing.

Event in Paris, France

In December 2015, Earth Law Center will release *Fighting for Our Shared Future* parallel to the 2015 U.N. Framework Convention on Climate Change (UNFCCC) Climate Conference in Paris, France.

We will call for specific solutions to ongoing co-violations, including a robust climate change treaty that better protects the rights of both nature and humans. There will also be an opportunity for public discussion.

Be sure to visit <http://earthlawcenter.org> for further details on the *Fighting for Our Shared Future* release and the climate conference.

CONTACT

Linda Sheehan Executive Director
P.O. Box 610044
Redwood City, CA 94061
(650) 877-2710
lsheehan@earthlaw.org

Grant Wilson
Programs Manager
P.O. Box 610044
Redwood City, CA 94061
(510) 566-1063
gwilson@earthlaw.org

Thank you to students from the Yale Environmental Protection Clinic for their invaluable work on the report.





Fighting for Our Shared Future: Protecting Both Human Rights and Nature's Rights

Executive Summary

The well-being of humans and nature are inextricably linked. Across the globe, we injure both people and ecosystems by treating the natural world as property to fuel incessant economic growth. These injuries have risen to the level of simultaneous violations, or “co-violations,” of human rights and nature’s rights.

Fighting for Our Shared Future: Protecting Both Human Rights and Nature’s Rights explores 100 case studies from around the world of co-violations of nature’s and people’s rights. The report first illustrates the scope of this problem through in-depth case studies of: mining in “Europe’s last wilderness” in Scandinavia; pollution at the Sarnia “Chemical Valley” in Ontario, Canada; the massive Mirador mine project in Ecuador; and climate change and over-diversion at Lake Chad in Africa. The report then analyzes these and the other case studies for trends to help identify appropriate solutions. Key findings highlighted in the report include the following:

- Co-violations are frequently connected to the extractive and energy industries
- Violations of the rights of indigenous peoples and environmental destruction are often strongly associated
- Co-violations occur globally, but they have been arising more often in the Global South
- Governments often side with private industry over people and natural systems whose rights may be violated
- The sources of co-violations are rarely addressed adequately, if they are addressed at all
- Addressing violations of the planet’s right to a healthy climate is needed to protect human rights overall
- Nature’s rights and human rights are intertwined and co-dependent

Many co-violations are fueled by our legal and economic systems, which allow and even encourage environmental destruction for profit. Such systems mistakenly reward corporate “rights” over the inherent rights of people and planet. By creating governance systems that instead respect and fully

enforce human and environmental rights, we can live sustainably, consistent with nature's laws and needs. The report will offer recommendations to set us on this path.

Recommendations for action by the United Nations and the international community include the following:

- Recognize in law and implement the fundamental rights of nature, including through U.N. General Assembly adoption of the Universal Declaration of the Rights of Mother Earth
- Create courts and legislative structures to enforce International Rights of Nature Tribunal judgments
- Create "International Rights of Nature" courts to hear cases involving nature's rights violations
- Incorporate rights of nature principles into existing human rights instruments and bodies
- Commit to a robust, binding, enforceable international climate change agreement that aims to eliminate climate-related human and environmental rights violations
- Adopt global and national moratoriums on particular sources of co-violations
- Create an international mechanism to monitor and enforce standards that co-promote human rights and nature's rights
- Adopt and implement an international treaty to prevent and enforce against corporate human rights violations
- Provide emergency protection to at-risk environmental defenders

We also address the steps that can be taken by individual states. State actors can be role models for the international community and build local resilience and well-being, by working now to:

- Recognize in law and enforce the fundamental rights of nature
- Protect and enforce the rights of indigenous peoples
- Protect and enforce the rights of other defenders of land and environment, and human rights more generally
- Provide transparent access to environmental data and justice, consistent with the rule of law

We further call on the business community to reject waiting for, or fighting, regulation, and instead to take on a leadership role in carving a shared path toward a flourishing future with the natural world. This includes support for a new system of ecological economics, to replace our current, fatally flawed economic system that privatizes and destroys nature.

Finally, we must also look to ourselves. As recognized by the Universal Declaration of the Rights of Mother Earth, "[e]very human being is responsible for respecting and living in harmony with Mother Earth" and must work to "ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth, now and in the future." It is our responsibility to act now for our shared future. This report shows how we can start.

Release Date and Location: December 3, 2015; Paris, France; see www.earthlawcenter.org



FIGHTING FOR OUR SHARED FUTURE

Protecting Both Human
Rights and Nature's Rights



earth
LAW CENTER
FIGHTING FOR NATURE'S RIGHTS



FIGHTING FOR OUR SHARED FUTURE

Protecting Both Human
Rights and Nature's Rights



LINDA SHEEHAN AND GRANT WILSON

December 2015

ACKNOWLEDGEMENTS

Earth Law Center (ELC) wishes to thank the **Yale Environmental Protection Clinic** for its significant contributions to this report during the Spring 2015 semester. We particularly thank the dedicated and talented students who worked on this effort: **Yun-Mei Mariana Lo**, **Brittany Carmon**, and **Tristana X. Giunta**. Their work was instrumental to this report.

We also deeply thank ELC volunteers **Sarah Jornsay-Silverberg**, **Laura Mitchell**, and **Darra Lanigan**, as well as intern **Madeleine Sheehan Perkins**, all of whom made critical contributions. We further thank the generous donations of the **Wallace Global Fund** and other foundations, without whom this report would not have been possible.

Most importantly, we would like to recognize all of the selfless and courageous individuals and groups who fight to protect the rights of humans and nature across the globe, often in the face of violence, extreme pollution, and many other threats. We further acknowledge the invaluable work of those organizations working to shed light on these injustices, including but not limited to the Yes to Life No to Mining Campaign, Global Witness, and EJOLT.

Finally, we acknowledge those species and ecosystems that have been injured and lost due to human activities. We hope that this report will help restore many of them to health and prevent new injury to all others, with the goal of achieving a shared, flourishing future.

TABLE OF CONTENTS

Executive Summary	1
Background	3
Environmental destruction is injuring both people and planet	3
Environmental injuries are violating fundamental rights	4
To protect human rights, we also must recognize nature's rights	8
By analyzing co-violations of fundamental rights, we define a path forward	10
Case Studies of Fundamental Rights Violations	13
Lapland, Northern Europe	13
Sarnia, Ontario	16
Mirador Mine, Ecuador	20
Lake Chad, Africa	24
Summary	27
Trends in Co-Violations of Human and Environmental Rights	28
Co-violations are frequently connected to extractive industries and energy production	28
Co-violations occur globally but arise more often in the Global South	30
Environmental destruction is strongly associated with violations of the rights of indigenous peoples	32
State interests often side with private industry rather than with human or nature's rights advocates	33
It is rare that the sources of co-violations are adequately addressed	35
Addressing violations of the planet's right to a healthy climate is needed to protect human rights overall	36
Nature's rights and human rights are intertwined and co-dependent	37
Recommendations	38
United Nations / International Community	38
States	48
Other Actors	52
Conclusion	55
Appendices	56
Appendix 1: Universal Declaration of the Rights of Mother Earth	57
Appendix 2: Universal Declaration of Human Rights	60
Appendix 3: U.N. Declaration on the Rights of Indigenous Peoples	66
Appendix 4: Co-Violation Examples Worldwide	76



EXECUTIVE SUMMARY

The well-being of humans and nature are inextricably linked. Across the globe, we injure both people and ecosystems by treating the natural world as property to fuel incessant economic growth. These injuries have risen to the level of simultaneous violations, or “co-violations,” of human rights and nature’s rights.

Fighting for Our Shared Future: Protecting Both Human Rights and Nature’s Rights explores 100 case studies from around the world of co-violations of nature’s and people’s rights. The report first illustrates the scope of this problem through in-depth case studies of mining in “Europe’s last wilderness” in Northern Europe, pollution at the Sarnia “Chemical Valley” in Ontario, Canada, the massive Mirador mine project in Ecuador, and climate change and over-diversion at Lake Chad in Africa. The report then analyzes these and the other case studies for trends to help identify appropriate solutions. Key findings highlighted in the report include the following:

- Co-violations are frequently connected to the extractive and energy industries
- Violations of the rights of indigenous peoples and environmental destruction are often strongly associated
- Co-violations occur globally, but they have been arising more often in the Global South
- Governments often side with private industry over people and natural systems whose rights may be violated
- The sources of co-violations are rarely addressed adequately, if they are addressed at all
- Addressing violations of the planet’s right to a healthy climate is needed to protect human rights overall

- Nature’s rights and human rights are intertwined and co-dependent

Recommendations for action by the United Nations and the international community include the following:

- Recognize in law and implement the fundamental rights of nature, including through U.N. General Assembly adoption of the Universal Declaration of the Rights of Mother Earth (UDRME)
- Support swift enforcement of International Rights of Nature Tribunal judgments
- Create “International Rights of Nature” courts to hear cases involving nature’s rights violations
- Incorporate rights of nature principles into existing human rights instruments and bodies
- Commit to a robust, binding, enforceable international climate change agreement that aims to eliminate climate-related human and environmental rights violations
- Adopt global and national moratoriums on particular sources of co-violations
- Create an international mechanism to monitor and enforce standards that co-promote human rights and nature’s rights
- Adopt and implement an international treaty to prevent and enforce against corporate human rights violations
- Provide emergency protection to at-risk environmental defenders

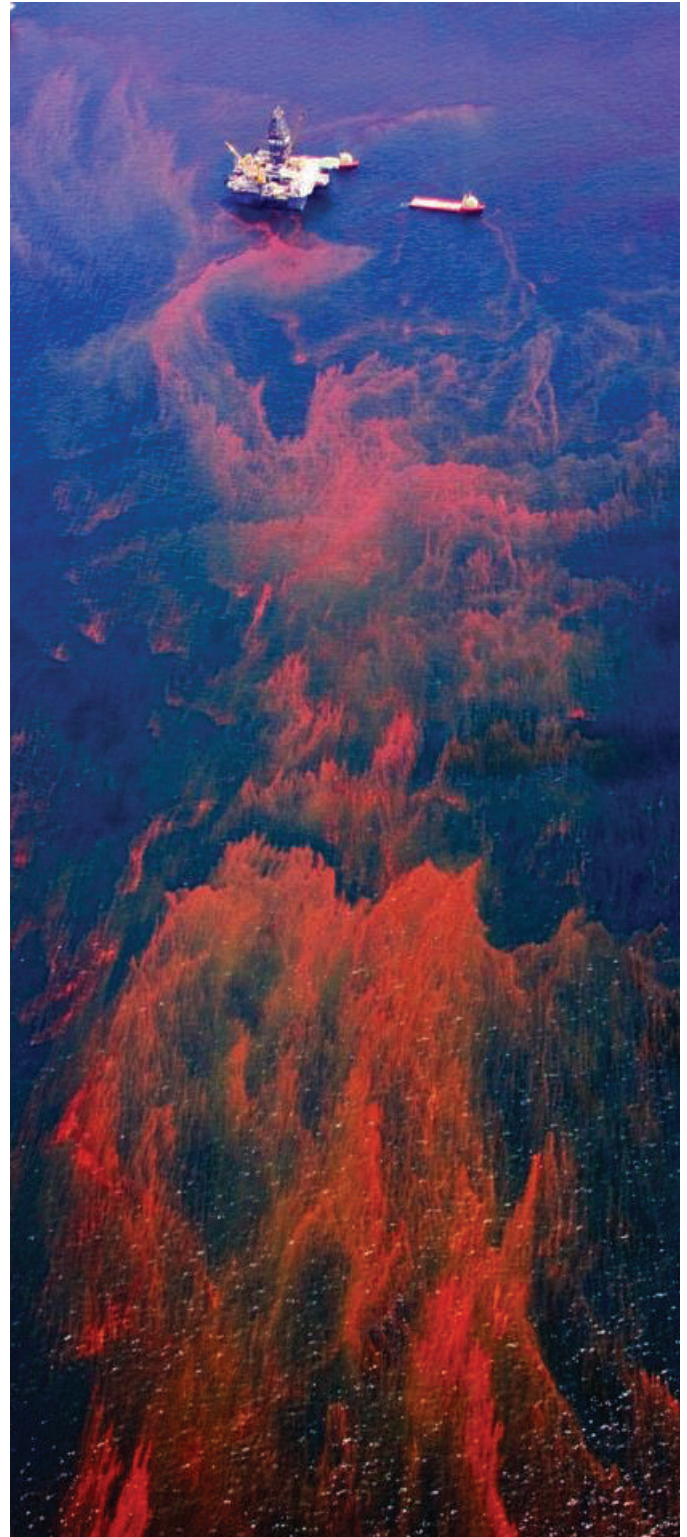


We also address the steps that can be taken by individual states. Nations can be role models for the international community and build local well-being by working now to:

- Recognize in law and enforce the fundamental rights of nature
- Protect and enforce the rights of indigenous peoples
- Protect and enforce the rights of other defenders of land and environment, and human rights more generally
- Provide transparent access to environmental information and justice, consistent with the rule of law

We further call on the business community to reject waiting for or fighting regulation, and instead to take on a leadership role in carving a shared path toward a flourishing future with the natural world. This includes support for a new system of ecological economics, to replace our current, fatally flawed economic system that privatizes and destroys nature.

Finally, we must also look to ourselves. As recognized by the Universal Declaration of the Rights of Mother Earth, “[e]very human being is responsible for respecting and living in harmony with Mother Earth” and must work to “ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth, now and in the future.” It is our responsibility to act now for our shared future. This report shows how we can start.



*Oil in Gulf of Mexico, BP oil spill, June 21, 2010,
Photo by John Wathen, Flight by Southwings*

BACKGROUND

Environmental destruction is injuring both people and planet

The Earth sustains all life. Yet we are harming the Earth, our only home, in previously unimaginable ways and at an unprecedented rate. For example, we have cleared 30 percent of global forest cover, degraded 20 percent, and fragmented much of the rest.¹ Half of Earth's topsoil – its “living plasma” – has been lost over the past 150 years due to activities such as unsustainable agriculture and livestock “production.”² Topsoil loss results in less fertile land for human use and diminished habitat for nature. We also significantly over-divert waterways. By 2025, 1.8 billion people will be living in regions with absolute water scarcity, with two-thirds of the world's population potentially under water-stressed conditions.³ Meanwhile, populations of freshwater vertebrate species have declined by roughly 76 percent just since 1970, due largely to human pressures.⁴

In the oceans, human activities threaten or have already destroyed almost 70 percent of coral reefs, which support 25 percent of all marine life and protect human coastal communities from storms and floods.⁵ Frequent oil spills also devastate humans and nature. For example, the Deepwater Horizon disaster killed eleven people in an explosion and release that spewed over 200 million gallons of oil into the Gulf of Mexico (later mixed with some 1.8 million gallons of toxic dispersants).⁶ The spill killed tens of thousands or more birds⁷ and caused a massive dolphin die-off, among many other impacts to nature and livelihoods.⁸

The widespread use of toxins also poisons our planet. Toxins from industrial operations and consumer products inevitably enter the environment and our bodies. By one estimate, there are over 70,000 chemicals now in use, and we know little about the impacts associated with the vast majority of those.⁹ A 2009 study in the United States found over 200 synthetic chemicals in the umbilical cord of newborns.¹⁰ Pollution-caused asthma remains at “historically high levels,” affecting over 25 million

people in the United States, including 6.8 million children.¹¹

We see the scope of the Earth's degradation through disappearing biodiversity. Biodiversity is important to ensure the overall survival of all species – including humans – and it is declining at 1,000 times the historic average.¹² Such “exceptionally rapid” biodiversity loss means that we are likely in the midst of a sixth mass extinction.¹³

A joint statement from over 475 scientists in 38 countries warned that without “concrete, immediate actions,” by 2050 “it is extremely likely that Earth's life-support systems . . . will be irretrievably damaged.”¹⁴ Humans depend upon healthy ecological systems for our well-being, just as all other species do. If we continue along our current path of destruction and exploitation, all Earth's inhabitants will continue to suffer.

Without concrete, immediate actions, it is extremely likely that Earth's life-support systems will be irretrievably damaged by 2050.

-Millennium Alliance for Humanity and Biosphere (2013)



Mir diamond mine, Yakutia, Russia, Photo by Knave 2000



Climate change calls for special attention. In recent years, our impacts on the planet's climate have become disturbingly clear. Even the World Bank has begun to weigh in on the potentially catastrophic climate impacts of our current lifestyles, observing that carbon dioxide levels are higher than at any time in the last 15 million years. Examining the potential impacts of a "devastating" 4°C temperature increase by 2100, the World Bank concluded there would be "unprecedented heat waves, severe drought, and major floods in many regions, with serious impacts on human systems [and] ecosystems" such as "substantially exacerbated water scarcity." They further predict large-scale biodiversity losses, "driving a transition of the Earth's ecosystems into a state unknown in human experience." Unfortunately, this state of affairs may occur sooner than we think. As World Bank noted, if current mitigation commitments and pledges are not fully implemented, warming of 4°C could occur decades earlier.¹⁵

To understand what a change of 4°C can do, the report adds that the temperature differential between now and the last ice age was from 4.5°C to 7°C. This drop caused much of central Europe and the northern United States to be covered with kilometers of ice.¹⁶ Adaptation would prove significantly more difficult now, given that the last ice age allowed for human and ecosystem adjustment over thousands of years rather than mere decades. We, and the Earth as we know it today, simply cannot change fast enough to keep pace with projected climate change impacts.¹⁷

Not to be ignored are the Earth's own warnings to us. In September 2012, sea ice covering the Arctic Ocean fell to the lowest extent since satellites began tracking it.¹⁸ In February 2015, the Arctic sea ice reportedly reached its maximum extent for the entire 2015 year, setting a record for lowest maximum sea ice extent since satellite recordkeeping began.¹⁹

These figures are important not only because of the sheer amount of ice lost, but also because ice reflects sunlight, keeping the Arctic region cooler and moderating global climate. In other words, ice loss creates proportionally more ice loss, and current projections predict a summer ice-free Arctic by 2035.²⁰ Melting also can change global

ocean circulation, with potentially major consequences for global weather systems and Arctic biodiversity.²¹

Inexplicably, we are failing to take these and other mounting warnings seriously. Like past leaders of once-mighty civilizations that forgot their connection to the Earth,²² world leaders today are barreling forward with policies that ignore the looming cliff. This is not only unwise, it is immoral in its utter lack of concern for the well-being of life on Earth.

Environmental injuries are violating fundamental rights

Destructive activities that impact both humans and nature are increasing alarmingly. Many of the associated injuries amount to simultaneous violations, or "co-violations," of both nature's rights and human rights, including in particular indigenous rights. We define a "co-violation" of rights as a situation in which governments, industries, or others violate both the rights of nature and human rights, including indigenous rights, with the same action.²³

"Co-violation" of rights: a situation in which governments, industries, or others violate both the rights of nature and human rights with the same action.

In early 2014 Earth Law Center released the first interactive map of co-violations of human rights and nature's rights.²⁴ We compiled instances of injuries around the world caused by laws and an economic system that prioritize short-term profit in the hands of a concentrated few, rather than maximize the overall well-being of people and planet. These stories call on us to institute meaningful change.

Examples of co-violations from the case studies we compiled include the following:

- In the Niger Delta, Africa's largest wetland, hundreds of oil spills occur each year due to oil extraction by Royal Dutch Shell and other companies. Toxic smoke from gas flaring also



billows across the landscape. Residents suffer from increased rates of respiratory illness, cancer, asthma, and other health effects. Oil pollution in the Niger Delta also destroys mangroves (which serve as important nurseries for juvenile fish), contaminates local creeks, and poisons animals. In 1996, the Nigerian government executed Ken Saro-Wiwa, a leading local environmental activist fighting this widespread contamination of the Delta and its people and wildlife.

- In Papua New Guinea, widespread logging occurs without the free, prior, and informed consent of local indigenous communities as required by the U.N. Declaration on the Rights of Indigenous Peoples. Police squads hired by logging companies have conducted violent raids on villagers to suppress opposition. Papua New Guinea's rich tropical rainforests are home to 200 mammal species, 20,000 plant species, and 750 bird species, accounting for five to seven percent of all bird species.
- In Richmond, California, emissions from the local Chevron Refinery and other refineries expose residents to benzene, mercury, and other harmful substances that are known to cause asthma, cancer, and neurological and reproductive problems. Seventeen percent of children in Richmond suffer from asthma, more than double the national average.²⁵ The Chevron Refinery has also polluted the local air and water, such as through the release of toxic wastewater into San Pablo Bay in the 1990s and the historic pollution of Castro Cove with oil and mercury. According to the state Air Board, the Richmond Chevron Refinery is the single largest emitter of greenhouse gases in the state of California.
- In the Ecuadorian Amazon, pollution from Texaco's (now Chevron) oil drilling operations from 1967 to 1992 resulted in an epidemic of birth defects, miscarriages, and an estimated 1,400 cancer deaths, particularly devastating indigenous communities. Known as "Chernobyl in the Amazon," Texaco caused over one million acres

of deforestation and polluted local waterways with 18 billion gallons of toxic wastewater and contaminants, severely damaging a formerly pristine rainforest of immense biodiversity.

- In Rhineland, Germany, massive lignite mines have forced thousands of people to relocate without their consent and with little opportunity to contest the removal, with those remaining in the region facing significant pollution threats. The Garzweiler open cast coal mine measures 20 km in circumference and is 300 meters deep, and the Tagebau Hambach mine is even larger. Plans to further expand mining in this area would destroy the ancient Hambacher Forst (forest) and force thousands more residents to relocate. Lignite – or "brown coal" – is the dirtiest form of coal, emitting one-third more carbon dioxide than black coal.

Climate change once again provides an important set of co-violation examples. Climate change threatens the following human rights, among others: to life; to adequate food, water, and sanitation; to adequate housing; and to self-determination. The rights of particularly vulnerable populations are of special concern, including: women, children, persons with disabilities, those living in extreme poverty, indigenous peoples, and displaced persons.²⁶ Global Humanitarian Forum estimates that 26 million people worldwide have been forced to move from their homes due to climate change. Because women constitute up to 80% of global refugee and displaced populations, this results in up to 20 million women worldwide displaced due to global warming.²⁷

The World Health Organization further predicts that climate change will result in an estimated 250,000 additional human deaths per year between 2030 and 2050.²⁸ Another report found that climate change *already* causes an estimated 400,000 deaths every year due to increased hunger, illness, diseases, and other factors; this figure will increase to 700,000 deaths per year by 2030 under the current trajectory.²⁹ One example is heat-related deaths; one report found that heat-related deaths in Australia's major cities could quadruple by 2050.³⁰

John Knox, the United Nations' Special Rapporteur for



Anti-logging protest, Tasmania, Photo by Rainforest Action Network

Human Rights and the Environment, concluded that “[e]ven a two degree increase in temperature would have a grave effect on the enjoyment of a wide range of human rights, including rights to life and health, and make it more difficult for countries to fulfill their obligations under international law to protect human rights from harm.”³¹

Climate change also increases armed conflict, further threatening human rights. A recent study found that climate change increased the likelihood of Syria’s 2006-2010 extreme drought, which was a factor in the violent conflicts that began in 2011 (such as by causing crop failures that led to mass migrations).³² Such conflicts will only become more common: a review of 55 studies on climate and conflict found that a 1°C temperature increase

corresponds to over an 11 percent increase of intergroup conflict (such as civil war and riots) and a notable increase in interpersonal conflict (such as assault and murder).³³ Of course, climate change also is prompting a massive decline of ecological well-being, including biodiversity. From 2010 until 2100, climate change is estimated to alter species’ ranges more than 100 times faster than they have changed over the last 320,000 years – forcing species to find new suitable habitat, adapt quickly, or go extinct.³⁴ A synthesis report in *Science* concluded that up to one in six species face extinction by 2100 if greenhouse gas emissions continue unabated.³⁵

In addition, global greenhouse gas emissions have increased the ocean’s acidity by 30 percent since the Industrial Revolution. A more acidic ocean can

dramatically affect marine species such as oysters, clams, sea urchins, corals, and others, and may threaten entire marine food webs.³⁶ Due to climate change and other impacts, “. . . we now face losing marine species and entire marine ecosystems, such as coral reefs, within a single generation.”³⁷

Finally, sea level rise associated with climate change will affect many millions of people. For example, a one-meter rise in sea level is estimated to flood 17 percent of Bangladesh, displacing tens of millions of people, and would also submerge the majority of some island nations.³⁸ The Intergovernmental Panel on Climate Change’s Fifth Assessment Report projects that by 2100, climate change and development patterns may create coastal flooding and displacement that will affect hundreds of millions of people.³⁹

Sea level rise also threatens coastal and intertidal habitats. In the United States alone, sea level rise threatens 233 already-federally protected species in vulnerable ecosystems such as coastal wetlands and beaches.⁴⁰ Another study found that a one-meter rise in sea level could submerge 10,800 islands, threatening with extinction many of the species endemic to those islands.⁴¹

Despite these and other escalating climate-related harms, national and international climate change laws and conventions continue to legalize massive amounts of greenhouse gas emissions while only calling for modest, and usually voluntary, reductions. While the international community fails to address climate change and other drivers of co-violations, humans and nature continue to suffer the consequences.



Protestors against gold mining in Stratoni, Greece



To protect human rights, we also must recognize nature's rights

Our overarching legal and economic systems accelerate co-violations by treating nature and workers as “resources” to fuel short-term profit maximization for the few. Nature is particularly mistreated in light of its characterization as merely “property” to be bought, sold, and ultimately degraded for profit. Reinforcing this misperception is the fact that our modern environmental laws themselves implicitly accept this claim of “nature as property.” They legalize nature’s destruction by dictating *how much* of the environment we can degrade, thus validating the continuing onslaught. Instead, we need laws grounded in the inherent rights of natural world to exist, thrive, and evolve.

We need laws grounded in the inherent rights of the natural world to exist, thrive, and evolve.

The evolution of human rights provides precedent for recognizing the fundamental rights of nature. Human progress can be measured by the ever-widening circle of those whom we understand to possess dignity and rights, work that is ongoing today. As described in the Universal Declaration of Human Rights (UDHR), such understanding is “the foundation of freedom, justice and peace in the world.”

Most significantly, UDHR Article 1 recognizes that “All human beings are born free and equal in dignity and rights.”⁴² As articulated by the Declaration’s Drafting Committee, “the supreme value of the human person . . . did not originate in the decision of a worldly power, *but rather in the fact of existing*.”⁴³ Examples of such rights, which protect individuals from the excesses of the state, are the “right to life, liberty and security of person” (Article 3) and the “right to an effective remedy by the competent national tribunals” (Article 8).

Just as we protect humans’ inherent rights from the

excesses of potentially harmful governing bodies, so too should we protect our partners on Earth from the excesses of both humans and human governance systems. Like our own value, the value of nature does not arise from our decisions. Instead, nature’s value and rights arise from its existence on this planet. This perspective is reflected in the 2010 Universal Declaration of the Rights of Mother Earth (UDRME).⁴⁴

UNIVERSAL DECLARATION OF THE RIGHTS OF MOTHER EARTH

In April 2010, over 30,000 people from 140 countries attended the World Peoples’ Conference on Climate Change and the Rights of Mother Earth in Cochabamba, Bolivia, to create an ambitious vision of living in harmony with nature. The conference also specifically addressed the shortcomings of the 2009 Climate Change Conference in Copenhagen (COP15), which was largely perceived as having failed to address climate change and its impacts. Seventeen working groups at the gathering in Bolivia synthesized their work into the “People’s Agreement of Cochabamba,” which calls for recognition and implementation of the rights of Mother Earth. This People’s Agreement also recognizes that upholding nature’s rights better protects the rights of humans, saying that “[t]o guarantee human rights and to restore harmony with nature, it is necessary to effectively recognize and apply the rights of Mother Earth.” It also calls for full recognition, respect, and implementation of international human rights and the rights of indigenous peoples. The Universal Declaration of the Rights of Mother Earth (UDRME) also emerged from this conference. The UDRME recognizes Mother Earth as a living being with inalienable and inherent rights, such as the “right to life and to exist” and “the right to regenerate its bio-capacity and to continue its vital cycles and processes

free from human disruptions.” The UDRME also recognizes the relationship between human rights and nature’s rights, “affirming that to guarantee human rights it is necessary to recognize and defend the rights of Mother Earth and all beings....”

As does the UDHR, the UDRME states at Article 1(4) that “[t]he inherent rights of Mother Earth are inalienable in that they arise from the same source as existence.” It similarly affirms that “Mother Earth and all beings of which she is composed have . . . the right to life and to exist” (Article 2, Section 1) and “[e]ach being has the right to a place and to play its role in Mother Earth for her harmonious functioning” (Article 2, Section 2). The UDRME specifically requires humans and our governing institutions to “recognize and promote the full implementation and enforcement of [nature’s] rights,” requiring “damages caused by human violations of the inherent rights” to be “rectified,” with those responsible “held accountable” (Article 3, Section 2).

By extending the sphere of rights outward to encompass all of Earth’s beings, with which we co-evolved, we are logically and morally continuing the work we began by recognizing the inherent rights of all humans.

The concept of nature’s rights in law is not new. Christopher Stone famously wrote about it in his groundbreaking essay of the early 1970s,⁴⁵ listing four elements as necessary to effectively recognize the rights of nature in law:⁴⁶

- rights must be subject to redress by public body;
- the entity must have standing to institute legal actions on its own behalf (a guardian can stand in for the entity as needed);
- redress must be calculated for the entity’s own damages; and
- relief must run to the benefit of the injured entity.

Stone emphasizes that to be meaningful, rights must be enforceable by a public body, the injured entity (such as an ecosystem or species) must have its own standing to appear before the public body, and restitution must go back to the injured entity.

Governments are already starting to recognize nature’s rights in their legal systems. For example, Ecuador amended its Constitution in 2008 to recognize the rights of nature to “exist, persist, maintain itself and regenerate its own vital cycles, structure, functions and its evolutionary processes.” The new Constitution includes the elements recommended by Stone, stating that “[a]ny person, people, community or nationality, may demand the observance of the rights of the natural environment before public bodies” and that “[n]ature has the right to be completely restored.” These constitutional provisions have already been successfully applied in at least one court case to date.⁴⁷

Ecuador’s leadership was quickly followed by Bolivia, which has adopted constitutional provisions⁴⁸ as well as legislation⁴⁹ recognizing the rights of nature. New Zealand as well has recognized nature’s rights to standing in courts of law through treaty agreements.⁵⁰

Recognition of the rights of nature in law is also occurring at the local community level. In the United States, roughly three dozen municipalities around the country have so far passed local laws to recognize the rights of nature.⁵¹ For example, the U.S. city of Pittsburgh, Pennsylvania, with over 300,000 people, passed a local law that bans proposed hydrofracking operations and includes a specific provision upholding the rights of “natural communities and ecosystems,” with citizen enforcement to uphold those rights.⁵² On the opposite coast, California’s City of Santa Monica proactively adopted a “Sustainability Rights” ordinance⁵³ in 2013 that protects the rights of human and natural system residents. Among other provisions, it states that “[n]atural communities and ecosystems possess fundamental and inalienable rights to exist and flourish in the City,” and adds that “residents of the City may bring actions to protect these natural communities and ecosystems.”⁵⁴



As these examples show, recognition in law of nature's rights is spreading as we begin to acknowledge our intimate connections with the natural world. What we do in the world impacts us.

By extending the sphere of rights outward to encompass all of Earth's beings, we logically and morally expand the work we have done over time to recognize the inherent rights of all humans.

Moreover, how we treat the natural world often mirrors how we treat each other. For example, governments and industries around the world are increasingly harassing, threatening, attacking, imprisoning, and even killing defenders of environmental and human rights. The United Nations found that human rights defenders working on "land and environmental issues in connection with extractive industries and construction and development projects in the Americas" face the highest risk of death of all human rights advocates worldwide.⁵⁵ Organizations such as Global Witness⁵⁶ and EJOLT,⁵⁷ and the Yes to Life No to Mining Campaign,⁵⁸ are providing invaluable reports of rights violations against people and the environment in the name of profit.

These continued violations of fundamental rights have to stop. We must hold governments and industry accountable for actions that impact human and environmental well-being. Among other steps, we must:

- reformulate our laws to recognize and implement environmental rights,
- bolster identification and enforcement of human rights, indigenous rights, and environmental rights violations, and
- shift to ecological economics models, which respect people and planet.

As the case studies in this report demonstrate, unless our governance systems recognize the inherent rights of

all beings in law, we will fail to recognize them in practice.

By analyzing co-violations of fundamental rights, we define a path forward

This report reviews and analyzes data compiled from 100 cases worldwide of co-violations of rights of nature and human rights (including specifically indigenous rights). Appendix 4 provides a full list of and summaries for each of these cases, and we offer an interactive map of these cases and those added since at <http://www.earthlawcenter.org/co-violations-of-rights>.

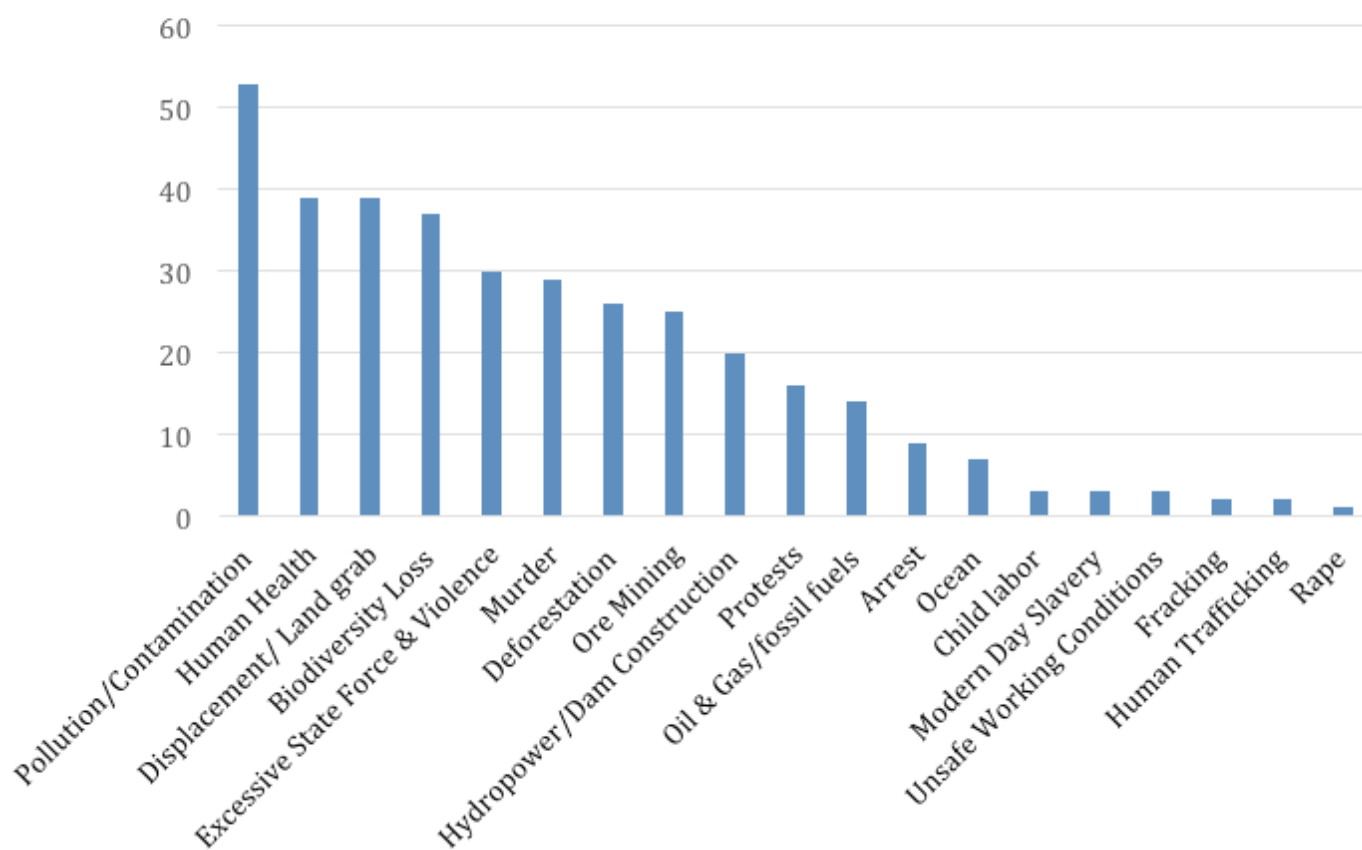
With a team from the Yale Environmental Protection Clinic, we reviewed these cases in detail and compiled trends and recommendations for action from the information we found. A summary of issues that arose and were repeated throughout the case studies is provided below. This summary illustrates vividly the fundamental ties between ecological and human well-being.



Pelican and Golden Gate Bridge, San Francisco, Photo by Cam Fortin



Keywords Arising in Co-Violations Case Summaries



Our key findings with regard to trends in the co-violation of human rights, indigenous rights, and nature's rights include the following:

- Co-violations are frequently connected to the extractive and energy industries
- Violations of the rights of indigenous peoples and environmental destruction are often strongly associated
- Co-violations occur globally, but they have been arising more often in the Global South
- Governments often side with private industry over people and natural systems whose rights may be violated
- The sources of co-violations are rarely addressed adequately, if they are addressed at all
- Addressing violations of the planet's right to a healthy climate is needed to protect human rights overall
- Nature's rights and human rights are intertwined and co-dependent

With regard to recommendations, we relied in large part on the UDHR and the UDRME, as well as the U.N. Declaration on the Rights of Indigenous Peoples (UNDRIP), as consistent guides for identifying rights violations and developing appropriate paths forward. Based on this process, we recommend the following actions by the United Nations and international community:



- Recognize in law and implement the fundamental rights of nature, including through U.N. General Assembly adoption of the Universal Declaration of the Rights of Mother Earth
- Support swift enforcement of International Rights of Nature Tribunal judgments
- Create “International Rights of Nature” courts to hear cases involving nature’s rights violations
- Incorporate rights of nature principles into existing human rights instruments and bodies
- Commit to a robust, binding, enforceable international climate change agreement that aims to eliminate climate-related human and environmental rights violations
- Adopt global and national moratoriums on particular sources of co-violations
- Create an international mechanism to monitor and enforce standards that co-promote human rights and nature’s rights
- Adopt and implement an international treaty to prevent and enforce against corporate human rights violations
- Provide emergency protection to at-risk environmental defenders

We further recommend that state actors provide leadership in this global effort by working to:

- Recognize in law and enforce the fundamental rights of nature
- Protect and enforce the rights of indigenous peoples
- Protect and enforce the rights of other defenders of land and environment, and human rights more generally



*Pictured Rocks National Lakeshore, Lake Superior, Michigan, USA,
Photo by Daniel Case*

- Provide transparent access to environmental information and justice, consistent with the rule of law

Finally, with respect to other actors, such as the business community and individuals, we recommend that we each take up our own leadership roles in carving a shared path toward a flourishing future with the natural world. As recognized by the Universal Declaration of the Rights of Mother Earth, “[e]very human being is responsible for respecting and living in harmony with Mother Earth” and we all must work to “ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth, now and in the future.”

We begin our report by examining in-depth four case studies of co-violations from across the globe. These case studies introduce the concepts that we will examine in detail for trends and actions in the following sections of the report.

CASE STUDIES OF FUNDAMENTAL RIGHTS VIOLATIONS

LAPLAND, NORTHERN EUROPE

Mining has turned ancestral Sámi lands into “tailings ponds or waste rock dumps.”

- Sámi reindeer herder Niila Inga

Mining companies from Britain, Australia, Canada, and elsewhere are in the process of developing massive mines in parts of Lapland (or “Sápmi”) – located in northern Finland, Sweden, and Norway – and elsewhere in Nordic countries. Seeking iron ore, copper, gold, nickel, phosphorus, uranium, and rare earth minerals, mining companies are threatening the well-being of this environmentally fragile area, dubbed by some “Europe’s last wilderness.” The proposed mining expansion may also irrevocably impact the way of life of the indigenous Sámi people, who make the area their ancestral home.

Impacts to Nature

Immense mines planned for development in Lapland will

irreversibly harm pristine rivers, lakes, and mountains in this sensitive Arctic region. Habitat destruction and air and water pollution threaten numerous species including bears, wolves, lynx, wolverines, and many others. Current mines have already caused significant contamination; for example, a study of reindeer foraging near mining sites shows elevated levels of heavy metals.⁵⁹

Mining in Lapland poses a particularly significant threat to waterways and aquatic species. Norway is one of only five countries in the world that still allows “submarine tailings disposal” (STD),⁶⁰ which involves dumping ground-up mine tailings mixed with chemicals into a fjord or other water body.⁶¹ Nussir ASA plans to use STD at a proposed massive copper mine in Repparfjord, Norway that is in the final stages of approval (as of September 2015).⁶² The mine would dump toxic tailings containing heavy metals into a fjord that provides spawning grounds for endangered coastal cod and other fish species.⁶³ Fishermen today still report fish deformities resulting from open pit mining in the late-1970s that dumped toxic tailings into this same fjord.⁶⁴



Reindeer, Jämtland, Sweden, Photo by Christoph Schenk



The Sokli mining project – a huge open-cast phosphorus mine planned for eastern Lapland between the Värriö nature park and Urho Kekkonen National Park – would have released billions of gallons of wastewater into pristine lakes and rivers.⁷¹ Fortunately, the project was suspended in September 2015. The reason for the suspension was not the environmental impact, however, but concerns over current profitability.⁷² As a result, Norwegian fertilizer company Yara plans to reevaluate and potentially repropose the project in the future. Given Norway's approval of the Engebø Mountain project, it appears likely that this mining effort as well would receive favorable consideration despite its widespread destructive impacts.

However, similar destructive projects are moving forward elsewhere in Nordic countries, such as a planned rutile

ore mine operated by Nordic Mining at Engebø Mountain in Førdefjorden (outside Lapland in southwest Norway) that will also use STD. Mine operators plan to dump over 250 million tonnes of waste into Norway's Førde fjord – including acrylamide, carbonic acid, phosphoric acid, sodium, sulphuric acid, and heavy metals.⁶⁵ The Førde fjord is home to porpoises, orcas, sea eagles, and numerous IUCN red list species, and is designated as a "national salmon fjord" to protect the threatened wild Atlantic salmon.⁶⁶ Nordic Mining itself calculated that their operations could cover up to 13 percent of the fjord's bottom with tailings,⁶⁷ which biologists warn could suffocate sea life and enter the food chain.⁶⁸ The Institute of Marine Research in Norway called the mine's disposal plans "the biggest planned pollution in Norway's modern history."⁶⁹ Despite these dire warnings, Norway's government approved the mining plan in April 2015.⁷⁰



Josefina Lundgren Skerk (right) and other Sámi mining protestors, Photo by Greenpeace

Impacts to Humans

About 80,000 indigenous Sámi occupy a vast area in Norway, Sweden, Finland, and Russia. When winter begins, the Sámi move thousands of reindeer, often from the mountains to the lowland areas to graze. They have done so for centuries. However, the expansion of the mining industry in Lapland will interfere with their traditional reindeer herding and fishing – and thus their way of life. The Sámi have already been impacted by mines in Lapland. Some Sámi have had to move away from the mines, which have gradually encroached on their land.⁷³

Meanwhile, migration routes and pastures enjoyed by the Sámi for reindeer herding “have become tailing ponds or waste rock dumps,” according to Niila Inga, a Sámi reindeer herder.⁷⁴ Niila Inga also reported that his community is currently “impacted by seven different mining projects”⁷⁵ – including those run by the Swedish government mining company LKAB. These impacts are also compounded by the historic displacement and suppression of the Sámi peoples. For example, Sweden previously refused to allow Sámi to speak their language and forcibly displaced them from their land.⁷⁶

As a specific example, the proposed “Kallak” open pit iron mine threatens the environment and culture of approximately 100 residents of the Jaahkaagasska Sámi community in northern Sweden. The CEO of Jokkmokk Iron Mines AB (a subsidiary of British-based Beowulf Mining) justifies the project by arguing that “. . . the economic value of this weighs more than the local reindeer herding business,” although he also expressed the belief that the mine could co-exist with reindeer herding.⁷⁷ To the contrary, a Sámi spokesperson stated that “[t]here’s no way our reindeer herding will be able to continue” if the open pit mine is developed.⁷⁸

Unfortunately, these threats will only escalate as mining expands in the Lapland region. In 2014, hundreds of Arctic mining applications were submitted.⁷⁹ These licenses are received “very easily,” according to Tero Mustonen,⁸⁰ who also said that “authorities are understaffed and underfunded and tend to . . . ignore both environmental and social impact assessments.”⁸¹

The disproportionate impact of mining projects on poorer communities – both indigenous and otherwise – also raises significant environmental justice concerns. For example, the recently-approved expansion of the Kevitsa nickel mine (set to become Finland’s largest mine) will negatively impact the community of Sodankylä in one of the poorest areas in Finland.⁸² Overall, the majority of Finland’s 46 mines and quarries that were operating as of the end of 2013 were located in poorer rural areas.⁸³

Potential Rights of Nature Violations

The contamination caused by mining projects in the Lapland region to water, air, and numerous species implicates multiple potential violations of the rights of nature. As recognized by the UDRME, these potential violations include the following:

- The right to life and to exist (Art. 2(1)(a))
- The right to be respected (Art. 2(1)(b))
- The right [of the ecosystem and species at issue] to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions (Art. 2(1)(c))
- The right to maintain its identity and integrity as a distinct, self-regulating and interrelated being (Art. 2(1)(d))
- The right to water as a source of life (Art. 2(1)(e))
- The right to integral health (Art. 2(1)(g))
- The right to be free from contamination, pollution and toxic or radioactive waste (Art. 2(1)(h))
- The right to full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities (Art. 2(1)(j))

These activities also implicate Article 3 of the UDRME, including the requirement that human beings, all states, and all public and private institutions must “act in accordance with the rights and obligations recognized



in this Declaration” (Art. 3(2)(d)) and must “[p]romote economic systems that are in harmony with Mother Earth and in accordance with the rights recognized in this Declaration” (Art. 3(2)(l)).

Potential Human/Indigenous Rights Violations

Mining projects in the Lapland region implicate multiple violations of the rights of the Sámi indigenous peoples, as recognized by the UNDRIP. These include the following:

- The right to self-determination, and by virtue the right to “. . . freely pursue their economic, social and cultural development” (Art. 3)
- The right “. . .not to be not to be subjected to forced assimilation or destruction of their culture” (Art. 8(1))
- The right to “[practice] and revitalize their cultural traditions and customs” (Art. 11)
- The right to the “. . .conservation and protection of the environment and the productive capacity of their lands or territories and resource” (Art. 29(1)), and the obligation of states to “. . .take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent” (Art. 29(2))
- The right to “. . .maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions. . .” (Art. 31(1)), and the obligation of the state to take measures to recognize and protect these rights (Art. 31(2))

Additionally, mining projects in the Lapland region also implicate multiple violations of the UDHR, including the following:

- The right to “life, liberty and security of person” (Art. 3)

- The right to “a standard of living adequate for the health and well-being of himself and of his family. . .” (Art. 25(1))

SARNIA, ONTARIO

“The more clouds in the sky, the more people will die.”

-Sarnia children’s’ refrain

Members of the Aamjiwnaang First Nation live in the shadow of North America’s petrochemical industry in Sarnia, Ontario. The World Health Organization deemed Sarnia to be Canada’s worst “hotspot” for air pollution.⁸⁴ Over sixty petrochemical facilities are located within 25 kilometers of the Aamjiwnaang First Nation in Sarnia – comprising about 40 percent of the industry in Canada. These facilities spew toxic pollutants day and night into the soil, air, water, and bodies of nearby residents. The area is nicknamed “Chemical Valley,” a moniker that once conjured a sense of industrial prosperity but now evokes environmental injustice and devastation. As is the case in many pollution hotspots, aside from accidental leaks and spills, all of the devastating pollution in Sarnia is permitted by the government and is “business as usual” for companies.

Impacts to Nature

Fish often serve as barometers of environmental health because of their particular sensitivity to changes in water quality and other ecosystem conditions.⁸⁵ The fish in Sarnia’s rivers and streams starkly demonstrate the impacts of ongoing chemical pollution. Intersex and cancerous fish are regularly found, and the Aamjiwnaang can no longer eat a traditional fish-heavy diet for fear of the health impacts.

Researchers have also found changes in the sex ratios and reproductive abilities of birds and turtles, believed to be due to endocrine-disrupting chemicals.⁸⁶ For example, tadpoles in Talfourd and Marsh Creeks, located near chemical plant discharge sites, suffer DNA damage.⁸⁷



Other aquatic species show elevated levels of chemicals, including elevated mercury levels in largemouth bass and pickerel within the “Ainkii jig” pond, and elevated levels of mercury, PCB, DDT, and hexachlorobenzene (HBC) in numerous fish species within the St. Clair River.⁸⁸

Sarnia is also becoming a battleground for tar sands oil from Alberta and Bakken crude from North Dakota. In September 2015, Canada’s National Energy Board (NEB) approved Enbridge Inc.’s “Line 9 project,” which involves sending 300,000 barrels of oil per day to from Sarnia to Montreal, including both tar sands oil and light Bakken crude.⁸⁹ To first reach Sarnia, a pipeline containing light Bakken crude must cross over 360 Michigan waterways.⁹⁰ Bakken crude is extremely volatile, and its extraction has caused significant negative impacts to air and water quality in North Dakota.

Additionally, supporters of a \$10 billion tar sands oil refinery in Sarnia (the Sarnia-Lambton Advanced Bitumen Energy Refinery, or “Saber”) are actively

seeking investors and have made progress in securing government support.⁹¹ A 2015 consensus statement from 100 U.S. and Canadian scientists stated that the tar sands are “incompatible” with limiting climate change.⁹²

Impacts to Humans

The Aamjiwnaang First Nation Community is located in the heart of Chemical Valley, surrounded on all sides by oil refineries and petro-chemical plants. The human health impacts are pervasive in the Aamjiwnaang community: 22 percent of children and 17 percent of adults have asthma (compared to roughly 8.5 percent of the general Canadian population⁹³), 39 percent of women over 18 have experienced at least one miscarriage or stillbirth, and cancer rates (especially for lung cancer) are notably higher in Sarnia’s Lambton County than the rest of the province.⁹⁴ The Aamjiwnaang and other nearby residents have spent years fighting for recognition and redress for these and other health impacts with relatively few results.



Petro-chemical industry on the St. Clair River, Sarnia, Ontario, Canada, Photo by P199



Aamjiwnaang community members near Sarnia have also seen an alarming drop in the male-female birth ratio. A 2005 study published in *Environmental Health Perspectives* found that almost two-thirds of children born between 1999 and 2003 in the Aamjiwnaang community near Sarnia were female.⁹⁵ This is virtually unprecedented in human communities.⁹⁶ While the 2005 study did not explicitly blame the local chemical industry, it notes that “previous studies have demonstrated that populations exposed to environmental contaminants such as endocrine disruptors, either through their close proximity to

industrial plants or through other sources such as food, can have significant changes in the reproductive ability of the community, including the sex ratio.”⁹⁷ Testing later conducted by McGill University strengthened this explanation when it found that mothers and children in Sarnia are exposed to above-average levels of hormone-blocking pollutants.⁹⁸

There have also been several chemical releases in Sarnia outside of regular operations. In 2013, at Shell’s Corunna refinery there was a chemical release of “sour water”



Aamjiwnaang Resource Centre next to Dow Chemicals, Photo by TheKurgan

containing mercaptan, hydrogen sulfide, and benzene, a carcinogen.⁹⁹ An emergency siren to warn local residents did not go off until an hour after the spill was reported.¹⁰⁰ Sarnia residents, including children at a local daycare, suffered from nausea, headaches, shortness of breath, and irritated skin and eyes.¹⁰¹ Children are tragically accustomed to such pollution. As described in a documentary short film on Sarnia by Vice, local children have even come up with the phrase “the more clouds in the sky, the more people will die.”¹⁰²

Potential Rights of Nature Violations

The ongoing and long-term pollution of the air and water in Sarnia implicates multiple potential violations of the rights of nature as recognized by the UDRME, including the following:

- The right to life and to exist (Art. 2(1)(a))
- The right to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions (Art. 2(1)(c))
- The right to water as a source of life (Art. 2(1)(e))
- The right to clean air (Art. 2(1)(f))
- The right to integral health (Art. 2(1)(g))
- The right to be free from contamination, pollution and toxic or radioactive waste (Art. 2(1)(h))
- The right to not have its genetic structure modified or disrupted in a manner that threatens its integrity or vital and healthy functioning (Art. 2(1)(i))
- The right to full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities (Art. 2(1)(j))

Both industrial pollution in Sarnia and the Canadian government’s failure to take adequate response measures also implicates Article 3 of the UDRME, including the requirement that human beings, all states, and all public and private institutions “act in accordance with the rights

and obligations recognized in this Declaration” (Art. 3(2)(d)) and “establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth” (Art. 3(2)(e))

Potential Human/Indigenous Rights Violations

The ongoing and long-term pollution of the air and water in Sarnia also implicates multiple potential violations of human rights as recognized by the UDHR, including the following:

- The right to “life, liberty and security of person” (Art. 3)
- The right to an “effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law” (Art. 8)
- The right to “a standard of living adequate for the health and well-being of himself and of his family. . . .” (Art. 25(1))

The releases further implicate multiple potential violations of the UNDRIP, including:

- The right of indigenous individuals to “life, physical and mental integrity, liberty and security of person” (Art. 7)
- The equal right of indigenous individuals to “the enjoyment of the highest attainable standard of physical and mental health” (Art. 24(2))
- The obligation of states to “take effective measures to ensure that no storage or disposal of hazardous materials of indigenous peoples without their free, prior and informed consent” (Art. 29)
- The right of indigenous individuals to “determine and develop priorities and strategies for the development or use of their lands or territories and other resources” (Art. 32(1)), and the



obligation of states to “consult and cooperate in good faith with the indigenous peoples” to obtain “free and informed consent prior to the approval of any project affecting their lands or territories and other resources” (Art 32(2)).

Human rights and indigenous rights instruments further emphasize special protections for mothers and children. For example, the UDHR states that that “motherhood and childhood are entitled to special care and assistance” (Art. 25(2)). The UNDRIP similarly recognizes that “[s]tates shall . . . take specific measures to protect indigenous children from economic exploitation. . . .” (Art. 17(2)). In Sarnia, the profit-driven, severe impacts of pollution on mothers during pregnancy and also on children run afoul of human and indigenous rights and basic moral conduct.

MIRADOR MINE, ECUADOR

“Unleashing industrial-scale mining in the region is a catastrophe equal to using the Galapagos Islands as a bombing range.”

-Biologist Alfredo Luna

The Shuar people of the del Cóndor (Condor mountain range) in Ecuador have been forced for many years to battle destructive industries. The latest intruder is the mining company Ecuacorriente SA, a former Canadian firm purchased in 2010 by a Chinese conglomerate.¹⁰³ Despite Ecuador’s own, stated commitment to nature’s rights through its Constitution, Ecuacorriente SA obtained government approval to build a massive \$1.4 billion open-pit copper and gold mine – the El Mirador mine (or “Mirador mine”). The mine would be built on ancestral Shuar territory on the slopes of the Cordillera del Cóndor.¹⁰⁴

As of 2015, the project is in a “late pre-extractive phase,” with full operations planned for 2017. The mine will be catastrophic to the well-being of both local community members and Amazonian waterways and ecosystems. Similar to the pollution in Sarnia, the Mirador mine also will cause extensive harm to local waterways.

One significant difference with this project from the other three in-depth studies, however, is the killing of indigenous environmental defenders, a growing problem worldwide.

Impact to Nature

The Mirador mine will devastate Ecuador’s Condor Highland, located in the southeastern part of Ecuador’s Amazon rainforest. To develop the mine and related infrastructure, the project will destroy 450,000 hectares of protected rainforest.¹⁰⁵ These forests are among the most biodiverse in the world, home to over 4,000 vascular plant species and numerous endangered and vulnerable animal species – including the bearded guan, white-necked parakeet, spider monkey, neotropical otter, and Andean (spectacled) bear.¹⁰⁶ The mine also threatens to cause the extinction of three amphibians (including the Kingsbury’s rocket frog) and one reptile (the red-throated wood lizard).¹⁰⁷ As described by a local biologist, “[u]nleashing industrial-scale mining in the region is a catastrophe equal to using the Galapagos Islands as a bombing range.”¹⁰⁸

The Mirador mine will also harm local waterways. First, the mine will significantly reduce flows, such as through its projected use of 140 liters of water per second, largely from the Wawayme and Quimi Rivers, to process 60,000 tons of rock daily.¹⁰⁹ Mine operators also plan to redirect the Tundayme River and reduce its flow by an estimated 90 percent to build a “containment reservoir” for processed materials.¹¹⁰

The Mirador mine also threatens to severely pollute several rivers. Rock waste and contaminated water will be left behind in tailing dams and landfills, which would threaten the Tundayme and Wawayme Rivers with acid mine drainage and other pollutants.¹¹¹ Heavy metals and other toxic substances could also enter local waterways, which biologist William Sacher characterized as potentially “catastrophic for the ecosystems and the population’s health.”¹¹² In fact, because waterways in the Cordillera del Cóndor eventually flow into the Amazon River, water pollution from the Mirador mine could have implications for much of the continent.¹¹³



Even though no mining has occurred, preparatory activities associated with the Mirador project have already harmed local waterways.¹¹⁴ For example, the Quimi River has reportedly suffered from contamination due to mishandled machinery fuel, the dumping of extracted materials, run-off from areas where vegetation was cleared, and drainage from sewage tanks.¹¹⁵ Local residents report “chocolate colored” sediment in the once-clear river.¹¹⁶ The pollution would be far worse once full mining operations begin.

Impact to Humans

The Mirador mine is located in the ancestral lands of the Shuar indigenous peoples. The mine is expected to have a direct social impact on eight separate towns.¹¹⁷ Many residents have already been displaced. On September 30, 2015, police and forces hired by Ecuacorriente SA, equipped with heavy machinery, reportedly evicted and demolished the homes of Shuar families that are part of the Comunidad Amazónica de Acción Nacional

(“Amazonian Social Action Community”).¹¹⁸ Other Shuar families been displaced by the project as well.¹¹⁹ Local Shuar and other residents further maintain that project proponents did not conduct adequate prior consultation with impacted communities, in violation of international standards and Ecuadorian law.¹²⁰

Even more seriously, a number of Shuar leaders have been killed after defending their ancestral lands from the mine. In December 2014, Shuar leader José Isidro Tendetza Antún was found murdered just days before he was set to testify on the Mirador mine before the International Rights of Nature Tribunal in Lima, Peru.¹²¹ Another Shuar leader reported that Tendetza had been tortured – his bones broken and his body beaten.¹²² Before his death, Tendetza had opposed a planned tailings pond only half a mile from the Quimi River, where Ecuacorriente SA plans to store millions of tonnes of toxic waste.¹²³ The Quimi River in turn flows into the Zamora River, next to which Tendetza’s body was found. His fellow activists say the Ecuadorean government is complicit in the silencing of



Shuar Leader pointing to a planned mining area near the Numbkataime River, Photo by Beth Wald



mining opponents.¹²⁴ At least two other Shuar indigenous leaders have been reported murdered defending their territory: Bosco Wisum (killed in 2009) and Fredy Taish (killed in 2013).¹²⁵

In December 2014, Shuar leader José Isidro Tendetza Antún was found tortured and murdered just days before he was set to testify on the Mirador mine project before the International Rights of Nature Tribunal in Lima, Peru.

Misguided responses to economic considerations play a role in fueling these harms. For example, critics have cited Ecuador's debt to China as influencing oil and mining concessions given to Chinese companies. There are many Chinese-backed development projects in Ecuador, such as the massive Coca Codo Sinclair hydroelectric facility, waterworks projects, roads, bridges, and a wind farm.¹²⁶ Further, Ecuador will receive a negotiated 52 percent of the earnings from the Mirador mine – corresponding to an estimated \$4.5 billion over the term of the Mirador mine agreement.¹²⁷

Potential Rights of Nature Violations

The above-described destruction of the rainforest, and expected massive harm to local waterways and species, implicate multiple potential violations of the rights of nature as recognized by the UDRME, including the following:

- The right to life and to exist (Art. 2(1)(a))
- The right to be respected (Art. 2(1)(b))
- The right to maintain its identity and integrity as a distinct, self-regulating and interrelated being (Art. 2(1)(d))
- The right to water as a source of life (Art. 2(1)(e))
- The right to integral health (Art. 2(1)(g))

Current and projected pollution from the Mirador mine and Ecuador's failure to protect local communities and nature from these harms also implicates the obligations of human beings to Mother Earth under Article 3 of the UDRME, including the requirement that human beings, all states, and all public and private institutions must "act in accordance with the rights and obligations recognized in this Declaration" (Art. 3(2)(d)) and "respect, protect, conserve and where necessary, restore the integrity, of the vital ecological cycles, processes and balances of Mother Earth" (Art. 3(2)(f)).

Finally, the Mirador mine potentially violates several provisions of Constitution of the Republic of Ecuador, including the right of the natural world to "exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution" (Art. 71), nature's "right to restoration" (Art. 72), and the state's obligation to apply "precaution and restriction measures in all the activities that can lead to the extinction of species, the destruction of the ecosystems or the permanent alteration of the natural cycles" (Art. 73). Unfortunately, Ecuador's 2009 Mining Law¹²⁸ and other influences have weakened implementation of nature's rights in Ecuador, as well as implementation of rights-based state policies such as "Buen Vivir" and collective indigenous rights.¹²⁹

Potential Human/Indigenous Rights Violations

The mine's current and expected pollution of indigenous territory, and the associated pattern of extreme violence and displacement impacting indigenous peoples, implicate multiple human and indigenous rights violations. These include the following human rights violations articulated in the UDHR:

- The right to "life, liberty and security of person" (Art. 3)
- That "[n]o one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment" (Art. 5)
- "No one shall be subjected to arbitrary arrest, detention or exile" (Art. 9)



An Ecuacorriente SA sign (in Spanish and Chinese) prohibiting swimming and littering in the Zamora River (near the Mirador mine site), Photo by Beth Wald

- “No one shall be subjected to arbitrary interference with his privacy, family, [or] home . . . Everyone has the right to the protection of the law against such interference or attacks” (Art. 12)
 - “Everyone is entitled to a social and international order in which the rights and freedoms set forth in [the UDHR] can be fully realized” (Art. 28)
 - The right of indigenous peoples to “the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” (Art. 26)
 - The obligation of states to “take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent” (Art. 29)
 - The right of indigenous peoples to “determine and develop priorities and strategies for the development or use of their lands or territories and other resources” (Art. 32[1]), and the obligation of states to “consult and cooperate in good faith with the indigenous peoples” to obtain “free and informed consent prior to the approval of any project affecting their lands or territories and other resources” (Art 32[2])
- Mine activities further implicate multiple potential violations of the UNDRIP, including:
- The right of indigenous individuals to “life, physical and mental integrity, liberty and security of person” (Art. 7)
 - The right of indigenous peoples to “not be forcibly removed from their lands or territories” (Art. 10)
 - The equal right of indigenous individuals to “the enjoyment of the highest attainable standard of physical and mental health” (Art. 24[2])



LAKE CHAD, AFRICA

Over-diversion and climate change have shrunk Lake Chad by 90 percent since the 1960s, threatening millions of people. The lake is the third most important area for migratory water birds in West Africa.

Lake Chad, a shallow freshwater lake situated at the edge of the Sahara Desert,¹³⁰ was once the largest freshwater lake in the world.¹³¹ However, due to a combination of climate change, water overuse, and general mismanagement, Lake Chad has shrunk by 90 percent since the 1960s – from a surface area of 25,000 km² to about 2,500 km² (with fluctuations).¹³² The disappearance of Lake Chad threatens the well-being and rights of millions of people in four countries (Nigeria, Cameroon, Chad, and Niger) and the local wildlife and ecosystems that rely on Lake Chad as a vital source of fresh water and habitat.¹³³ The situation in Lake Chad highlights how climate change – often as exacerbated by human activities – can drive co-violations of human and environmental rights.

Impacts to Nature

Lake Chad's disappearance has been driven primarily by climate change and over-use of water by humans.¹³⁴ As



Villagers fetching water from shrinking Lake Chad, Photo from UN.org

to the former, experts believe that climate change has fueled severe droughts and warmer temperatures (which increases evaporation) in Lake Chad, contributing to the massive loss of water.¹³⁵ This is not an isolated situation; currently in Africa over 600 lakes are estimated to be declining rapidly due to the combined impacts of climate change and water overuse.¹³⁶

In addition to climate change, numerous large irrigation projects in Niger, Nigeria, Cameroon, and Chad have significantly reduced the flows entering Lake Chad, especially from the River Chari and its tributary the Logone (which together supply about 90 percent of Lake Chad's water).¹³⁷ Dams on the Jama'are and Hadejia Rivers in northeastern Nigeria,¹³⁸ and the Maga Dam on the Logone River in Cameroon, further reduce inflow to the lake.¹³⁹

The disappearance of Lake Chad has significantly harmed local ecosystems. Habitat loss has reduced available nesting sites and winter grounds for Lake Chad's 372 bird species, about one-third of which are migratory.¹⁴⁰ Lake Chad is also home to two near-endemic bird species: the river prinia and the rusty lark.¹⁴¹ Dams and other pressures also impact the timing and extent of seasonal floods that migrant birds and many other species rely upon for habitat.¹⁴² The loss of water has also diminished populations of Lake Chad's 120 fish species,¹⁴³ with this loss exacerbated by overfishing and dams.¹⁴⁴ Finally, Lake Chad houses one of Africa's largest wetlands networks.¹⁴⁵ Though some Lake Chad's wetlands are included on the Ramsar List of Wetlands of International Importance,¹⁴⁶ about half have been lost, primarily due to reduced flows.¹⁴⁷

Impacts to Humans

The disappearance of Lake Chad has enormous consequences for millions of people.¹⁴⁸ First, the loss of water impacts food security. The hydrological changes in Lake Chad have resulted in crop failures, collapsed fish populations, livestock deaths, and increasing poverty throughout the region.¹⁴⁹ Many residents have already been forced to flee as a result.

Twenty million people depend on Lake Chad for their

livelihoods.¹⁵⁰ This includes over 150,000 fishermen that live on the shores and islands of Lake Chad and who have ever-fewer fish to catch.¹⁵¹ With the shrinking of Lake Chad, grazing lands are also depleted, putting pastoralists out of work.¹⁵² As stated by Nigerian fisherman Muhammadu Bello, “I don’t know what global warming is, but what I do know is that this lake is dying and we are all dying with it.”¹⁵³

Finally, climate change in the Lake Chad region fuels conflict and violence. Regions that suffer from drastic climate alterations often face an increase in civil wars and inter-group violence.¹⁵⁴ Climate change exacerbates competition for limited food and water, and also causes land conflicts as refugees are forced to flee to new areas.¹⁵⁵ For example, in the Lake Chad basin, pastoralists have been forced to move away from the lake to the wetter south, which has fueled conflicts between refugees and current residents.¹⁵⁶ Such conflicts make it even more difficult for local populations to adapt to the impacts of climate change. Climate change has also fueled extremism in the area. For example, experts argue that Boko Haram – which has killed thousands of people in recent years – has an easier time recruiting when fishers and farmers cannot find work due to shrinking water supplies.¹⁵⁷

Overall, the populations depending on Lake Chad will face increasing hardships and mortality rates in the years to come if nothing is done to mitigate the loss of the lake. These pressures will only get worse, since water shortages in Northern Africa and the Middle East are estimated to increase by a factor of five by 2050.¹⁵⁸ According to NASA data analyzed by the FAO, a potential but realistic worst-case scenario involves Lake Chad drying up entirely, fueling a humanitarian disaster.¹⁵⁹

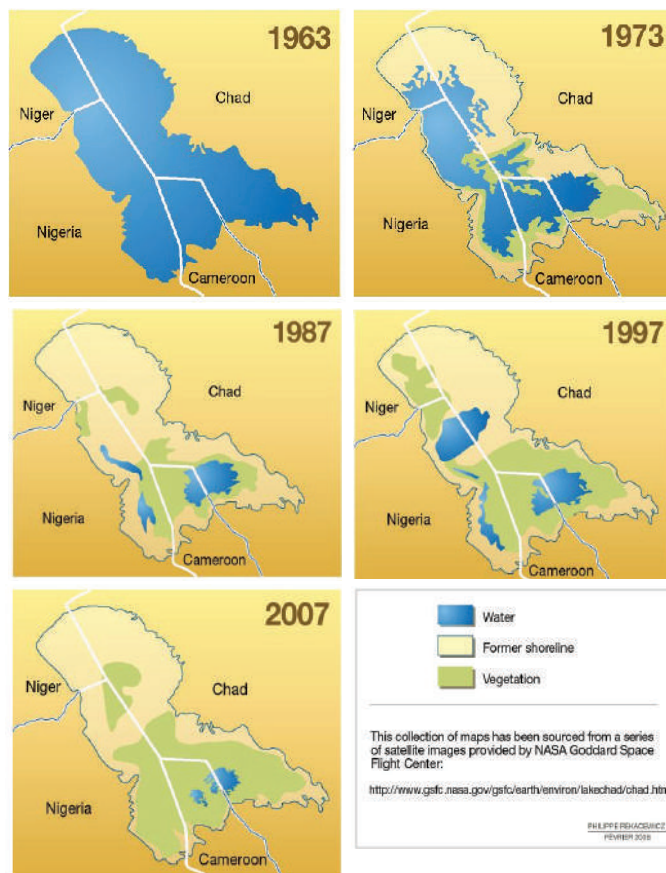
“[T]his lake is dying and we are all dying with it.”

-Nigerian fisherman Muhammadu Bello

Potential Rights of Nature Violations

The impacts of climate change and water mismanagement in the Lake Chad basin implicate multiple potential violations of the rights of nature recognized by the UDRME, including the following:

- The right to life and to exist (Art. 1(a))
- The right to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions (Art. 2(1)(c))
- The right to water as a source of life (Art. 2(1)(e))
- The right to integral health (Art. (g))
- The right to full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities (Art. 2(1)(j))



Lake Chad shrinking from 1963-2007, Graphic by UNEP (tiles rearranged)



Lake Chad Buffalo, Photo by Bernard Dupont

The failure of the international community to reduce greenhouse gas emissions to a level that would mitigate the harms being caused to Lake Chad raises additional rights of nature considerations. For example, this implicates the obligation of human beings to “establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth” (Art. 3(2)(e)). The failure of the international community to take adequate steps to restore Lake Chad and other areas impacted by climate change to health, or otherwise take full responsibility for such harms, also implicates the “guarantee that the damages caused by human violations of the inherent rights recognized in this Declaration are rectified and that those responsible are held accountable for restoring the integrity and health of Mother Earth” (Art. 3(2)(g)).

Potential Human/Indigenous Rights Violations

The impacts of climate change and water mismanagement in the Lake Chad basin – including threats to food, loss of livelihood, and resulting conflicts – implicates multiple potential violations of human rights recognized by the UDHR, including the following:

- The right to “life, liberty and security of person” (Art. 3)
- The right to work (Art. 23)
- The right to “a standard of living adequate for the health and well-being of himself and of his family. . .” (Art. 25(1))

Summary

These case studies demonstrate the range of serious co-violations of human and environmental rights that are occurring all over the world. Despite these clear harms, many national governments are passive at best and complicit at worst. In Sarnia, Ontario, the local petrochemical industry is poisoning the Aamjiwnaang First Nation and other residents, along with local aquatic species and ecosystems, in actions literally permitted by the government. In Ecuador, Ecuacorriente SA would destroy rivers and ecosystems in the Amazon for profit, subjecting the Shaur to destruction of their homeland and violence along the way. Ecuador's government not only allows this destruction, but is projected to receive a substantial share of mining earnings from it. Across the globe in Lapland, Scandinavian countries – often viewed as being protective of nature – are accepting hundreds of new mining permits that will diminish “Europe's last wilderness” and further harm the way of life of the indigenous Sámi. Finally, the governments of Lake Chad countries continue to prioritize “development” – dams,

water projects, and other infrastructure projects that diminish this essential water body – over the needs of humans and nature.

These case studies also demonstrate repeated links to climate change. As a processing center for fossil fuels, and a potential refinery and transportation hub for tar sands oil, Sarnia is becoming a hotbed for climate change acceleration. In Ecuador, the Mirador mine will destroy hundreds of thousands of hectares of protected rainforest, a critical buffer of climate change (deforestation is the world's second largest climate change contributor). In Lapland, warmer temperatures due to climate change are opening up sea routes and providing access to new ore deposits, fueling an incredibly destructive polar mining boom. And in Lake Chad, water supplies needed for human subsistence and ecosystem well-being are dwindling due in part due to the effects of climate change. Such co-violations of the rights of people and nature will continue until governments and industry begin to fully address the sources and impacts of their wholesale destruction of the natural world.



Quilotoa, a water-filled caldera in the Ecuadorian Andes, Photo by Daran Kandasamy



TRENDS IN CO-VIOLATIONS OF HUMAN AND ENVIRONMENTAL RIGHTS

The above case studies are only some of the increasing number of deeply disturbing instances of co-violations of nature's rights and human rights (with special attention to indigenous rights). We must halt and reverse this trend, but to do so, we must better understand its root causes and symptoms. In this way, we can best focus our energies not only to stop the continued destruction, but also to build support for legal and economic systems that advance social and biological well-being, rather than injure it.

ELC has mapped these and other co-violations globally,¹⁶⁰ and we add regularly to this compilation through ongoing research as well as through outreach to colleagues who are daylighting and fighting these co-violations locally. We have selected for analysis in this report the first 100 case studies of co-violations from around the world that we identified. We provide details on each of these cases in Appendix 4.

Among our key findings are the following, which we explore in the sections below:

- Co-violations are frequently connected to the extractive and energy industries
- Violations of the rights of indigenous peoples and environmental destruction are often strongly associated
- Co-violations occur globally, but they have been arising more often in the Global South
- Governments often side with private industry over people and natural systems whose rights may be violated

- The sources of co-violations are rarely addressed adequately, if they are addressed at all
- Addressing violations of the planet's right to a healthy climate is needed to protect human rights overall
- Nature's rights and human rights are intertwined and co-dependent

Co-violations are frequently connected to extractive industries and energy production

Out of the 100 co-violation cases compiled, extractive industries and energy production accounted for 61 cases. Hydropower dams, power plants, mining, oil and gas production, and hydrofracking predominated among these examples. These case studies in particular tended to be especially violent, with more killings associated with these sources of co-violations than any of the other categories compiled. These are also the categories that have seen the most growth, due to the increasing exploitation of the natural world for profit and increasing energy demands overall.

The December 2011 Report of the U.N. Special Rapporteur on the Situation of Human Rights Defenders described a broad array of human rights violations arising from a wide variety of extractive, construction, and development projects. These include "hydroelectric power stations and cement factories" (Guatemala, Brazil), dams (Brazil, India), gas pipelines (Brazil), the operation of mines (China, Mexico, Ecuador, Papua New Guinea, Peru), nuclear power plants (Philippines), the production of oil and petrol (China, Nigeria, Peru), and logging (Brazil,

Cambodia, Honduras, Mexico).¹⁶¹ These examples implicated multiple types of human rights and indigenous rights violations, including:

- excessive state force during peaceful protests;
- violence against activists by project proponents and/or the state;
- state-perpetrated land grabs to speed through dams (such as approving and implementing plans to flood inhabited areas, without the informed consent of those living there);
- displacement, including from dam operations or pollution from extractive industries;
- health effects as a result of air and water pollution from extractive industries;
- violations particularly directed against indigenous protesters and opponents; and
- threats and intimidation towards activists and their families, including arrests, arbitrary detention, and defamation. In a number of cases threats are followed by vandalism and destruction of protestors' homes, physical injury, and murder.

In all of these examples, nature's inherent rights also appear to be infringed upon. Examples of the significant harms to nature linked to the above concerns include:

- loss of biodiversity and habitat from mining projects, industrial development, logging, and other activities, with significant impacts to sensitive ecosystems such as rainforests and wetlands;
- land and water pollution, including from toxic substances and other harmful pollutants that bioaccumulate in ecosystems and wildlife;
- air pollution from coal-fired power plants and other sources that settles into local rivers, streams, and coastal habitats, and other ecosystems;

- dam operations that deplete waterways, impair hydrological functions, impede fish migration, destroy wetlands, and flood terrestrial ecosystems; and
- extinction of species.

The Special Rapporteur further found that violations are “carried out by both State and non-State actors,”¹⁶² illustrating the extent to which the modern economic system controls individual and collective lives. The co-violations data we analyzed bore out this same conclusion. Despite the fact that governments are mandated to protect their citizens and their human rights, we found that state action (or inaction) allegedly had a hand in fully 55 of the 61 co-violations related to energy production and extractive industries. Further, out of the 32 allegedly state-perpetuated co-violation cases involving extractive industries and energy production, 15 purportedly involved killings by the state's police force. These types of human rights violations rarely go remedied, in part because energy production and extractive industries provide a significant source of revenue to the government involved. We explore this phenomenon further below and in our recommendations.

Co-violations involving extractive industries and energy production also accounted for 17 of the 29 killings reported in the case studies. In most of these cases, the leaders of the movements were targeted. Examples include the following:

- Throughout Columbia, concessions owned by the La Colosa mine operator, Anglo Gold Ashanti, have been associated with escalating human rights violations by police and military. These include “extrajudicial executions, arbitrary detention, indiscriminate bombings, illegal searches, and threats to community leaders.” On November 2, 2013, in Cajamarca, César García, a member of the Environmental Awareness Peasants' Committee (Comité Ambiental Conciencia Campesina) was shot to death one month after receiving a threatening phone call to cease his activism against the La Colosa open-pit gold mining project. He had urged local farmers not to



give up their land to miners because the La Colosa mine could produce up to 160,000 tons of mining waste daily, polluting the ground and water with heavy metals and destroying the Andean tropical cloud forest environment.¹⁶³

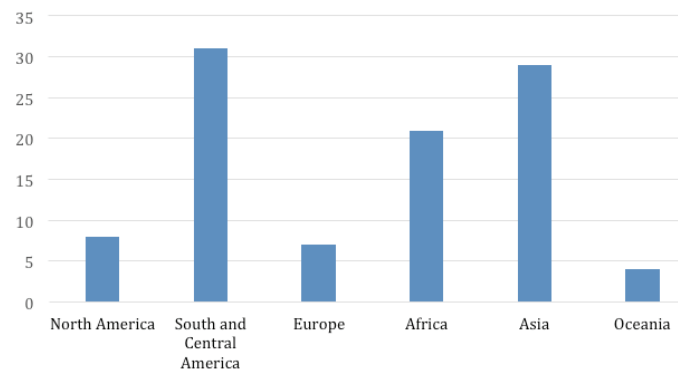
- Ituango Dam and hydroelectric power plant oppositionist Nelson Giraldo Posada was murdered about 300 miles south of the La Colosa mine killing. He and other protestors opposed the construction of the Ituango Dam because it would flood 15 square miles of forest habitat, including the area where the region's only known colony of threatened Military Macaws is located. Activists say there has been a pattern of displacement, "forced disappearances," killings, torture, and threats against residents in twelve communities affected by the Ituango Dam.¹⁶⁴
- In Sompeta, India, the state police force opened fire on villagers opposing the construction of a 2640 MW coal-fired power project, killing three people. The villagers were petitioning because this project, if constructed, could impact at least 1,000 acres of wetlands, including the "beela," a unique low-lying swamp area that serves as crucial nesting habitat for about 120 bird species. It also would destroy other important habitats, harm local biodiversity, and threaten water quality. It is further expected that the coal ash ponds (byproducts of heating water for steam) will leak into local waterways, pollute soil, and produce severe health effects.¹⁶⁵
- In Marikana, South Africa police opened fire on locals striking over pay and living conditions at a British-owned platinum mine, killing 34 people in one incident.¹⁶⁶ Platinum mining operations at Marikana – a dry, rocky area located near the lush mountain habitat of the Kgaswane Nature Reserve – pollute local waterways, and sewage from mining camps further flows into local rivers or tributaries within the Crocodile River catchment.
- As noted above, activist José Isidro Tendetza Antún, a Shaur indigenous leader and vocal critic of the planned Mirador copper and gold mine

in Cordillera del Cóndor, Ecuador, was found tortured and killed just days before he was set to testify on this topic before the International Rights of Nature Tribunal in Lima, Peru, which was also hosting the U.N. Climate Change "Conference of the Parties."¹⁶⁷


Co-violations occur globally but arise more often in the Global South

While co-violations occur globally, we found examples to arise more frequently in the Global South, where the natural world has been relatively less exploited to date and so is the site of increased extraction activity. The 100 stories we reviewed for this report were distributed as follows: 31 in South and Central America, 29 in Asia, 21 in Africa, eight in North America, seven in Europe, two in Australia, and two elsewhere in Oceania.

100 Co-Violations, by Continent



The U.N. similarly found that human rights defenders working on land and environmental issues "in the Americas" (primarily South and Central America) appear to be the "most at risk" and "faced the highest risk of death as a result of their human rights activities" compared to other regions. One example is found in Peru's Tambo Valley, where violent clashes between police and protestors over the proposed Tia Maria copper mining project left three farmers and one police officer dead. New laws in Peru have made police and armed forces less accountable for injuring or killing protestors, increased penalties for certain protest actions, and



prohibited local officials from protesting. The Tia Maria copper project threatens to destroy habitat and wildlife, and seriously pollute the nearby Tambo River. Experts also worry that the mining project's use of a desalination plant will contaminate affected marine ecosystems.

Other examples of co-violations of rights abound elsewhere in the Global South, however; examples include the following:

- Shipbreaking in Bangladesh. The vast majority of tanker and container ships are taken to India, Pakistan, and Bangladesh to be dismantled for scrap. These older ships release hazardous materials such as asbestos, heavy metals, PCBs, and organotins, which are often dumped directly into coastal ecosystems along with polluted bilge and ballast water. Shipbreaking laborers work for minimal pay in extremely dangerous conditions, and are routinely injured or killed on the job and poisoned by prolonged exposure to toxic chemicals. The NGO Shipbreaking Platform has also accused the shipbreaking industry of employing child labor.¹⁶⁸
- Coal Mining in South Africa. A proposed open cast mine called the Fuleni Anthracite Project would force hundreds of rural villagers from their land and threaten those who remain with harmful coal dust pollution. The mine would be located a mere 40 meters from the iMfolozi wilderness area – a sacred site to the Zulu people. The iMfolozi is Africa's first designated wilderness area and serves as a sanctuary for the world's largest rhinoceros concentration. In addition to expected habitat destruction from six planned coal pits, the mine's noise, vibrations, and light pollution would confuse and traumatize sensitive and dwindling wildlife and pollute the local water and soil.

Our globalized economic system enables the outsourcing of environmental damage as well as labor abuses. The natural systems of developing countries are frequently exploited to feed the demand from developed ones. The focus of our economic system on profit over well-being results in the co-violations we are seeing

with increasing frequency.

The data show, however, that co-violations are not solely a Global South problem. The economic system that violates rights in search of short-term profit exists as well in wealthier, industrialized nations. Consider the following two examples:

- Tar Sands Mining in Canada. To extract fuel from Canada's tar sands, oil companies clear-cut boreal forest and dig out several hundred feet of topsoil, sometimes draining wetlands and diverting rivers in the process. They leave behind a barren, ruined landscape that can no longer support imperiled species like caribou. Tar sands mining has contaminated Alberta's Athabasca River with toxic heavy metals – including arsenic, mercury, and thallium – from a combination of airborne particulates and mine site leaching.¹⁶⁹ On the human rights front, protestors have faced government harassment. For example, two anti-tar sands activists in the U.S. were arrested and charged with committing a "terrorism hoax" after officials alleged that decorative glitter from their protest signs resembled a biochemical agent. Internal information obtained by activists show that energy giant TransCanada had encouraged law enforcement officials to charge environmentalist protesters under anti-terrorism laws.¹⁷⁰
- Lignite Mining in Poland. Three thousand people in the region of Lausitz, Poland are at risk of being forced to relocate by a lignite mine proposed by energy company Polska Grupa Energetyczna. Just across the border, villages in Germany are similarly at risk from the company Vattenfall's plans to expand two other lignite mines. Over 135 Lausitz region villages have been destroyed by strip mines since the 1930s. In addition to ripping out vast landscapes, open pit mining in the Lausitz region has contaminated local rivers with substances such as iron ochre, which can prevent plant photosynthesis, clog fish gills, and kill animals that ingest it. In Germany, open-case lignite mining has resulted in dead zones in the Spree River.¹⁷¹



Deepwater Horizon oil spill cleanup, Photo by NOAA

Environmental destruction is strongly associated with violations of the rights of indigenous peoples

Of the 100 co-violations cases compiled, 35 implicate violations of indigenous peoples' rights, as articulated in the UNDRIP and elsewhere. A review of these cases reveals several common denominators: acts of violence and intimidation against indigenous individuals and communities, lack of consent and consultation regarding projects in indigenous territories, and forcible displacement of indigenous peoples from their lands.¹⁷² The U.N. has found that "many" defenders of the environment "are killed because of their work on . . . the right to land of indigenous peoples and minorities."¹⁷³

Violations of indigenous rights in these instances track nature's rights violations particularly closely. For example, Ethiopian authorities have forced thousands of indigenous pastoralists (such as Bodi, Kwegu, and Mursi people) off their land in the Lower Omo Valley, sometimes using military force, to repurpose the area for sugar plantations.¹⁷⁴ The government has also razed all vegetation from huge swaths of the Lower Omo Valley, which was known for the biodiversity of its grasslands and riverine forests. The nation's larger redevelopment projects include the massive Gibe III Dam, which would

devastate the livelihoods of 170,000 resident agro-pastoralists – largely indigenous people – that rely on water from the Omo River Basin. The dam would reduce the water level in Lake Turkana, a UNESCO World Heritage site and the world's largest desert lake, by up to 20 meters – devastating fish and destroying sensitive habitat.

In another example, the government of Indonesia – home of the world's third largest rainforest – has handed over large tracts of ancestral lands to foreign palm oil distributors, forcing native communities to cease their traditional land uses. Local palm oil workers allege forced labor, including child labor and human trafficking, as well as bonded labor, indebtedness, unsafe working conditions, abuse, and other forms of exploitation. On the environmental side, converting natural forests into oil palm plantations destroys habitats, sharply reduces biodiversity, pollutes air and water, erodes soil, and threatens imperiled plant and animal species like the Sumatran tiger, orangutans, and keruing paya trees.¹⁷⁵

Despite the fact that many such actions directly contradict the provisions of the UNDRIP, government authorities often appear to be the immediate perpetrators or otherwise complicit with corporations and industry in violating the rights of indigenous peoples. For example, an investigation from Global Witness found that the Chief



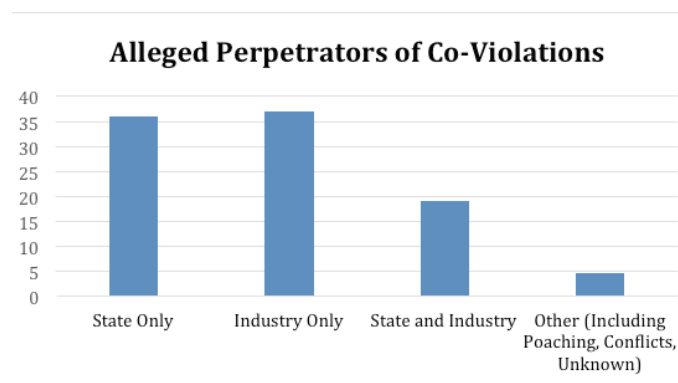
Minister of Sarawak, a state on the island of Borneo, made illegal land swaps with loggers and palm oil companies that displaced indigenous communities from their homes.¹⁷⁶ In Guatemala, the national government approved a proposed dam on the Cambalan River despite overwhelming rejection of the project by indigenous Mayan communities, in violation of their right to free, prior, and informed consent. On May 1, 2012, community leader and dam opponent Andrés Francisco Miguel was murdered by security guards from Hidro Santa Cruz, the hydroelectric company in charge of the proposed dam. In response to the resulting protests, hundreds of military personnel intimidated and arrested dam opponents.¹⁷⁷

These and other examples illustrate that advocates for indigenous peoples and their lands stand up for justice and the natural world at great risk to their own lives. Hundreds of activists and defenders have been killed in the last decade alone, including many indigenous activists,¹⁷⁸ often, it appears, with direct or indirect government involvement. These cases demonstrate further that our current governance systems fail to value and protect human lives and ecosystem health from the devastating, unrelenting pressure of an economic system premised on maximizing short-term profits, rather than social and biological well-being.

Finally, in addition to indigenous peoples, environmental degradation has had a disproportionate impact on other vulnerable groups, including women and children. A 2013 U.N. “Mapping Report” summarized several of these trends.¹⁷⁹ For example, the Committee on the Elimination of Discrimination against Women concludes that climate change, water pollution, nuclear contamination, and other environmental harms (which are frequently associated with nature’s rights violations) can particularly infringe upon women’s rights recognized in the Convention on the Elimination of All Forms of Discrimination against Women.¹⁸⁰ Further, the Convention on the Rights of the Child acknowledges risks from environmental degradation to nutritious food and clean drinking water for children.¹⁸¹ The U.N.’s Special Rapporteur on hazardous substances and wastes further highlighted heightened risks to children’s rights to health from mercury and other hazardous substances as a result of extractive industries.¹⁸²

State interests often side with private industry rather than with human or nature’s rights advocates

As noted above, the data we compiled for this report shows that in 37 of the 100 co-violations cases we examined, industry was alleged to be the sole perpetrator; in 36 of the cases, the state was alleged to be the sole responsible party; and in 19 of the cases, both the state and industry were alleged to be responsible. In other words, *in over half of the cases we compiled, the state appears to be a perpetrator of rights violations, either alone or with industry.*



These findings are consistent with the U.N. conclusion that “State actors, including Government officials, State security forces and the judiciary, are the perpetrators of many of the violations committed” against defenders of land and environment rights.¹⁸³

Numerous case studies compiled to date illustrate instances of state police or the military intimidating, arresting, engaging in violence against, and even killing civilians to protect private interests. For example, in Ardahan, Turkey government officials guarding BP’s oil pipeline reportedly intimidated, arrested, and tortured civilians.¹⁸⁴ In Marikana, South Africa, 34 people died in one incident as police opened fire on workers on strike at a British-owned platinum mine.¹⁸⁵

In another example, residents of the Yalisika community in Bosanga in the Democratic Republic of the Congo (DRC) protested against SIFORCO, a logging company, for failing to meet its commitments to invest in local infrastructure. In response, approximately 60 national police and navy



Marchers raise awareness about violence against women gathering water, Marseille, France, Photo by Linda Sheehan

officers reportedly clashed with local Yalisika residents, “[unleashing] a wave of violence” that included property destruction, the burning down of a home, the arrest of 16 villagers, the rape of several women (including minors), and attacks on locals, including at least one murder.¹⁸⁶ After the raid, witnesses indicated that SIFORCO paid officers of the police and navy.¹⁸⁷

Notably, of the 29 cases we documented which involved killing, six involved industry only as the reported perpetrator, six involved both industry and the state, and 15 involved the state only as the reported perpetrator. This represents a total of over 70 percent of co-violations killings in which the state is allegedly involved as a perpetrator, acting alone or in collusion with industry. Many of these killings were associated with attempts by the police or military to put down protests. Additionally, 30 cases involved excessive state force and violence, with ten of those also including industry as a reported perpetrator.

Again, our findings are consistent with those of others tracking related human rights abuses. Examples include the following:

- Those “who challenge powerful economic interests and whose efforts often intersect negatively with both State and corporate activities, are perceived as a threat and find themselves not only vulnerable to abuses by State interests but also the interests of powerful economic actors.”¹⁸⁸
- “Human rights defenders working on behalf of communities affected by large-scale development projects are increasingly being branded ‘anti-government’, ‘against development’, or even ‘enemies of the State’.”¹⁸⁹
- States frequently respond to environmental protests through repression, stigmatization, and criminalization.¹⁹⁰

- There has been a “climate of impunity” as defenders of land and environmental rights “have been under surveillance, attacked, harassed or otherwise threatened, and in some cases killed.”¹⁹¹

Finally, even when the state is not an active perpetrator, it can be a silent accomplice. States often turn a blind eye to co-violations, failing to actively prosecute those individuals responsible, fund preventative efforts, or otherwise act assertively to protect the rights of its citizens and the natural world.

Every co-violation implicates the state, either through its action or its inaction. States not only have a negative duty to avoid violating human and nature’s rights but also a positive duty to affirm these rights. As recommended by the United Nations:

States “should prevent violations of the rights of defenders under their jurisdiction by taking legal, judicial, administrative and all other measures to ensure the full enjoyment by defenders of their rights; investigating alleged violations; prosecuting alleged perpetrators; and providing defenders with remedies and reparation.”¹⁹²

Unfortunately, this recommendation for State action often goes unheeded, as we observe in the next section.

It is rare that the sources of co-violations are adequately addressed

The sources of co-violations are rarely sufficiently remedied. Violators are infrequently brought to justice. Moreover, the underlying structures that allow for co-violations to occur are seldom satisfactorily rectified, despite the fact that “[e]veryone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law” (UDHR Art. 8).

In studying these types of cases, Global Witness observed an endemic culture of impunity, which national governments and their aid donors have a responsibility to address. Often, defenders face threats from the very

people supposed to protect them – a number of cases involve state security forces, often in collaboration with corporations and private landowners. The lack of political will to ensure large resource deals are done fairly and openly appears matched by the lack of political will to deliver justice for those killed in resulting conflicts. Evidence suggests that responsibility rarely only lies with the person pulling the trigger – complex and secretive networks of vested interests ultimately lie behind these crimes.¹⁹³

“What feeds the violence is the impunity.”

- Isolete Wichinieski, National Coordinator of the Comissão Pastoral da Terra, Brazil

Global Witness further noted that just 10 of such perpetrators are known to have been tried, convicted, and punished between 2002 and 2013 – around one percent of the overall incidence of the 908 known killings during that period.¹⁹⁴ Additionally, a mere 34 individuals have been arrested and are facing charges for the murders of 16 defenders¹⁹⁵ out of the many that have been killed defending rights associated with land and the environment.

In fact, environmental rights defenders are more likely to face repercussions for their legal actions than the perpetrators of co-violations themselves. As again reported by Global Witness,

[i]ncreasingly, governments are launching criminal proceedings against defenders – subjecting them to police raids, wrongful arrests, fines and imprisonment. From January 2011 to August 2014, the Observatory for the Protection of Human Rights documented spurious legal cases against 123 land activists globally.¹⁹⁶

For example, in Bagua, Peru, police shot at a peaceful protest conducted primarily by indigenous Wampis and Awjún people, leaving more than 200 people injured (80 of whom were shot) and 20 people dead. However, only protestors – no police officers – were brought to trial. Furthermore, a new law exempts police officers and



soldiers from criminal responsibility if they cause injury or death while on duty.¹⁹⁷

In another example, despite 11 deaths and massive environmental destruction unleashed by the Deepwater Horizon Oil Spill in the Gulf of Mexico, not a single person has been sent to jail for the spill itself, with four out of five cases of alleged individual criminal misconduct still remaining unresolved.¹⁹⁸ After BP finally agreed (after years of combatting responsibility) to settle all legal actions brought by the United States and four states for \$18.7 billion to be paid over 18 years, its stock price actually increased,¹⁹⁹ putting more money into the pockets of investors. This may have been due to the fact that the settlement amount was “less than half of what the law would justify.”²⁰⁰ The relative lack of deterrent means that fossil fuel companies continue to exploit reserves across the world, often recklessly, with the ultimate goal of maximizing profits rather than societal or ecological well-being.

Even if specific co-violations are remedied, the background conditions that foster co-violations continue unabated. For example, the prevailing economic model promotes ever-increasing consumption as somehow possible, and even beneficial, on a finite planet. Such fundamentally flawed assumptions breed co-violations of nature’s rights and human rights worldwide. Until we begin to challenge the foundational causes of these co-violations, they will continue to occur.

Addressing violations of the planet’s right to a healthy climate is needed to protect human rights overall

Out of the 100 co-violation cases we compiled, five directly related to climate change, a new but expanding source of co-violations. Climate-caused co-violations are particularly under-reported (as opposed to those associated with extraction, for example) because they are currently tied to less obvious causes of violations, such as dangerous storms, heat events, and sea level rise. As the science behind climate change reporting evolves, our reporting on climate change co-violations will likely increase.

As described above, recent studies have shed light on the interlinkages between climate change and injuries to humans, and there is now international consensus that addressing climate change is necessary to protect human rights. Most immediately, the manifestations of climate change (mega-storms, droughts, etc.) impact food security²⁰¹ and other survival needs²⁰² in already-disadvantaged regions, where livelihoods often depend heavily on the well-being of the local natural environment.

For example, 11,000 citizens of the Pacific Island nation of Tuvalu are expected to be displaced within the next 50 years due to climate-accelerated coastal erosion, flooding, drought, destruction of the fish populations on which they depend for food, and groundwater and soil salinization. Warming and acidification of the sea has bleached 80 percent of the coral reefs around Tuvalu, causing the collapse of both fisheries and the islands’ lagoon ecosystems. In June 2014, a Tuvalan family became the first formally recognized refugees of climate change when the New Zealand immigration court granted them residency.²⁰³ State and other action is needed now to better protect remaining coastal life and ecosystems, to secure longer-term protection of both the natural world and the residents of Tuvalu.²⁰⁴

Nations of the Global North have begun to experience climate change impacts as well. The indigenous inhabitants of Kivalina, Alaska are threatened by rising sea levels, coastal erosion, retreating sea ice, and increasingly severe storms. They can no longer rely on their traditional livelihoods of hunting and fishing. For example, locals have recently been unable to pull their boats across the thinning sea ice, ruining their hunting season and threatening their food supply. In 2012, floodwaters entered the village’s landfill and spilled garbage and human waste into the sea. By 2025 the village may be completely under water.²⁰⁵

The impacts of climate change on the full enjoyment of indigenous rights and human rights, including rights to an adequate standard of living, food, housing, health, and water and sanitation, are largely agreed upon.²⁰⁶ As recognized by the United Nations, human health is “inextricably linked to the health of the planet and living and producing in harmony with nature.”²⁰⁷ Time is running

out to address this most severe threat to the health of both the planet and its people.

Nature's rights and human rights are intertwined and co-dependent

The case studies provide numerous important lessons from which we can build alternative governance structures that will support the well-being of people and planet. One critical observation from these cases is that the well-being and fundamental rights of both humans and nature are inherently interdependent. In each of the case studies, actions to prevent or to swiftly and fully correct the environmental violations at issue would have spared human lives and protected human health and livelihoods. Conversely, full protection of human and indigenous rights would entail adoption of a new economic system that prioritizes social and ecological well-being over the maximization of short-term profit for the few.

There is growing momentum in support of recognition of the interdependence of people and planet. Sample statements acknowledging this logical interconnection include:

- “By the time today’s children reach middle age, it is extremely likely that Earth’s life support systems . . . will be irretrievably damaged by . . . human-caused environmental stressors, unless we take concrete, immediate actions.”²⁰⁸
- “[R]ights-based protections for nature . . .” protect all of Earth’s inhabitants “since the well being of humans and nature are indivisible.”²⁰⁹
- “[W]here forest peoples’ rights are secure and respected, forests are also secured, healthy and intact.”²¹⁰
- The “inseparable relationship between humans and the Earth . . . must be respected for the sake of our future generations and all of humanity”; “Mother Earth is the source of life which needs to be protected, not a resource to be exploited and commodified as a ‘natural capital’.”²¹¹

The growing numbers of reported co-violations underscore the urgency of addressing the rights of nature now, both for the sake of the natural world itself and also for the continued protection of human rights such as the rights to life, food, water, and self-determination.²¹² For the sake of life now and our shared future, we must hold violators (both state and non-state actors) of human rights and the rights of nature fully accountable for their actions. This necessarily includes creating and enforcing legal and economic structures that prioritize social and ecological well-being and accept our human well-being as intimately tied with that of the Earth. Such legal and economic structures will reject the current, mad focus on endless, nature-fueled economic growth on a finite planet, and the associated monetization and privatization of nature for the short-term profit of the few.

This task must begin with our recognition of the inherent rights of nature to exist, thrive, and evolve, which will shift our worldview from humans as controllers of the Earth, to humans as a sacred part of it. From this worldview, we will be able to support new laws and economic systems that implement the inherent rights of all Earth’s beings, thereby enhancing human rights in the process.



RECOMMENDATIONS

To prevent and correct co-violations of rights and create a world in which humans and nature thrive together in harmony, we must reformulate our laws to implement the rights of nature, and bolster monitoring and enforcement of human rights, indigenous rights, and nature's rights violations. This overall effort necessarily will include shifting away from our destructive economic model, which treats nature (and often people) as fuel for short-term profit, toward laws and economic systems that advance the well-being of all life.

This report makes specific recommendations in pursuit of these goals for action by the United Nations and international community, state actors, and other actors such as businesses and private individuals.

UNITED NATIONS / INTERNATIONAL COMMUNITY

Summary of Recommendations

The destruction that we – and our modern economic and legal systems – are wreaking on the planet is global, and calls for global action. Among other steps, the United Nations specifically and the international community generally must swiftly act to:

- Recognize in law and implement the fundamental rights of nature, including through U.N. General Assembly adoption of the Universal Declaration of the Rights of Mother Earth
- Support swift enforcement of International Rights of Nature Tribunal judgments
- Create “International Rights of Nature” courts to hear cases involving nature's rights violations
- Incorporate rights of nature principles into existing human rights instruments and bodies


- Commit to a robust, binding, enforceable international climate change agreement that aims to eliminate climate-related human and environmental rights violations
- Adopt global and national moratoriums on particular sources of co-violations
- Create an international mechanism to monitor and enforce standards that co-promote human rights and nature's rights
- Adopt and implement an international treaty to prevent and enforce against corporate human rights violations
- Provide emergency protection to at-risk environmental defenders

We explore each of these recommendations below.

Recognize in law and implement the fundamental rights of nature, including through U.N. General Assembly adoption of the Universal Declaration of the Rights of Mother Earth

We will not effectively address accelerating environmental degradation until the international community recognizes and implements binding, rights-based language to protect the rights of nature at the international level. Currently, efforts at the local level (such as in dozens of U.S. communities) and the national level (such as Ecuador's constitutional amendment) have recognized nature's rights. International citizen-based initiatives, such as the International Rights of Nature Tribunals, have succeeded at applying nature's rights legal concepts to specific cases worldwide.

To advance and expand upon these existing efforts, the United Nations and other international governmental



organizations should adopt laws and binding agreements to recognize nature's rights.

A “society in which it is stated . . . that ‘rivers have legal rights’ would evolve a different legal system than one which did not employ that expression.”

-Christopher Stone, Should Trees Have Standing?

One critical step in this effort is adoption by the U.N. General Assembly of a Resolution and Declaration that formally recognizes the UDRME and urges its broad implementation through national law. There are numerous reasons to pursue such an action. First, UDRME adoption would promote the integration of rights of nature concepts into U.N. human and indigenous rights activities, thus encouraging a more holistic approach to overlapping rights issues. Second, UDRME adoption would promote the development of a suite of international rights-based laws. The Universal Declaration of Human Rights has become decades after its adoption the “moral backbone and source of inspiration of a whole new branch of international law.”²¹³ By analogy, adoption of the UDRME will have a similar impact over time. As Christopher Stone presciently notes in his essay *Should Trees Have Standing*, “a society in which it is stated . . . that ‘rivers have legal rights’ would evolve a different legal system than one which did not employ that expression.”²¹⁴

Third, UDRME adoption would leverage the high visibility of the United Nations to increase international attention on co-violations of human and environmental rights. Finally, UDRME adoption could lead to a binding treaty that provides for more robust protections for nature's rights and overlapping human rights. For example, the U.N. General Assembly adopted the Declaration of the Rights of the Child and then followed it later with the Convention on the Rights of the Child.²¹⁵

The ultimate goal of U.N. UDRME adoption would be enforceable laws and agreements across the globe, to guide all levels of government in implementing nature's rights.

UDRME ADOPTION AT THE UNITED NATIONS

U.N. bodies are acknowledging the growing rights of nature movement. For example, the U.N. General Assembly, which recognizes April 22 as “Mother Earth Day,” has held an Interactive Dialogue of the General Assembly on Harmony with Nature annually since 2011 on this day. These Interactive Dialogues have resulted in a series of U.N. reports and resolutions on “Harmony with Nature” that acknowledge the growing rights of nature movement and many of its underlying principles (www.harmonywithnatureun.org). These principles include the April 2010 World People's Conference on Climate Change and the Rights of Mother Earth, from which the UDRME emerged. In addition, the final adopted Resolution from the 2012 U.N. Conference on Sustainable Development (“Rio +20”) formally acknowledged nations that “recognize the rights of nature.” More recently, the 2014 “Harmony with Nature” Report of the Secretary General recognizes that stakeholders worldwide have “voiced the need for humankind to recognize the fundamental rights of the natural world.” Civil society around the world continues to advocate for U.N. adoption of the UDRME through these and other processes.

With regard to the process for adoption of the UDRME, any Member State or principal organ of the United Nations may propose its adoption as an item on the U.N. General Assembly's provisional agenda. Another way (among others) to place an item on the provisional agenda is by request of any principal organ of the United Nations. Upon approval of the provisional agenda, the General Assembly could vote on adoption of the UDRME. This would only require a simple majority of Member States present and voting, or a two-thirds majority if the item is considered an “important question.” (Rules of Procedure of the General Assembly, Rules 13, 21, 81, 85.)



Iron ore mine waste pond break, Minas Gerais, Brazil, Photo by Agência Brasil Fotografias

Support swift enforcement of International Rights of Nature Tribunal judgments

Organized by civil society around the world, International Rights of Nature Tribunals²¹⁶ re-frame and adjudicate prominent environmental and social justice cases within a rights of nature context. While the Tribunals do not yet have formal legal authority, the adjudication process:

- generates sophisticated legal analysis of diverse cases from a nature's rights perspective, applying the UDRME tenets and nature's rights laws as legal guidelines;
- educates governments, advocacy groups, and the interested public on the tenets of the rights of nature and how they can be applied;
- recommends actions such as enforcement and mitigation based on rights of nature violations; and
- enables others to ultimately develop formal legal structures that recognize the inherent rights of nature.

The Tribunals are particularly guided by UDRME Article 2(1)(j), which states that: "Mother Earth and all beings of which she is composed have the following inherent rights: ... the right to full and prompt restoration for the violation of the rights recognized in this Declaration caused by human activities." As discussed by 2015 Tribunal Chair and attorney Cormac Cullinan of South Africa:

[i]magine if there were an international tribunal that concerned itself with the fundamental rights of all beings, including humans, and decided matters on the basis of what was best for the Earth community as a whole, regardless of politics; an Earth Tribunal of respected individuals that drew on the wisdom of humanity as whole, respected the laws of Nature and was not beholden to governments or corporations.

The establishment of the International Tribunal for

the Rights of Nature is intended to give effect to this dream. This bold venture by the members of the Global Alliance for the Rights of Nature is a creative response to the current impasse at the international level which has led to a widening chasm between what global civil society wants done and what governments are willing to agree to and implement.²¹⁷

Two International Rights of Nature Tribunals have been held to date, in Quito, Ecuador,²¹⁸ and Lima, Peru.²¹⁹ The third is being held in Paris, France²²⁰ to coincide with the December 2015 international climate change discussions. Regional nature's rights tribunals have also been held in the San Francisco Bay Area, USA²²¹ and in Brisbane, Australia.²²²

The International Rights of Nature Tribunals are guided by a formal set of processes to ensure the integrity of assessment and judgments. For example, the members of the Tribunal (judges) are constituted in way that ensures that all the regions of the world are represented, and the Tribunal is managed by a secretariat answerable to the members of the Tribunal. Regional chambers of the Tribunal and regional secretariats also may be formally established in order to hear cases specific to that area or bioregion.

Examples of processes and procedures to date include the following:

- Written submissions to the Tribunal should identify the specific provisions of the UDRME allegedly being violated, such as:
 - the rights of Mother Earth and all beings, the right to water as a source of life; and the right to be free from contamination, pollution and toxic or radioactive waste, and
 - the duty of all human beings, States, and public and private institutions to act in accordance with the rights and obligations recognized in the UDRME.
- To decide whether UDRME and other nature's rights provisions have been violated, the Tribunal:



- must consider whether or not, on the basis of available scientific, traditional and other human knowledge, the activity at issue impacts the integrity, health and functioning of Mother Earth, and/or will violate any of the rights identified, and
- may consider any existing norms or laws that are relevant including: international human rights law (including the Universal Declaration of Human Rights and the United Nations Declaration on the Rights of Indigenous Peoples), generally accepted principles of law reflected in judicial decisions or the teachings of respected jurists, international law including treaties and customary international law, and traditional knowledge and customary laws relevant to the place or places in question.

People's tribunals such as the International Rights of Nature Tribunal have a long tradition of addressing fundamental issues of justice beyond the reach of traditional courts, including military interventions and human rights abuses.²²³ The United Nations (in addition to other international governmental organizations, as appropriate) should recognize these groundbreaking International Rights of Nature Tribunals and their evolving case judgments and support the prompt enforcement of final judgments issued by the Tribunals. By calling for enforcement of judgments made by the International Rights of Nature Tribunal, the United Nations and others bodies would help ensure the international community addresses some of the world's most significant co-violations of both nature's rights and human rights.

Create "International Rights of Nature" courts to hear cases involving nature's rights violations

The International Rights of Nature Tribunal is demonstrating to the world that rights of nature laws and courts are both necessary and possible. There is a significant need for such nature's rights-based laws and courts globally. Fortunately, we can consider precedents

and lessons in the human rights arena to provide guidance in this effort.

For example, the European Court of Human Rights,²²⁴ established pursuant to the European Convention on Human Rights in 1959,²²⁵ hears applications alleging that a contracting state has breached one or more of the human rights provisions set out in the European Convention and its protocols. Individuals, NGOs, or the contracting states can seek judgments and advisory opinions from the Court. All 47 member states of the Council of Europe are contracting parties to the Convention and recognize the jurisdiction of the Court and its judgments.

In another example, the Inter-American Court of Human Rights²²⁶ (Court), along with the Inter-American Commission on Human Rights (Commission),²²⁷ make up the human rights protection system of the Organization of American States (OAS), which serves to uphold and promote basic rights and freedoms in the Americas. The OAS established the Court in 1979 to enforce and interpret the provisions of the 1969 American Convention on Human Rights,²²⁸ which defines the human rights the ratifying States have agreed to respect and ensure. The Convention also defines the functions and procedures of both the Commission and the Court.





The Court hears and rules on the specific cases of human rights violations referred to it, and issues legal opinions on matters as requested by OAS states. Under the Convention, cases can be referred to the Court by either the Commission or a state party. In contrast to the European human rights system, individual citizens of the OAS member states are not allowed to take cases directly to the Court.

Working alongside the Court, the Commission itself arose out of the American Declaration of the Rights and Duties of Man,²²⁹ approved at the Ninth International Conference of American States held in Bogota in 1948. There the OAS Charter²³⁰ was adopted and grounded in the “fundamental rights of the individual.” Full respect for human rights appears in several sections of the Charter, underscoring the importance that the Member States attach to it.

The development and operations of these formal, multi-state human rights courts, and the human rights conventions and laws on which they are based, provide important lessons for the development of necessary nature’s rights courts.

Nature’s rights can also be considered through existing court structures. For example, an area that is the focus of escalating global advocacy is the effort to recognize and act on the crime of “ecocide” in international criminal law, as the fifth crime prosecutable before the International Criminal Court (ICC)²³¹ in the same manner as crimes against humanity (such as genocide and war crimes). “Ecocide” cases represent the most severe cases of environmental destruction and health-related damages. They are those which threaten the safety of the planet, and so must be recognized as a crime. The ICC, governed by the Rome Statute,²³² was established to help end impunity for perpetrators of the most serious crimes affecting the international community. Since its entry into force in 2002, the Rome Statute has been adopted by 123 countries (as of April 2015). Any state party may propose amendments to it, including proposed amendments to recognize the crime of ecocide.

Interested parties have accordingly developed and adopted²³³ a Charter of Brussels²³⁴ to call for recognition of environmental crimes as crimes against Humanity and

Peace by the United Nations. The Charter of Brussels also officially requests the establishment of a European and International Criminal Court of the Environment and Health, another potential avenue for addressing violations of nature’s rights. All such avenues for formally hearing and acting on nature’s rights violations before public bodies must be investigated, and swiftly developed as appropriate.

Incorporate rights of nature principles into existing human rights instruments and bodies

As described above, the international community increasingly acknowledges the connection between human rights and protecting nature, but often does not take the additional step of recognizing nature’s rights in law. For example, while the Inter-American Court of Human Rights recognizes that its case law (and the case law of the European Court of Human Rights) supports “...an undeniable link between the protection of the environment and the enjoyment of other human rights,”²³⁵ the Court does not recognize nature as a rights-bearing entity. Similarly, the Stockholm Declaration recognizes that humans have a right to live in “an environment of a quality that permits a life of dignity and well-being,”²³⁶ but it does recognize nature’s own right to health.

Accordingly, in addition to adopting laws and enforcement structures that protect nature’s rights for nature’s own benefits, we must link such efforts to the protection of human rights and indigenous rights in light of their interconnections, as illustrated by the case studies in this report. One way to do so is to incorporate rights of nature principles into existing human rights instruments and bodies, both internationally (such as through the International Covenant on Civil and Political Rights)²³⁷ and regionally (such as through the American Convention on Human Rights). Additionally, international bodies should establish official liaisons between human rights, nature’s rights, and indigenous rights bodies.

Finally, the right to a healthy environment should be expanded to include nature’s rights. Over 100 states have established constitutional, statutory, or court-developed



rights of humans to a healthy environment.²³⁸ Expanding these constitutional rights to include nature's rights (as specifically linked to the human right to a healthy environment) will help states better ensure the mutual protection of humans and the natural world.

Commit to a robust, binding, enforceable international climate change agreement that aims to eliminate climate-related human and environmental rights violations

Climate change impacts already fuel a significant number of co-violations, such as described in the Lake Chad desertification case study, among others. But this is only part of the picture, as climate change's sources – such as fossil fuel extraction and refining, deforestation, and others – themselves cause other, significant numbers of co-violations. A robust and effective climate change treaty can help address some of these climate change-related co-violations. However, time is running short. As recognized in a 2015 joint statement from the U.N., “the heads of governments and their climate negotiators represent the very last generation that can prevent catastrophic environmental harm to a vast array of human rights.”²³⁹

To be effective, an international climate change treaty must have several elements. As background, it should limit warming to 1°C above pre-industrial levels to avoid the worst impacts. This is the temperature target called for by the “People's Agreement” from the 2010 World People's Conference on Climate Change and the Rights of Mother Earth.²⁴⁰ By contrast, the Copenhagen Accord²⁴¹ and Cancun Agreements²⁴² target a 2°C temperature increase (although the latter document recognizes the need to *consider* a 1.5°C target). A 2013 report led by James Hansen found that while a 2°C increase “could cause major dislocations for civilization,” an increase of 1°C “keeps global temperature close to the Holocene range” to which “humanity and nature . . . is adapted.”²⁴³

To have some possibility of meeting a 1°C scenario, “extraordinarily rapid emission reductions are needed,”²⁴⁴ an effort that would also address many of the main current

causes of co-violations (including fossil fuel extraction and deforestation). If there is delay in this effort that prevents meeting the 1°C target, an international climate change treaty should in the alternative limit warming to no more than a 1.5°C above pre-industrial levels. There is a meaningful difference between a 2°C and 1.5°C temperature increase in terms of risks to both human rights and nature's rights. The U.N. High Commissioner for Human Rights has found that “incremental increases in impacts and risks adversely affect the full enjoyment of a wide range of human rights, and make it correspondingly more difficult for States to fulfill their obligations under international law to respect, protect and promote human rights.”²⁴⁵

Fortunately, a 1.5°C target can still be met through deep emissions cuts across all sectors and achieving carbon neutrality between 2045-2060 (followed by a period of *negative* carbon emissions).²⁴⁶ However, once again, the window for meaningful action is small.

With this background in mind, an effective international climate change treaty should include the following elements:

- Commitment by the international community to a robust *and binding* agreement that mandates emissions reductions necessary to limit the global temperature increase to 1°C above pre-industrial levels. If this is impossible, the climate change agreement should commit – with enforcement provisions – to limiting global temperature increases to 1.5°C.
- Explicit recognition that climate change fuels co-violations of human and environmental rights, that Parties to the treaty have a legal obligation to affirmatively prevent such co-violations, and that addressing co-violations must be central to the global climate change response, specifically taking precedent over economic and particularly “corporate rights” considerations.
- Full recognition, integration, and implementation of key human and environmental rights instruments. This includes the UNDRIP, the



UDHR, and the UDRME.

- Explicit recognition that, where harms from climate change cannot be avoided, states must take actions to mitigate and fully remedy violations of environmental and human (including particularly indigenous) rights.²⁴⁷
- Rejection of carbon markets, Reducing Emissions from Deforestation and Forest Degradation (REDD) and REDD+, and other elements of the international climate change regime that commodify nature and violate rights to free, prior, and informed consent.²⁴⁸

Adopt global and national moratoriums on particular sources of co-violations

The international community must consider immediate, global moratoriums on major causes of co-violations, including activities that significantly exacerbate climate change. Just as certain sources of human rights violations are now universally prohibited (such as a ban on torture), and just as the international community has taken action in the past to phase out particularly harmful chemicals (most notably through the Montreal Protocol), so too must we begin to eliminate specific activities that result in widespread co-violations of nature's rights and human rights.

One example is a moratorium on new coal mines, as recently supported by leaders from the Cook Islands, Kiribati, Marshall Islands, Nauru, Palau, and Tuvalu.²⁴⁹ Another example would be for an international climate change agreement to call for an end to all fossil fuel subsidies, which currently amount to hundreds of billions of dollars annually.²⁵⁰ Recently, thirty trade union bodies representing tens of millions of workers issued a statement calling for a "global moratorium on hydraulic fracturing (fracking) for shale gas, coal seam gas, and shale oil."²⁵¹

An especially important area for a moratorium is a ban on extractive or other industrial activity within Sacred

Natural Sites and Territories.²⁵² These sacred areas are the bedrock of indigenous governance systems, which require protection of ancestral and traditional territories. As described in the attached case studies, many areas important to indigenous governance and spiritual life are under attack by industrial interests with little regard for the significance of these sites. Sacred Natural Sites and Territories should be deemed "no go areas" for industrial development. Such moratoriums are critical to the protection of indigenous rights, such as:

- "the right to maintain and strengthen their . . . cultural institutions" (UNDRIP Article 5); and
- "the right to manifest, practise, develop and teach their spiritual and religious traditions, customs and ceremonies; [and] the right to maintain, protect, and have access in privacy to their religious and cultural sites . . ." (UNDRIP Article 12).

Create an international mechanism to monitor and enforce standards that co-promote human rights and nature's rights

Of the 100 co-violation cases compiled in this report, 61 cases involved co-violations resulting from the activities of extractive industries and energy production. Additionally, over half of the murders documented in this report arose from cases involving extraction and energy production.²⁵³ Adding to the problem of increasingly violent co-violations committed in connection with the extractive industries and development projects is the issue of widespread impunity for both state and non-state actors responsible for such co-violations.²⁵⁴ This report finds that 55 of the 61 co-violations related to energy production and the extractive industries resulted from state action or failure to act, with 15 such cases resulting in the state-sanctioned killing of environmental defenders, reportedly by the use of excessive police force.²⁵⁵ These violations rarely led to state efforts to charge or prosecute the perpetrators.²⁵⁶ Where prosecutorial efforts were made, investigations are often excessively prolonged, and due process is not guaranteed.²⁵⁷ Given that many states are economically dependent on the extractive and energy



production industries, corporate interests often guide government inaction in response to co-violations, which in turn creates a culture of impunity that breeds further violence aimed at silencing those who oppose such projects.²⁵⁸

Over 60 percent of the co-violations compiled for this report involved extractive industries and energy production, industries that accounted for almost 60 percent of the killings reported in the case studies.

To address the interrelated problems of human and nature's rights co-violations within these industries and associated endemic impunity for perpetrators, the international community should create an independent, global mechanism to monitor these industries and feed into an enforcement mechanism that is grounded in rights-based laws. This mechanism should set and enforce environmental and human rights standards that protect the environment and its defenders, and should also provide an accountability mechanism through

which co-violations may be reported, investigated, and prosecuted.

To ensure independence, transparency, and efficiency, this international monitoring and enforcement agreement should include the following tools:

- a list of human rights (including labor and indigenous rights) and environmental rights standards that apply to any project operating within the scope of the agreement;
- a process for issuing and hearing from impartial observers responsible for determining whether such standards have been met on a project-by-project basis;
- an enforcement mechanism capable of issuing sanctions to state or industry actors acting in violation of adopted standards;
- an accessible, multilingual accountability office responsible for investigating project complaints and offering redress to victims of co-violations



Woman washing her hands in the polluted Parañaque River, The Philippines

(including non-human victims, consistent with the UDRME);

- regular publication of complaints filed; and
- a process for receiving and responding to feedback from civil society, indigenous peoples, and other stakeholders, with regular outreach to particularly at-risk stakeholders to ensure that their voices are heard.²⁵⁹

Finally, states should address the issue of state-perpetuated co-violations by strengthening the availability of current remedies for human rights violations and ensuring – with independent, international observers – that national institutions act in accordance with human and nature’s rights norms and standards.²⁶⁰

Adopt and implement an international treaty to prevent and enforce against corporate human rights violations

In June 2014, the United Nations Human Rights Council established an intergovernmental working group to develop a legally binding instrument that would prevent and address corporate human rights violations.²⁶¹ To mitigate the frequency of co-violations, particularly those that take place in connection with the activities of the extractive industries, construction, and energy production, any such future instrument should regulate the activities of business enterprises under human rights laws and according to the rights of nature (particularly those rights recognized by the UDRME). The text of a future treaty should also specifically address the heightened risk posed to environmental defenders by the activities of transnational corporations and business entities.²⁶²

Provide emergency protection to at-risk environmental defenders

As this report repeatedly highlights, environmental defenders face a high risk of human rights violations in the context of their advocacy. For example, of the 100 cases studied in this report, fully 29 involved the killings

of environmental defenders. Environmental defenders and their families are “intimidated, harassed, subject to surveillance, threatened, attacked, arbitrarily arrested, criminalized, tortured and ill-treated in detention, subject to enforced disappearances, and sometimes killed.”²⁶³ In 2015, the U.N.’s Special Rapporteur emphasized that he is “extremely worried about the . . . most exposed groups of defenders,” finding that their work is “an extraordinarily dangerous activity” that is nonetheless a “universally recognized right.” He recommended “exhaust[ion of] every possible opportunity to provide them with better protection.”²⁶⁴

The work of environmental defenders has become “an extraordinarily dangerous activity” in many areas.

-U.N. Special Rapporteur on the Situation of Human Rights Defenders (2015)

The frequency with which rights co-violations are perpetrated against environmental defenders demands significantly greater protections of their important work by the international community. For example, Article 25 of the Rules of Procedure of the Inter-American Commission on Human Rights (IACHR) establishes a mechanism to provide emergency protection for persons in “serious and urgent situations [that face] a risk of irreparable harm” due to their association with a particular organization or community.²⁶⁵ These precautionary measures aim to protect the lives and physical integrity of human rights defenders so that such persons may continue their advocacy without being subject to acts of violence and harassment.²⁶⁶ However, this emergency protection, like other provisions worldwide, is clearly being under-utilized.

In consideration of the high number of fatal co-violations, the IACHR provisions should be fully enforced. Furthermore, the Human Rights Commissions of the Association of South East Asian Nations and the African Commission on Human and Peoples’ Rights should establish a mechanism for emergency protection



measures that draws from the IACHR model and ensures its implementation. In the interim, the United Nations should assign heightened numbers of staff, including but not limited to staff and resources associated with the U.N. Special Rapporteur on the Situation of Human Rights Defenders, to document and daylight these abuses. Regular reports should be provided to the media to bring the world's attention to this severe and growing problem.

Finally, as noted below, international funding entities (including private foundations) should enhance their programmatic priorities toward support and protection for defenders of nature's rights and associated human and indigenous rights. This should include outreach and legal support as well as other protective measures.



Mayan Riviera coral reef, Mexico

STATES

Summary of Recommendations

While action at the international level is essential, nations can and must also take action to recognize and enforce nature's rights in law. Importantly, state action can also serve as a model for international work. Among other steps, we recommend that states work now to:

- Recognize in law and enforce the fundamental rights of nature
- Protect and enforce the rights of indigenous peoples
- Protect and enforce the rights of other defenders of land and environment, and human rights more generally
- Provide transparent access to environmental information and justice, consistent with the rule of law

We address each of these recommendations briefly below.

Recognize in law and enforce the fundamental rights of nature

As discussed above, states such as Bolivia, Ecuador, and New Zealand, along with dozens of U.S. communities, have made significant strides in recognizing nature's rights in law. Their actions should be taken up and expanded by states around the world. Much as states have incorporated the human right to a healthy environment into their constitutions, laws, and court decisions, so too should they now move to recognize in law the environment's own right to be healthy. As described by law professor Christopher Stone, to be effective these laws must include accountability requirements such as citizen enforcement provisions, should provide for independent representation for affected natural ecosystems and species, and should mandate full

redress of environmental injuries. Finally, existing courts should be educated with regard to enforcement of such laws, and new courts created as needed to ensure the full implementation of nature's rights.

Protect and enforce the rights of indigenous peoples

As detailed above, the rights of indigenous peoples are frequently violated simultaneously with violations of the rights of nature. "Because of their close relationship with the environment, indigenous peoples are particularly vulnerable to impairment of their rights through environmental harm."²⁶⁷ In addition, as observed by the U.N.'s Special Rapporteur on the rights of indigenous peoples, the "extractive industry activities generate effects that often infringe upon indigenous peoples' rights."²⁶⁸ Considering the disproportionate harm being caused to indigenous peoples by perpetrators of nature's rights, as well as the critical role that indigenous peoples play in protecting the natural world, states must take additional steps to protect their rights.

States at a minimum must ensure the free, prior, and informed consent for all projects potentially affecting indigenous peoples.

First, as called for by the People's Agreement of Cochabamba,²⁶⁹ states must ensure the full recognition, respect, and implementation of indigenous rights, including through full adherence to the U.N. Declaration on the Right of Indigenous Peoples and the International Labour Organisation Convention Concerning Indigenous and Tribal Peoples in Independent Countries (ILO 169). As of late 2015 only 22 countries ratified ILO 169,²⁷⁰ a legally binding instrument that helps protect the fundamental rights of indigenous peoples and the integrity of their traditional lands.²⁷¹ ILO 169 should be universally adopted.

The People's Agreement of Cochabamba also specifically "call[s] upon States to give legal recognition to claims over

territories, lands and natural resources to enable and strengthen [indigenous peoples'] traditional ways of life and contribute effectively to solving climate change."²⁷² As a first and most fundamental step towards this goal, states at a minimum must ensure the free, prior, and informed consent for all extractive projects and land use decisions that may affect indigenous peoples.

States must also ensure impartial, thorough, prompt, and transparent investigations into reported infringements of indigenous rights – especially with regard to violence directed against indigenous lands defenders.²⁷³ Additionally, as recognized by human and indigenous rights instruments, where indigenous rights violations do occur, states must provide for an "effective remedy," such as through state implementation of "mechanisms that allow defenders to communicate their grievances, claim responsibilities, and obtain effective redress for violations, without fear of intimidation."²⁷⁴

Finally, indigenous rights will only be fully appreciated if our legal systems are expanded and enriched by recognition of indigenous governance systems. Such new, pluralistic legal systems will help evolve currently-destructive legal approaches that commodify and degrade the natural world, and guide them to seek the overall well-being of all life and that of future generations.



Sacred Valley, Peru, Photo by Quinet



Protect and enforce the rights of other defenders of land and environment, and human rights more generally

In addition to protecting the rights of indigenous peoples in particular, states must ensure the protection of environmental defenders overall from rights violations, as well as prevent and redress other human rights violations associated with environmental degradation where possible under existing and new instruments.

The U.N. Declaration on Human Rights Defenders affirms in Article 1 the right to “promote and to strive for the protection and realization of human rights and fundamental freedoms at the national and international levels.”²⁷⁵ Article 2 immediately assigns to states the “prime responsibility and duty to protect, promote and implement all human rights and fundamental freedoms,” including by adopting “such legislative, administrative and other steps as may be necessary to ensure that the rights and freedoms referred to in the present Declaration are effectively guaranteed.” Further, Article 9 adds that those whose rights are violated have the right to a public hearing and redress. In other words, this international agreement assigns states the responsibility to adopt laws and other mechanisms that protect people from the types of co-violations described in this report. States must pick up this responsibility again, and it is all of our own responsibility – as well as that of the international community – to ensure they do so effectively.

The U.N. Special Rapporteur on human rights defenders adds to this list of recommendations. The current Special Rapporteur recently urged the United Nations to ensure implementation of the Declaration on Human Rights Defenders and called on states to meet their obligations to:²⁷⁶

- ensure that defenders can go about their work in a national framework buttressed by appropriate laws and regulations;
- remove the obstacles any domestic laws may place on the legitimate activities to promote and protect human rights conducted by defenders,

including activities associated with the right to peaceful assembly and freedom of association; and

- conduct impartial investigations and ensure that the perpetrators of violations against the rights of defenders are brought to justice.

As recognized by the Special Representative of the Secretary-General on the situation of human rights defenders, “[h]istorically, protests and demonstrations have been the engines of change and major contributing factors to advances in human rights.”²⁷⁷ Protection of our shared responsibility to exercise these and related rights is essential to perfect human and indigenous rights implementation, as well as to ensure recognition of nature’s rights in law.

Finally, states must act to prevent and redress other violations of human rights that may occur with nature’s rights violations, including injury and illness associated with environmental degradation. These rights are well-described in the UDHR and associated constitutional, statutory, and judicial legal instruments worldwide. Their implementation, however, has lagged in the face of overwhelming pressure from overarching legal and economic systems that push for ever-more degradation of the Earth.

Provide transparent access to environmental information and justice, consistent with the rule of law

Numerous co-violations arise when international corporations, states, and other actors exclude local communities and individuals in environmental decision-making and then fail to provide access to justice for resulting environmental harms. Transparency and access to justice protect both human rights and nature’s rights and are necessary to governance by rule of law. The U.N. describes the rule of law as:

a principle of governance in which all persons, institutions and entities, public and private, including the State itself, are accountable to laws

that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights norms and standards. It requires . . . equality before the law, accountability to the law, fairness in the application of the law, ... avoidance of arbitrariness and procedural and legal transparency.²⁷⁸

The Preamble of the UDHR describes application of the rule of law as “essential” to the protection of human rights. The UN further finds adherence to the rule of law necessary to achieve “durable peace.”²⁷⁹

Generally stated, the rule of law means no one is above the law. Norms, policies, institutions, and processes that adhere to the rule of law create a society “in which individuals feel safe and secure, where disputes are settled peacefully and effective redress is available for harm suffered, and where all who violate the law, including the State itself, are held to account.”²⁸⁰ Full participation in governance systems to ensure protection of human rights and nature’s rights is essential to governance by the rule of law. Towards this end, transparency and access to justice are critical.

Full implementation of nature’s rights and human rights requires government transparency and access to justice.

One way to begin to incorporate the natural world into our governance systems consistent with the rule of law is to establish and enforce access to environmental information, public participation in decisions that affect the environment, and access to justice in environmental matters.”²⁸¹ These environmental access rights are embodied in Principle 10 of the 1992 Rio Declaration, which recognizes that environmental decisions are best made with the participation of all concerned citizens.²⁸² However, much of the world has not fulfilled the guarantee of environmental access rights envisioned by Principle 10. Those states closest to this goal are the member states of the U.N. Economic Commission of Europe (UNECE), the majority of which have ratified the Convention on Access to Information, Public Participation in Decision-making



Ural owl in Albu, Estonia, Photo by Ireen Trummer

and Access to Justice in Environmental Matters (“Aarhus Convention”).

To close this gap, the international community should consider pursuing regional environmental access rights conventions. As opposed to an international convention, regional conventions are likely to be more swiftly adopted, and could tailor environmental access rights to a particular area and take full advantage of existing regional processes, institutions, and cultures.²⁸³ The U.N. Special Rapporteur on human rights and the environment identified regional implementation of Principle 10 as a “good practice” in the implementation of human rights obligations relating to the environment.²⁸⁴



Recently, Members of the Economic Commission for Latin America and the Caribbean began to advance a regional agreement for environmental access rights, with the negotiation phase beginning in November 2014 and a regional agreement planned for completion by December 2016.²⁸⁵ An October 2015 statement from fifteen U.N. Special Procedures experts supported such a regional instrument for Latin America and the Caribbean, noting that “a robust, legally binding regional instrument would provide invaluable support for [implementing Principle 10 at the national and local level], including by protecting environmental human rights defenders, including indigenous activists and leaders and women human rights defenders, who are at high risk of harassment and even death in many countries.”²⁸⁶

In addition to these efforts, the UNECE could decide to include additional states within the Aarhus Convention by opening it up for ratification by states outside of the UNECE. Finally, another option is to pursue a new international treaty on environmental access rights.

OTHER ACTORS

“Every human being is responsible for respecting and living in harmony with Mother Earth.”

-Universal Declaration of the Rights of Mother Earth, Art. 3(1).

To fully prevent and address co-violations, we must also look to ourselves. As recognized in Article 3 of the Universal Declaration of the Rights of Mother Earth, all human beings and public and private institutions (including states) must “act in accordance with the rights and obligations” of nature recognized in the UDRME, and all must “ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth, now and in the future.” In short, “[e]very human being is responsible for respecting and living in harmony with Mother Earth.”

As described throughout this report, corporations and

states are acting in ways that co-violate the rights of people, ecosystems and species. We must hold our governments, and those entities that they are required to regulate, to a higher standard.

To fully address the co-violations occurring daily around the world, we must evolve the actions of corporations, other private actors, governments, and ourselves to be in harmony with our planet’s rights and needs. Companies and other private actors in particular must take strong actions to end common sources of co-violations of human and environment rights. For example, among other steps, governments should insist that corporations:

- refuse to make any investment decision or project plan without genuine free, prior, and informed consent that includes representatives of the ecosystems and species at issue;
- conduct “due diligence checks on supply chains” to ensure they do not implicate human rights abuses and environmental harms;
- refrain from operating in militarized areas, or using private security where there are credible allegations of prior involvement in human rights violations; and
- make the full observation of human and nature’s rights mandatory company practice.²⁸⁷

Given the complicity of many governments in the co-violations described in this report, among numerous others, this change will not come about simply by asking. We have a responsibility as individuals and members of society to demand that these changes be made.

For example, as noted earlier, communities around the United States have begun enacting local laws (ordinances) that recognize the inherent rights of nature to exist, thrive, and evolve and that include citizen suit provisions to ensure those rights are implemented. Citizens around the world can begin to take similar actions to build a global network of such laws, which can pressure further action at all levels of government.²⁸⁸

The International Tribunals on the Rights of Nature are providing additional leadership globally, illustrating both the need and potential for formal court proceedings to protect nature's rights. Local tribunals consistent with the formal procedure of the International Tribunals could further build a broad body of practice that leads toward the creation of such law and courts across the world.

“[P]rotests and demonstrations have been the engines of change and major contributing factors to advances in human rights.”

-U.N. Special Rapporteur on the Situation of Human Rights Defenders

In addition to such efforts, peaceful protests and demonstrations have brought about enormous change in advancing human rights over the last two hundred years. We must claim and exercise our rights under the Declaration on Human Rights Defenders to:

- “seek the protection and realization of human rights at the national and international levels”;
- “conduct human rights work individually and in association with others”; and
- “form associations and non-governmental organizations” and “meet or assemble peacefully” to realize human and nature’s rights worldwide.²⁸⁹

Those with a particular level of power to assist such work also must use that gift effectively. To this end, the U.N. Special Rapporteur encourages international donors and creditors and intergovernmental organizations, including private foundations, to:

- strengthen aid programs for environmental and human rights defenders; and
- examine ways of providing pro bono legal aid to defenders, by instituting an international network of lawyers and legal experts willing to help defenders, especially in emergencies.²⁹⁰



Caracol Falls, Brazil, Photo by Tfioreze, Wikipedia Commons

At the same time as we work to prevent destructive actions, we also must work to implement alternatives – particularly economic alternatives – that achieve the well-being of humans and nature. For example, the final declaration of the U.N.’s Rio +20 convention called for “broader measures of progress to complement gross domestic product in order to better inform policy decisions.”²⁹¹ The UDRME recognizes that we must “promote economic systems that are in harmony with Mother Earth and in accordance with the rights recognized in this Declaration” (Art. 3(2)(l)). One such system is ecological economics, which treats the economic system as a subset of the larger ecosphere, rather than treating nature as a commodity that is part of the larger economy.²⁹² Ecological economics also recognizes that infinite economic growth is not possible on a finite planet, and that an increase in consumption does not mean an increase of well-being.²⁹³

Our current, blind obeisance to “corporate rights” over human and environmental rights is driving the destruction we are witnessing today. We must reject this flawed worldview and adopt economic systems that reflect and nurture the world we live in. Businesses, community members, and other actors should be guided to “opt-in” to new financial systems, business models, and lifestyles



that protect people and planet, consistent with ecological economics.

Finally, on an individual level, many of us contribute in our own ways to overall harm through wasteful consumer habits and other destructive patterns. Fortunately, numerous organizations worldwide are leading the way in illustrating alternative lifestyles and livelihoods in harmony with the Earth. For example, we can choose to evolve our communities toward such sustainable models as Transition Towns²⁹⁴ and “eco-cities.” The latter are ecologically healthy, self-sustaining cities that are modeled on the structure and function of natural ecosystems.²⁹⁵ Businesses and communities could also

participate in the localism movement,²⁹⁶ which utilizes permaculture, renewable energy, locally grown food, local commerce and other methods to achieve healthy, sustainable communities supported by local economies. As a final example, we could choose to participate in the “sharing economy,” which utilizes social enterprises, urban farms, cooperatives, cohousing communities, local currencies, time banks, and other social innovations that benefit humans and nature.²⁹⁷

Numerous alternatives exist for us to exercise our responsibility to respect and live in harmony with the Earth. It is up to us to seize those opportunities, now.



“Water is the source of life, not profit,” Photo by Linda Sheehan

CONCLUSION

The complex, vibrant world we know today evolved over billions of years, expanding in complexity and consciousness to include our own, human community. Our modern laws and economic system, however, force us to pretend we exist outside of the natural world and allow us to treat it as merely natural “resources” to feed our short-term financial gain. Modern science shows this to be false by demonstrating what we instinctively know: that we exist in webs of integrated relationships with a life-giving Earth. The laws and ethics of our governance must reflect these new lessons. We must evolve our laws to heed Leopold’s advice to protect “every cog in the wheel”²⁹⁸ of life. It is not only deeply unwise to do otherwise – it is simply immoral.

The evolution of human rights shows us how we can evolve the law to recognize nature’s rights. Human rights and the rights of indigenous peoples have been recognized in law internationally. An increasing number of nations have similarly enshrined the human right to a healthy environment in law. Finally, as we extend the circle of the

rights-bearing community outward, we are beginning to similarly recognize the rights of nature.

The case studies examined in this report, however, demonstrate that there is much urgent work to be done. We must act now, individually and collectively, to transform our modern society to one that rejects our current, destructive economic structure and embraces governance that reflects the rights of both humans and the natural world to reach this goal.

The case studies examined in this report represent only the first 100 we collected; the list of co-violations of human rights and nature’s rights expands daily. This cannot continue. This report provides a suite of short-, medium-, and long-term steps we can take to stop and reverse this trend, for the benefit affected people, ecosystems, and species, as well as all of us on our small, fragile, shared planet. As reflected by Apollo 15 Astronaut Alfred Worden, “Now I know why I’m here. Not for a closer look at the moon, but to look back at our home, the Earth.”



“Blue Marble,” December 1972, Photo by Apollo 17

APPENDICES



APPENDIX 1:



Universal Declaration of the Rights of Mother Earth

World People's Conference on
Climate Change and the Rights of
Mother Earth

Cochabamba, Bolivia

April 22, 2010



Preamble

We, the peoples and nations of Earth:

considering that we are all part of Mother Earth, an indivisible, living community of interrelated and interdependent beings with a common destiny;

gratefully acknowledging that Mother Earth is the source of life, nourishment and learning and provides everything we need to live well;

recognizing that the capitalist system and all forms of depredation, exploitation, abuse and contamination have caused great destruction, degradation and disruption of Mother Earth, putting life as we know it today at risk through phenomena such as climate change;

convinced that in an interdependent living community it is not possible to recognize the rights of only human beings without causing an imbalance within Mother Earth;

affirming that to guarantee human rights it is necessary to recognize and defend the rights of Mother Earth and all beings in her and that there are existing cultures, practices and laws that do so;

conscious of the urgency of taking decisive, collective action to transform structures and systems that cause climate change and other threats to Mother Earth;

proclaim this Universal Declaration of the Rights of Mother Earth, and call on the General Assembly of the United Nation to adopt it, as a common standard of achievement for all peoples and all nations of the world, and to the end that every individual and institution takes responsibility for promoting through teaching, education, and consciousness raising, respect for the rights recognized in this Declaration and ensure through prompt and progressive measures and mechanisms, national and international, their universal and effective recognition and observance among all peoples and States in the world.

Article 1. Mother Earth

(1) Mother Earth is a living being.

(2) Mother Earth is a unique, indivisible, self-regulating community of interrelated beings that sustains, contains and reproduces all beings.

(3) Each being is defined by its relationships as an integral part of Mother Earth.

(4) The inherent rights of Mother Earth are inalienable in that they arise from the same source as existence.

(5) Mother Earth and all beings are entitled to all the inherent rights recognized in this Declaration without distinction of any kind, such as may be made between organic and inorganic beings, species, origin, use to human beings, or any other status.

(6) Just as human beings have human rights, all other beings also have rights which are specific to their species or kind and appropriate for their role and function within the communities within which they exist.

(7) The rights of each being are limited by the rights of other beings and any conflict between their rights must be resolved in a way that maintains the integrity, balance and health of Mother Earth.



Article 2. Inherent Rights of Mother Earth

- (1) Mother Earth and all beings of which she is composed have the following inherent rights:
 - (a) the right to life and to exist;
 - (b) the right to be respected;
 - (c) the right to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions;
 - (d) the right to maintain its identity and integrity as a distinct, self-regulating and interrelated being;
 - (e) the right to water as a source of life;
 - (f) the right to clean air;
 - (g) the right to integral health;
 - (h) the right to be free from contamination, pollution and toxic or radioactive waste;
 - (i) the right to not have its genetic structure modified or disrupted in a manner that threatens its integrity or vital and healthy functioning;
 - (j) the right to full and prompt restoration for violation of the rights recognized in this Declaration caused by human activities;
- (2) Each being has the right to a place and to play its role in Mother Earth for her harmonious functioning.
- (3) Every being has the right to wellbeing and to live free from torture or cruel treatment by human beings.

Article 3. Obligations of human beings to Mother Earth

- (1) Every human being is responsible for respecting and living in harmony with Mother Earth.
- (2) Human beings, all States, and all public and private institutions must:
 - (a) act in accordance with the rights and obligations recognized in this Declaration;
 - (b) recognize and promote the full implementation and enforcement of the rights and obligations recognized in this Declaration;
 - (c) promote and participate in learning, analysis, interpretation and communication about how to live in harmony with Mother Earth in accordance with this Declaration;
 - (d) ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth, now and in the future;
 - (e) establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth;
 - (f) respect, protect, conserve and where necessary, restore the integrity, of the vital ecological cycles, processes and balances of Mother Earth;
 - (g) guarantee that the damages caused by human violations of the inherent rights recognized in this Declaration are rectified and that those responsible are held accountable for restoring the integrity and health of Mother Earth;
 - (h) empower human beings and institutions to defend the rights of Mother Earth and of all beings;
 - (i) establish precautionary and restrictive measures to prevent human activities from causing species extinction, the destruction of ecosystems or the disruption of ecological cycles;
 - (j) guarantee peace and eliminate nuclear, chemical and biological weapons;
 - (k) promote and support practices of respect for Mother Earth and all beings, in accordance with their own cultures, traditions and customs;
 - (l) promote economic systems that are in harmony with Mother Earth and in accordance with the rights recognized in this Declaration.

Article 4. Definitions

- (1) The term “being” includes ecosystems, natural communities, species and all other natural entities which exist as part of Mother Earth.
- (2) Nothing in this Declaration restricts the recognition of other inherent rights of all beings or specified beings.

APPENDIX 2:



Universal Declaration of Human Rights

United Nations General Assembly
Paris, France
December 10, 1948



Preamble

Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,

Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,

Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,

Whereas it is essential to promote the development of friendly relations between nations,

Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom,

Whereas Member States have pledged themselves to achieve, in co-operation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms,

Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge, Now, Therefore THE GENERAL ASSEMBLY proclaims THIS UNIVERSAL DECLARATION OF HUMAN RIGHTS as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

Article 1.

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Article 2.

Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty.

Article 3.

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



Article 4.

No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

Article 5.

No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 6.

Everyone has the right to recognition everywhere as a person before the law.

Article 7.

All are equal before the law and are entitled without any discrimination to equal protection of the law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination.

Article 8.

Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.

Article 9.

No one shall be subjected to arbitrary arrest, detention or exile.

Article 10.

Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him.

Article 11.

(1) Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence.

(2) No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the penal offence was committed.

Article 12.

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.



Article 13.

- (1) Everyone has the right to freedom of movement and residence within the borders of each state.
- (2) Everyone has the right to leave any country, including his own, and to return to his country.

Article 14.

- (1) Everyone has the right to seek and to enjoy in other countries asylum from persecution.
- (2) This right may not be invoked in the case of prosecutions genuinely arising from non-political crimes or from acts contrary to the purposes and principles of the United Nations.

Article 15.

- (1) Everyone has the right to a nationality.
- (2) No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.

Article 16.

- (1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.
- (2) Marriage shall be entered into only with the free and full consent of the intending spouses.
- (3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

Article 17.

- (1) Everyone has the right to own property alone as well as in association with others.
- (2) No one shall be arbitrarily deprived of his property.

Article 18.

Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

Article 19.

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

Article 20.

- (1) Everyone has the right to freedom of peaceful assembly and association.
- (2) No one may be compelled to belong to an association.



Article 21.

- (1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.
- (2) Everyone has the right of equal access to public service in his country.
- (3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.

Article 22.

Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Article 23.

- (1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.
- (2) Everyone, without any discrimination, has the right to equal pay for equal work.
- (3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.
- (4) Everyone has the right to form and to join trade unions for the protection of his interests.

Article 24.

Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

Article 25.

- (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
- (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

Article 26.

- (1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.
- (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.
- (3) Parents have a prior right to choose the kind of education that shall be given to their children.



Article 27.

- (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.
- (2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

Article 28.

Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.

Article 29.

- (1) Everyone has duties to the community in which alone the free and full development of his personality is possible.
- (2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.
- (3) These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.

Article 30.

Nothing in this Declaration may be interpreted as implying for any State, group or person any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.

APPENDIX 3:



U.N. Declaration on the Rights of Indigenous Peoples

United Nations General Assembly
New York City, NY, USA
September 13, 2007



The General Assembly,

Guided by the purposes and principles of the Charter of the United Nations, and good faith in the fulfilment of the obligations assumed by States in accordance with the Charter,

Affirming that indigenous peoples are equal to all other peoples, while recognizing the right of all peoples to be different, to consider themselves different, and to be respected as such,

Affirming also that all peoples contribute to the diversity and richness of civilizations and cultures, which constitute the common heritage of humankind,

Affirming further that all doctrines, policies and practices based on or advocating superiority of peoples or individuals on the basis of national origin or racial, religious, ethnic or cultural differences are racist, scientifically false, legally invalid, morally condemnable and socially unjust,

Reaffirming that indigenous peoples, in the exercise of their rights, should be free from discrimination of any kind,

Concerned that indigenous peoples have suffered from historic injustices as a result of, inter alia, their colonization and dispossession of their lands, territories and resources, thus preventing them from exercising, in particular, their right to development in accordance with their own needs and interests,

Recognizing the urgent need to respect and promote the inherent rights of indigenous peoples which derive from their political, economic and social structures and from their cultures, spiritual traditions, histories and philosophies, especially their rights to their lands, territories and resources,

Recognizing also the urgent need to respect and promote the rights of indigenous peoples affirmed in treaties, agreements and other constructive arrangements with States,

Welcoming the fact that indigenous peoples are organizing themselves for political, economic, social and cultural enhancement and in order to bring to an end all forms of discrimination and oppression wherever they occur,

Convinced that control by indigenous peoples over developments affecting them and their lands, territories and resources will enable them to maintain and strengthen their institutions, cultures and traditions, and to promote their development in accordance with their aspirations and needs,

Recognizing that respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment,

Emphasizing the contribution of the demilitarization of the lands and territories of indigenous peoples to peace, economic and social progress and development, understanding and friendly relations among nations and peoples of the world,

Recognizing in particular the right of indigenous families and communities to retain shared responsibility for the upbringing, training, education and well-being of their children, consistent with the rights of the child,

Considering that the rights affirmed in treaties, agreements and other constructive arrangements between States and indigenous peoples are, in some situations, matters of international concern, interest, responsibility and character,



Considering also that treaties, agreements and other constructive arrangements, and the relationship they represent, are the basis for a strengthened partnership between indigenous peoples and States,

Acknowledging that the Charter of the United Nations, the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights, as well as the Vienna Declaration and Programme of Action, affirm the fundamental importance of the right to self-determination of all peoples, by virtue of which they freely determine their political status and freely pursue their economic, social and cultural development,

Bearing in mind that nothing in this Declaration may be used to deny any peoples their right to self-determination, exercised in conformity with international law,

Convinced that the recognition of the rights of indigenous peoples in this Declaration will enhance harmonious and cooperative relations between the State and indigenous peoples, based on principles of justice, democracy, respect for human rights, non-discrimination and good faith,

Encouraging States to comply with and effectively implement all their obligations as they apply to indigenous peoples under international instruments, in particular those related to human rights, in consultation and cooperation with the peoples concerned,

Emphasizing that the United Nations has an important and continuing role to play in promoting and protecting the rights of indigenous peoples,

Believing that this Declaration is a further important step forward for the recognition, promotion and protection of the rights and freedoms of indigenous peoples and in the development of relevant activities of the United Nations system in this field,

Recognizing and reaffirming that indigenous individuals are entitled without discrimination to all human rights recognized in international law, and that indigenous peoples possess collective rights which are indispensable for their existence, well-being and integral development as peoples,

Recognizing that the situation of indigenous peoples varies from region to region and from country to country and that the significance of national and regional particularities and various historical and cultural backgrounds should be taken into consideration,

Solemnly proclaims the following United Nations Declaration on the Rights of Indigenous Peoples as a standard of achievement to be pursued in a spirit of partnership and mutual respect:

Article 1

Indigenous peoples have the right to the full enjoyment, as a collective or as individuals, of all human rights and fundamental freedoms as recognized in the Charter of the United Nations, the Universal Declaration of Human Rights and international human rights law.

Article 2

Indigenous peoples and individuals are free and equal to all other peoples and individuals and have the right to be free from any kind of discrimination, in the exercise of their rights, in particular that based on their indigenous origin.



Article 3

Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.

Article 4

Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions.

Article 5

Indigenous peoples have the right to maintain and strengthen their distinct political, legal, economic, social and cultural institutions, while retaining their right to participate fully, if they so choose, in the political, economic, social and cultural life of the State.

Article 6

Every indigenous individual has the right to a nationality.

Article 7

1. Indigenous individuals have the rights to life, physical and mental integrity, liberty and security of person.
2. Indigenous peoples have the collective right to live in freedom, peace and security as distinct peoples and shall not be subjected to any act of genocide or any other act of violence, including forcibly removing children of the group to another group.

Article 8

1. Indigenous peoples and individuals have the right not to be subjected to forced assimilation or destruction of their culture.
2. States shall provide effective mechanisms for prevention of, and redress for:
 - (a) Any action which has the aim or effect of depriving them of their integrity as distinct peoples, or of their cultural values or ethnic identities;
 - (b) Any action which has the aim or effect of dispossessing them of their lands, territories or resources;
 - (c) Any form of forced population transfer which has the aim or effect of violating or undermining any of their rights;
 - (d) Any form of forced assimilation or integration;
 - (e) Any form of propaganda designed to promote or incite racial or ethnic discrimination directed against them.

Article 9

Indigenous peoples and individuals have the right to belong to an indigenous community or nation, in accordance with the traditions and customs of the community or nation concerned. No discrimination of any kind may arise from the exercise of such a right.

Article 10

Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.



Article 11

1. Indigenous peoples have the right to practise and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.
2. States shall provide redress through effective mechanisms, which may include restitution, developed in conjunction with indigenous peoples, with respect to their cultural, intellectual, religious and spiritual property taken without their free, prior and informed consent or in violation of their laws, traditions and customs.

Article 12

1. Indigenous peoples have the right to manifest, practise, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains.
2. States shall seek to enable the access and/or repatriation of ceremonial objects and human remains in their possession through fair, transparent and effective mechanisms developed in conjunction with indigenous peoples concerned.

Article 13

1. Indigenous peoples have the right to revitalize, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems and literatures, and to designate and retain their own names for communities, places and persons.
2. States shall take effective measures to ensure that this right is protected and also to ensure that indigenous peoples can understand and be understood in political, legal and administrative proceedings, where necessary through the provision of interpretation or by other appropriate means.

Article 14

1. Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning.
2. Indigenous individuals, particularly children, have the right to all levels and forms of education of the State without discrimination.
3. States shall, in conjunction with indigenous peoples, take effective measures, in order for indigenous individuals, particularly children, including those living outside their communities, to have access, when possible, to an education in their own culture and provided in their own language.

Article 15

1. Indigenous peoples have the right to the dignity and diversity of their cultures, traditions, histories and aspirations which shall be appropriately reflected in education and public information.
2. States shall take effective measures, in consultation and cooperation with the indigenous peoples concerned, to combat prejudice and eliminate discrimination and to promote tolerance, understanding and good relations among indigenous peoples and all other segments of society.



Article 16

1. Indigenous peoples have the right to establish their own media in their own languages and to have access to all forms of non-indigenous media without discrimination.
2. States shall take effective measures to ensure that State-owned media duly reflect indigenous cultural diversity. States, without prejudice to ensuring full freedom of expression, should encourage privately owned media to adequately reflect indigenous cultural diversity.

Article 17

1. Indigenous individuals and peoples have the right to enjoy fully all rights established under applicable international and domestic labour law.
2. States shall in consultation and cooperation with indigenous peoples take specific measures to protect indigenous children from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development, taking into account their special vulnerability and the importance of education for their empowerment.
3. Indigenous individuals have the right not to be subjected to any discriminatory conditions of labour and, inter alia, employment or salary.

Article 18

Indigenous peoples have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decisionmaking institutions.

Article 19

States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.

Article 20

1. Indigenous peoples have the right to maintain and develop their political, economic and social systems or institutions, to be secure in the enjoyment of their own means of subsistence and development, and to engage freely in all their traditional and other economic activities.
2. Indigenous peoples deprived of their means of subsistence and development are entitled to just and fair redress.

Article 21

1. Indigenous peoples have the right, without discrimination, to the improvement of their economic and social conditions, including, inter alia, in the areas of education, employment, vocational training and retraining, housing, sanitation, health and social security.
2. States shall take effective measures and, where appropriate, special measures to ensure continuing improvement of their economic and social conditions. Particular attention shall be paid to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities.



Article 22

1. Particular attention shall be paid to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities in the implementation of this Declaration.
2. States shall take measures, in conjunction with indigenous peoples, to ensure that indigenous women and children enjoy the full protection and guarantees against all forms of violence and discrimination.

Article 23

Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programmes affecting them and, as far as possible, to administer such programmes through their own institutions.

Article 24

1. Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals. Indigenous individuals also have the right to access, without any discrimination, to all social and health services.
2. Indigenous individuals have an equal right to the enjoyment of the highest attainable standard of physical and mental health. States shall take the necessary steps with a view to achieving progressively the full realization of this right.

Article 25

Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard.

Article 26

1. Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.
2. Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.
3. States shall give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned.

Article 27

States shall establish and implement, in conjunction with indigenous peoples concerned, a fair, independent, impartial, open and transparent process, giving due recognition to indigenous peoples' laws, traditions, customs and land tenure systems, to recognize and adjudicate the rights of indigenous peoples pertaining to their lands, territories and resources, including those which were traditionally owned or otherwise occupied or used. Indigenous peoples shall have the right to participate in this process.



Article 28

1. Indigenous peoples have the right to redress, by means that can include restitution or, when this is not possible, just, fair and equitable compensation, for the lands, territories and resources which they have traditionally owned or otherwise occupied or used, and which have been confiscated, taken, occupied, used or damaged without their free, prior and informed consent.
2. Unless otherwise freely agreed upon by the peoples concerned, compensation shall take the form of lands, territories and resources equal in quality, size and legal status or of monetary compensation or other appropriate redress.

Article 29

1. Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources. States shall establish and implement assistance programmes for indigenous peoples for such conservation and protection, without discrimination.
2. States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.
3. States shall also take effective measures to ensure, as needed, that programmes for monitoring, maintaining and restoring the health of indigenous peoples, as developed and implemented by the peoples affected by such materials, are duly implemented.

Article 30

1. Military activities shall not take place in the lands or territories of indigenous peoples, unless justified by a relevant public interest or otherwise freely agreed with or requested by the indigenous peoples concerned.
2. States shall undertake effective consultations with the indigenous peoples concerned, through appropriate procedures and in particular through their representative institutions, prior to using their lands or territories for military activities.

Article 31

1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.
2. In conjunction with indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights.

Article 32

1. Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.
2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.
3. States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact.



Article 33

1. Indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions. This does not impair the right of indigenous individuals to obtain citizenship of the States in which they live.
2. Indigenous peoples have the right to determine the structures and to select the membership of their institutions in accordance with their own procedures.

Article 34

Indigenous peoples have the right to promote, develop and maintain their institutional structures and their distinctive customs, spirituality, traditions, procedures, practices and, in the cases where they exist, juridical systems or customs, in accordance with international human rights standards.

Article 35

Indigenous peoples have the right to determine the responsibilities of individuals to their communities.

Article 36

1. Indigenous peoples, in particular those divided by international borders, have the right to maintain and develop contacts, relations and cooperation, including activities for spiritual, cultural, political, economic and social purposes, with their own members as well as other peoples across borders.
2. States, in consultation and cooperation with indigenous peoples, shall take effective measures to facilitate the exercise and ensure the implementation of this right.

Article 37

1. Indigenous peoples have the right to the recognition, observance and enforcement of treaties, agreements and other constructive arrangements concluded with States or their successors and to have States honour and respect such treaties, agreements and other constructive arrangements.
2. Nothing in this Declaration may be interpreted as diminishing or eliminating the rights of indigenous peoples contained in treaties, agreements and other constructive arrangements.

Article 38

States, in consultation and cooperation with indigenous peoples, shall take the appropriate measures, including legislative measures, to achieve the ends of this Declaration.

Article 39

Indigenous peoples have the right to have access to financial and technical assistance from States and through international cooperation, for the enjoyment of the rights contained in this Declaration.

Article 40

Indigenous peoples have the right to access to and prompt decision through just and fair procedures for the resolution of conflicts and disputes with States or other parties, as well as to effective remedies for all infringements of their individual and collective rights. Such a decision shall give due consideration to the customs, traditions, rules and legal systems of the indigenous peoples concerned and international human rights.



Article 41

The organs and specialized agencies of the United Nations system and other intergovernmental organizations shall contribute to the full realization of the provisions of this Declaration through the mobilization, inter alia, of financial cooperation and technical assistance. Ways and means of ensuring participation of indigenous peoples on issues affecting them shall be established.

Article 42

The United Nations, its bodies, including the Permanent Forum on Indigenous Issues, and specialized agencies, including at the country level, and States shall promote respect for and full application of the provisions of this Declaration and follow up the effectiveness of this Declaration.

Article 43

The rights recognized herein constitute the minimum standards for the survival, dignity and well-being of the indigenous peoples of the world.

Article 44

All the rights and freedoms recognized herein are equally guaranteed to male and female indigenous individuals.

Article 45

Nothing in this Declaration may be construed as diminishing or extinguishing the rights indigenous peoples have now or may acquire in the future.

Article 46

1. Nothing in this Declaration may be interpreted as implying for any State, people, group or person any right to engage in any activity or to perform any act contrary to the Charter of the United Nations or construed as authorizing or encouraging any action which would dismember or impair, totally or in part, the territorial integrity or political unity of sovereign and independent States.
2. In the exercise of the rights enunciated in the present Declaration, human rights and fundamental freedoms of all shall be respected. The exercise of the rights set forth in this Declaration shall be subject only to such limitations as are determined by law and in accordance with international human rights obligations. Any such limitations shall be non-discriminatory and strictly necessary solely for the purpose of securing due recognition and respect for the rights and freedoms of others and for meeting the just and most compelling requirements of a democratic society.
3. The provisions set forth in this Declaration shall be interpreted in accordance with the principles of justice, democracy, respect for human rights, equality, non-discrimination, good governance and good faith.

APPENDIX 4:



Co-Violation Examples Worldwide

from www.earthlawcenter.org/



AFRICA

1. Tindouf, Algeria

Human Rights Concern: Algeria has announced that it intends to tap into its shale gas reserves even though water shortages remain a major grievance. The process would require the use of 15 to 20 million liters of water for each fracturing (the average daily consumption of about 40,000 people). Shale gas drilling (or “fracking”) pollutes groundwater and aquifer reserves with toxic chemicals, threatening drinking water supplies, and also causes dangerous levels of toxic air pollution.

Environmental Rights Concern: Chemicals used during this large scale fracking operation are expected to cause soil contamination, groundwater pollution, and surface water pollution, threatening the health of fish and other aquatic species. Emissions from fracking, such as methane, are also major contributors to climate change.

2. Central Kalahari Game Reserve, Botswana

Human Rights Concern: The Central Kalahari Game Reserve (CKGR), the ancestral home of Botswana’s Bushmen, has been opened up for fracking by international companies that could operate thousands of gas wells. Coal bed methane fracking would use vast amounts of already-scarce water, which Bushmen rely upon to survive, lowering the water table by up to several hundred feet and potentially polluting water supplies with toxic chemicals.

Environmental Rights Concern: The Central Kalahari Game Reserve—a shrubby desert area defined by expansive plains, salt pans, and fossilized riverbeds—is the second largest wildlife reserve in the world. Fracking operations could contaminate surface and groundwater, degrade air quality with volatile toxins, and deplete water supplies, threatening the health of wildlife such as elephants, cheetahs, and leopards.

3. Kollo, Burkina Faso

Human Rights Concern: Small-scale gold mines across Burkina Faso in the African Sahel region (which also includes Niger and other countries) employ a workforce of 30 to 50 percent children. Some children are trafficked for labor; many others are exposed to mercury, which damages the brain, lungs, and kidney.

Environmental Rights Concern: To isolate gold from extracted ore, small-scale gold miners often add mercury to create an amalgam that they then burn, releasing mercury into the air that deposits on land and in water. Such mercury pollution causes developmental, neurological, and hormonal problems in wildlife and contaminates ecosystems. Development of the mines also destroys local habitat, consisting mainly of grasslands and small trees.



4. Lake Chad, Chad

Human Rights Concern: Communities heavily dependent on Lake Chad as a source of food, water, and jobs are suffering from malnutrition and displacement as intensified desertification – fueled by climate change, poor water management, and other pressures – is causing the lake to disappear.

Environmental Rights Concern: Lake Chad shrank 90 percent from 1963 to 2001, devastating this global biodiversity hotspot that is home to 120 fish species, 32 bird species, and rich wetlands. Lake Chad also suffers from loss of vegetation cover and reduced hydrological connectivity as a result of desertification.

5. Bosanga, Democratic Republic of Congo

Human Rights Concern: On April 20, 2011, residents of the Yalisika community protested against the logging company SIFORCO (a DRC subsidiary of Swiss-based Danzer Group) for its failure to meet commitments to invest in local infrastructure. In response, approximately 60 national police and navy officers reportedly clashed with local Yalisika residents, “[unleashing] a wave of violence” that included property destruction, the burning down of a home, the arrest of 16 villagers, rape, attacks on residents, and at least one murder.

Environmental Rights Concern: The Yalisika community is located in the territory of Bumba, which is situated in the Congo Basin – home to the world’s second largest rainforest after the Amazon. The area around Bumba lost nearly 37,000 hectares of forest from 2001 to 2012, harming important biodiversity, contributing to climate change, and polluting a host of tributaries to the Congo River.

6. Okapi Wildlife Reserve, Democratic Republic of Congo

Human Rights Concern: On June 24th, 2012, an elephant poacher named Paul Sadala (known as “Morgan”) and Mai Mai Simba rebels attacked the headquarters of the Okapi Wildlife Reserve, looting, kidnapping 28 women, raping, and killing six people – some of whom were burned alive.

Environmental Rights Concern: The attackers killed all of the Reserve’s 14 captive okapis, which were wildlife ambassadors for the community. The rebels launched the attack as retaliation for efforts to stop illegal elephant poaching and gold mining inside the Reserve, where okapi, forest buffalo, forest elephants, and over 300 bird species reside. The Reserve is a World Heritage site that was established in 1992 to protect one of the most important populations of okapi, which are only found in the Democratic Republic of Congo.

7. North Kivu, Democratic Republic of Congo

Human Rights Concern: There are ongoing reports of violence, child labor, murder, rape, and other human rights abuses by militias in eastern Democratic Republic of Congo that vie for control of lucrative coltan mining.

Environmental Rights Concern: Workers dig craters in streambeds to mine coltan, eroding and polluting the aquatic habitat. Miners also destroy forest habitat of the endangered mountain gorilla and hunt the gorillas for bush meat.



8. Lower Omo Valley, Ethiopia

Human Rights Concern: The Ethiopian government forced thousands of indigenous pastoralists off their land, sometimes using military violence and intimidation, in order to build sugar plantations. The government's larger redevelopment project also includes commercial agriculture and the massive Gibe III Dam, which could devastate the livelihoods of 170,000 resident agro-pastoralists that rely on water from the Omo River Basin.

Environmental Rights Concern: To plant the sugar plantations, the government eradicated all vegetation from large areas of the Lower Omo Valley, known for its biodiverse grasslands and riverine forests. Meanwhile, the Gibe III Dam could reduce the water level in Lake Turkana, a UNESCO World Heritage site and the world's largest desert lake, by up to 20 meters – devastating fish and destroying sensitive habitat.

9. Agbogbloshie, Ghana

Human Rights Concern: Workers in the world's biggest dumping site for e-waste suffer from severe health problems, including chronic nausea, headaches, respiratory problems, burns, sores, and damage to their nervous and reproductive systems. Many local workers reportedly die from cancer in their 20s.

Environmental Rights Concern: E-waste in Agbogbloshie, once a wetland, is frequently burned to salvage metals, poisoning the Korle Lagoon and Odaw River with toxic chemicals such as arsenic, mercury, and lead. E-waste is prevalent on the banks of the Odaw River, which is now devoid of life.

10. Tana Delta, Kenya

Human Rights Concern: Villagers report being forced off their land, some even facing threats of seeing their villages burn down, by proponents of large-scale plantations to grow sugar cane and jatropha for biofuels.

Environmental Rights Concern: The land and water grab in the Tana Delta threatens a rich wetland that is home to 350 bird species. Irrigation projects have already caused the Delta to shrink, destroying large areas of habitat.

11. Grand Cape Mount, Liberia

Human Rights Concern: The Government of Liberia has granted multinational corporation Sime Darby massive land concessions to expand its palm oil plantations without the consent of affected communities, displacing residents, swallowing up farms, destroying livelihoods, and impairing culturally sacred sites.

Environmental Rights Concern: The palm oil plantations have devastated numerous environmentally sensitive areas. For example, in Grand Cape Mount, Sime Darby filled in marshlands – once rich with mangroves and fish – with dirt, nearly drying up the only local creek. These plantations have also degraded the Upper Guinean Forest ecosystem, home to 15 endemic bird species and 1,800 endemic vascular plant species.



12. Fort Dauphin (Taolagnaro), Madagascar

Human Rights Concern: Fort Dauphin (Taolagnaro) residents were dispossessed of their land by the Rio Tinto/QMM mineral sand mining operation with little or no compensation, contrary to customary land rights. Fifteen activists seeking additional compensation and benefits for residents dispossessed of their land were arrested in March 2013.

Environmental Rights Concern: Madagascar is a biodiversity hotspot with over 200,000 types of plants and animals, including an estimated 64 species that only exist in Madagascar's coastal rainforests, where the mine is located. Sand mining has been shown to deplete groundwater, impact surface water quality, and harm biodiversity.

13. Swakopmund, Namibia

Human Rights Concern: Uranium ore miners at Rio Tinto's Rössing mine in Namibia have been dying of cancer and suffering from lung infections and other illnesses at increased rates. While working conditions have improved, a study found that miners are still exposed to harmful levels of dust and do not receive adequate information from Rio Tinto about threats to their health.

Environmental Rights Concern: On the Khan River, located downstream of the mine, scientists found an increase in uranium by a factor of over 2,000, as well as increased levels of nitrates, sulphates, fluoride, and radionuclides – substances that poison aquatic species and can also cause deformities and reproductive problems.

14. Ebocha, Nigeria

Human Rights Concern: During oil production in the Niger Delta, gas flaring and venting releases noxious gases into the air. Local villages report serious chronic health conditions from exposure to the gas, including bronchial, rheumatic, chest, and eye problems, amongst others. The noxious gas also leads to a loss of livelihood (such as by killing crops), landscape, and sense of place.

Environmental Rights Concern: Gas flaring is a major global contributor to climate change, accounting for 350 million tons of CO2 emissions annually (equivalent to the annual emissions of over 70 million cars). Locally, gas flaring acidifies local waterways and damages vegetation within the Niger Delta, Africa's largest wetland.

15. Niger Delta, Nigeria

Human Rights Concern: Shell and other oil companies have caused massive oil pollution in the Niger Delta through a mix of operational failures, aging infrastructure, and inadequate security. In 1996, the Nigerian government executed Ken Saro-Wiwa, a leading environmental activist in the Niger Delta, and eight other Ogoni people. In 2009, Shell was accused of being complicit in the executions and settled outside of court in the United States. Local concerns over oil pollution include respiratory disease, skin lesions, and cancer.

Environmental Rights Concern: The Niger Delta is a wetland that is home to mangrove swamps, lowland rainforests, and barrier islands. Every year, hundreds of oil spills poison animals, destroy vegetation, penetrate bird plumage and mammal fur, and cause water and soil to become toxic, devastating the environment.



16. iMfolozi Wilderness Area, South Africa

Human Rights Concern: A proposed open cast mine called the Fuleni Anthracite Project would force hundreds of rural villagers from their land and threaten those who remain with harmful coal dust pollution. The mine would be located only 40 meters from the iMfolozi wilderness area – a sacred site to the Zulu people.

Environmental Rights Concern: iMfolozi is Africa's first designated wilderness area (designated in 1895) and is a sanctuary for the world's largest rhino concentration. Noise, vibrations, and light pollution from the six planned coal pits would confuse and traumatize wildlife and likely pollute the local water and soil.

17. Marikana, South Africa

Human Rights Concern: Police opened fire on locals striking over pay and living conditions at a British-owned platinum mine, killing 34 people in one incident. Postmortem findings showed that at least one individual was shot in the back of the head.

Environmental Rights Concern: Platinum mining operations at Marikana – a dry, rocky area located near the lush mountain habitat of the Kgaswane Nature Reserve – reportedly pollute local waterways. Sewage from mining camps also flows into rivers and streams within the Crocodile River catchment. Locals allege that the mine's tailings dams are poorly maintained and threaten to contaminate waterways with toxins such as cobalt, cadmium, and lead.

18. North Mara, Tanzania

Human Rights Concern: Local villagers accuse North Mara Gold Mine operators of failing to address a pattern of excessive force by local police, who have killed at least six Tanzanian villagers over the past two years. Local villages also report that toxic sludge from the mine seeped into the Thigithe River, killing a reported 20 people. Barrick Gold denies being responsible for the deaths.

Environmental Rights Concern: Toxic sludge from the Barrick Gold mine has been reported to flow into the Thigithe River after high rainfalls. Local villagers assert that the toxic substances have killed fish and other animals.

19. Karamoja, Uganda

Human Rights Concern: Companies exploring and mining for minerals in the Karamoja region of Uganda are violating the free, prior, and informed consent of local communities by, for example, fencing off large swaths of traditional communal grazing land without the consent of Karimojong pastoralists.

Environmental Rights Concern: Mining for gold and other minerals during the expected forthcoming mining boom will tear apart the savannah grasslands and wooded hills of Karamoja, deplete local waterways, and likely cause surface and groundwater contamination.



20. Chiadzwa, Mutare West, Zimbabwe

Human Rights Concern: Human Rights Watch reports that human rights violations persist in Zimbabwe's Marange open pit diamond fields despite recent efforts to address these harms. Reported abuses include setting dogs on miners, use of excessive force, and the government's failure to address serious abuses by police and private security forces employed by mining companies.

Environmental Rights Concern: A study from the University of Zimbabwe found that mining at the Marange diamond fields causes chemical pollution of the Save River and the Singwizi and Odzi tributaries. The open pit mining technique used to extract diamonds also results in widespread destruction of forests and topsoil, impairing wildlife habitat and ecosystems.

21. Masvingo, Zimbabwe

Human Rights Concern: Severe rainfall and the partial failure of the Tokwe-Mukorsi dam – still incomplete after 16 years and known by the government to be vulnerable – flooded the Masvingo basin, destroying the land and homes of over 20,000 people. The government engaged in coercion, violence, and harassment to relocate refugees to relatively small one-hectare plots without adequate compensation. Many people now lack sufficient food, shelter, and other basic needs.

Environmental Rights Concern: The massive Tokwe-Mukorsi dam was finally completed in 2015 at the confluence of the Tokwe and Mukorsi Rivers. Like other such dams, it will interrupt natural flow cycles and sedimentation, block debris that aquatic species rely on for habitat, impede fish migration, and result in other negative ecosystem impacts. Scientists believe that the heavy flooding that caused a partial failure of the dam is a manifestation of climate change.



ASIA

22. Dhaka, Bangladesh

Human Rights Concern: Human Rights Watch reports that leather tanneries in the Bangladesh capital are flooding local neighborhoods with toxic chemicals. Both adult and child workers, some as young as 11, have become ill with fevers, skin disease, and respiratory problems when exposed to toxic chemicals.

Environmental Rights Concern: The tanneries release toxic substances – including sulfuric acid, chromium, and lead – into open gutters, from where the toxins eventually make their way into the Buriganga River, which is now a dead zone. The government estimates that Dhaka’s Hazaribagh area releases 21,000 cubic meters (or eight-and-a-half Olympic swimming pools) of untreated toxic wastewater each day.

23. Phnom Penh, Cambodia

Human Rights Concern: The Cambodian government reportedly made seven times the allowable amount of state land concessions to companies operated by logging tycoon Try Pheap, evicting almost 1,500 families. Several opponents of illegal logging were recently killed, including a local environmentalist shot by a Cambodian police officer and a reporter found dead in his trunk.

Environmental Rights Concern: Deforestation and rampant logging, much of it illegal, reduced Cambodia’s forest cover from 73 percent in 1990 to 57 percent in 2010. Logging in Cambodia causes wildlife loss as well as major soil erosion, which increases eutrophication and flooding.

24. Hanyuan County, China

Human Rights Concern: In 2004, tens of thousands of people protested the construction of the Pubugou dam, citing inadequate compensation for seized farmland and official corruption in the relocation program. Thousands of police halted the protests, with the resulting clashes reportedly killing two villagers and one police officer. One protestor was executed without a fair trial, according to his lawyer.

Environmental Rights Concern: The Pubugou dam is the largest in a group of at least seventeen dams being developed on the Dadu River, causing the once free-flowing river to dwindle to a trickle in some locations. Asbestos mines have also caused significant desertification on the once lush banks of the Dadu River.



25. Hepu County, China

Human Rights Concern: The Stora Enso paper company, its intermediates, and local government officials acting on its behalf have often used coercive methods to acquire land from farmers and villagers. In two villages, the government and police used violence to force protesting villagers to give up their land. According to the U.N. Human Rights Council, related land conflicts resulted in two reported deaths and many other instances of violence.

Environmental Rights Concern: Stora Enso has acquired at least 90,000 hectares of land for use in eucalyptus plantations – monocultures that harm local biodiversity, fuel deforestation, and deplete soil nutrients – and plans to build a one million ton pulp mill. The Guangxi Province has the third-richest biodiversity of any province in China, including 116 threatened plant species and 195 animal species listed under National or Provincial criteria.

26. Yinggehai, China

Human Rights Concern: More than 1,000 people protested a planned coal-fired power plant over concerns that the resulting pollution would destroy their farming and fishing livelihoods. During resulting clashes, police fired tear gas canisters into the crowd and arrested 50 people. Over 100 villagers suffered from injuries.

Environmental Rights Concern: The coal-fired power plant would contribute to the ongoing destruction of Hainan island's rich coastal forests and other ecosystems, and would also harm marine ecosystems as mercury and other harmful substances settle into local waterways. Coal-fired power plants are also a major contributor to climate change.

27. Angul District, India

Human Rights Concern: Local citizens protesting land grabs, inadequate compensation, and disrupted water supplies caused by Jindal Steel's steel plant construction were attacked by company security guards armed with iron rods and sticks, injuring about 200 people.

Environmental Rights Concern: The six megaton per annum steel plant and 1,000 megawatt power plant near Angul will discharge large amounts of pollutants. While the plant is not yet complete, other Jindal steel plants discharge toxic pollutants like phenol and cyanide, which have harmed local waterways.



28. Manipur, India

Human Rights Concern: The Mapithel Dam Project is estimated to fully submerge six villages (Phayang, Louphong, Chadong, Lamlai Khullen, Lamlai Khunou, and Mongbung) and partially submerge eleven villages, displacing 8,000 to 10,000 people. A community group called Mapithel Dam Affected Villages Organization (MDAVO) asserts that dam construction began “without the free, prior and informed consent of the affected villages.” Armed forces have violently suppressed peaceful dam protests, with some villagers being arrested and tortured, according to reports.

Environmental Rights Concern: Once complete, the dam is expected to flood 595 hectares of forest habitat. The dam will also impede the Thoubal River’s natural distribution of silt (which is important for downstream aquatic species and ecosystems) and block fish migration.

29. Mettur, India

Human Rights Concern: “Black wind” from local coal yards wafts across neighborhoods in Mettur and elsewhere in India, causing asthma, wheezing, and other health impacts. In Mettur, some harmful airborne particles are at levels three to four times higher than WHO guidelines, prompting doctors to recommend that pregnant women move elsewhere.

Environmental Rights Concern: Ash ponds from local coal-fired power plants contaminate the local Cauvery River with toxic substances, including mercury, which can bioaccumulate in fish and cause stunted growth, reduced fertility, and death.

30. Singrauli, Madhya Pradesh, India

Human Rights Concern: The Indian government has been privatizing forests in Central India for coal mining, impacting the lives and livelihoods of forest-dwelling communities. Projected expansions of the program could force thousands more tribal people from their ancestral homes.

Environmental Rights Concern: 1.1 million hectares of forest are reportedly under threat from 13 coal fields at various stages of development in Central India. Mining has already destroyed and fragmented forests and impacted endangered species such as tigers, leopards, and elephants.

31. Sompeta, India

Human Rights Concern: Police opened fire on villagers opposing the construction of a 2640 megawatt coal-fired power project, killing three people.

Environmental Rights Concern: The power project, if built, could impact at least 1,000 acres of wetlands – including the “beela,” a unique low-lying swamp area that serves as crucial nesting habitat for about 120 bird species – destroying important habitats, harming local biodiversity, and threatening water quality. Coal ash ponds (byproducts of heating water for steam) are expected to leak into local waterways and pollute soil.



32. Majalaya, Indonesia

Human Rights Concern: The massive textile industry in and around Majalaya discharges toxic waste directly into the Citarum River, which millions of residents rely on for drinking water and bathing. The polluted water causes rashes, itchiness, and can lead to skin cancer over time. One study found lead levels to be 1,000 times U.S. EPA standards.

Environmental Rights Concern: The government only regulates 264 out of 100,000 chemicals used by the textile industry, so factories regularly discharge toxic chemicals into the Citarum River. Scientists have recorded far fewer fish downstream of the discharge areas compared to upstream areas.

33. Papua, Indonesia

Human Rights Concern: The U.S.-based Freeport-McMoRan mining company, owner of the Grasberg gold mine, has given millions of dollars to the local military and police units to protect the mine. The local military and police have been accused of serious human rights violations, including torture, rape, arbitrary detention, and extrajudicial killings. In 2011, police fired into a crowd of striking miners, killing one and wounding six others.

Environmental Rights Concern: The Grasberg mine is one of the largest open-pit gold mines in the world. It has dumped almost a billion tons of mining waste into a system of rivers that flow into low-lying wetlands near the pristine Lorenz National Park, making the river and wetlands “unsuitable for aquatic life,” according to the mine operator’s own report.

34. Sumatra, Indonesia

Human Rights Concern: The government handed over large swaths of ancestral lands to foreign palm oil distributors, forcing native communities to cease their traditional land uses. Local palm oil workers allege instances of forced labor, child labor, human trafficking, unsafe working conditions, abuse, and bonded labor (labor to work off a debt, which the United Nations considers to be modern day slavery).

Environmental Rights Concern: Converting natural forests into oil palm plantations reduces biodiversity; pollutes water; erodes soil; and threatens imperiled plant and animal species like the Sumatran tiger, orangutan, and keruing paya trees. Indonesia, home of the world’s third-largest rainforest, supplies about half of all palm oil worldwide.



35. Xayaburi, Laos

Human Rights Concern: Construction of the Xayaburi hydroelectric dam is underway on the Mekong River in Northern Laos (95 percent of the electricity will go to Thailand). The project is estimated to directly impact 202,000 nearby residents, including forcing 2,100 people to relocate and threatening the food security of a region that relies on fish and other river-based food sources.

Environmental Rights Concern: The massive dam would block critical fish migration routes of up to 100 species, such as the endangered Mekong Giant Catfish and scores of other imperiled species. Reports forecast that the dam will impair the river basin's rich ecosystem, which is second only the Amazon River in terms of fish diversity.

36. Sarawak, Malaysia

Human Rights Concern: The Malaysian government is building 12 hydroelectric dams in Sarawak, a state on the island of Borneo, displacing thousands of indigenous people from their traditional lands. Some of the dams have already been completed. Indigenous Penan were reportedly arrested, detained, intimidated, threatened, and denied access to human rights observers and supplies while protesting the 944 megawatt Murum Dam.

Environmental Rights Concern: The Sarawak dams will flood an estimated 2,300 square kilometers of tropical rainforest and impede the flow of the Murum River, Balui River, and other waterways.

37. Sarawak, Malaysia

Human Rights Concern: An investigation by Global Witness found that the Chief Minister of Sarawak made illegal land swaps with loggers and palm oil companies, displacing indigenous communities. Borneo's palm oil industry is known for human rights violations such as child and slave labor.

Environmental Rights Concern: Deforestation of Borneo's rainforest habitat and the construction of related infrastructure (such as roads) threatens imperiled large mammals with extinction, including orangutans and the Borneo elephant.

38. Selenge Province, Mongolia

Human Rights Concern: Centerra Gold, a Canadian-owned mining company, has the Mongolian government's support to exploit the Gatsuurt wilderness area in Selenge Province. Their operations would impact Noyon Mountain, a sacred site of national importance to the Mongolian people, and threaten countless artifacts, archaeological sites, and the tombs of historic Mongol figures.

Environmental Rights Concern: Centerra Gold's mining operations would impact Noyon Mountain and the surrounding ecosystem with air pollution, environmental contaminants (including mercury and cyanide), and toxic mine drainage, destroying habitat and harming biodiversity. In 2014, the Mongolian Parliament amended its "Long Name Law," meant to protect water bodies from mining, to open up protected areas to short-term mining leases.



39. Arakan, Myanmar (Burma)

Human Rights Concern: The Shwe Gas project, which will transfer natural gas and crude oil from Burma to China, is associated with a multitude of human rights abuses, including forced labor, arbitrary taxation, forced eviction, and unfair land acquisition. In September 2013, ten anti-Shwe demonstrators were sentenced to prison for violating peaceful assembly laws despite making several attempts to obtain a public assembly permit.

Environmental Rights Concern: Industrial waste from oil and gas exploration and pipeline construction are killing fish in the Arakan coastal area and damaging the country's second-largest mangrove forest. Oil spills and gas leaks are a perennial threat.

40. Gadani, Pakistan; Alang, India; Chittagong, Bangladesh

Human Rights Concern: The NGO Shipbreaking Platform accuses the shipbreaking industry of employing illegal child labor. Shipbreaking laborers work for minimal pay in extremely dangerous conditions, with scarce safeguards or regulatory oversight. They are routinely injured or killed on the job and poisoned by exposure to toxic chemicals.

Environmental Rights Concern: Old ships are full of hazardous materials such as asbestos, heavy metals, PCBs, and organotins. These toxic substances, along with polluted bilge and ballast water, are often dumped directly into coastal and aquatic ecosystems.

41. Gaza Strip and West Bank, Palestine

Human Rights Concern: The Gaza Strip and West Bank both struggle to obtain adequate amounts of clean water for drinking and other uses. This is in part due to conflicts with Israel that prevent direct West Bank access to the Jordan River and destroy clean water infrastructure during attacks.

Environmental Rights Concern: The collapse of infrastructure in the Gaza Strip and West Bank also negatively impacts ecosystems. For example, the Gaza Strip's sewage system, which has largely collapsed in part due to blockades and attacks, contaminates the Mediterranean Sea with a daily average of 3.5 million cubic feet of raw sewage. Raw sewage harms the marine ecosystem by causing hypoxia (reduced oxygen levels), eutrophication, and the accumulation of toxic substances in aquatic species.

42. Benguet, Philippines

Human Rights Concern: A report from the Philippine government reveals that open pit mining has significantly reduced food supplies of local communities who rely on subsistence fishing. The mines were also built upon ancestral lands of indigenous people, a number of whom allege violations of their right to free, prior, and informed consent to the mines.

Environmental Rights Concern: Regional water systems have been described as "a wasteland" due to the ongoing mining. In 2012, a tailings pond breach caused 20 million metric tons of waste to spill into Balog Creek, smothering fish to death and contaminating the water with heavy metals such as copper, which is toxic to plants and animals.



43. Manila, Philippines

Human Rights Concern: Citing a report on the matter, a Senator of the Philippines asserted in 2013 that since 2001, 56 environmental advocates had been killed nationwide, including those supporting forest protection and protesting illegal lumber collection.

Environmental Rights Concern: The deforestation rate in the Philippines is reportedly the highest in East and Southeast Asia. Such deforestation threatens species like the endangered Philippine eagle and also exposes ecosystems and people to flash floods and landslides during typhoons, which are becoming increasingly common.

44. Tampakan, Philippines

Human Rights Concern: Philippine soldiers are accused of murdering a native tribal leader and his family in response to his campaign to protect natives and their ancestral lands from the Tampakan mine, a \$5.9 billion copper and gold mining project. Other deaths include the August 2013 killing of a tribal leader and his son by soldiers.

Environmental Rights Concern: The Tampakan mine would straddle three watersheds and destroy almost 4,000 hectares of forest and other lands. The project is expected to produce 2.7 billion tons of toxic mine waste and would pile toxic byproducts (tailings) by a tributary of the Mal River.

45. Jeju Island, South Korea

Human Rights Concern: Opponents of a U.S. naval base on Jeju Island have reportedly been subject to human rights violations such as interference with the freedom of peaceful assembly and association, excessive use of police force, and police violence.

Environmental Rights Concern: Jeju Island is home to a UNESCO Biosphere Reserve, Natural Heritage Site, and Global Geopark. Construction of the naval base, which is already underway, will reportedly release toxins into the marine ecosystems and destroy an estimated 98 acres of sea floor that is home to nine endangered species and numerous varieties of endangered soft coral reef.

46. Weliweriya, Sri Lanka

Human Rights Concern: At least three people died and several dozen others (including journalists) suffered injuries when military forces fired into a large crowd of protestors rallying against claimed contamination from a rubber glove factory. Local citizens allege that the factory discharged untreated chemicals into a trench, contaminating the groundwater with pollutants such as nitrates, which can cause blue baby syndrome.

Environmental Rights Concern: Rubber glove factory operators reportedly contaminated the groundwater by dumping untreated chemicals and waste. One report also describes a dumping site adjacent to the Aththanagalu River littered with burnt waste, glove remnants, and chemical containers. Dipped Products PLC denies responsibility.



47. Vakhsh River, Tajikistan

Human Rights Concern: The Tajikistan government is constructing the Rogun Dam on the Vakhsh River, which will displace about 7,000 families (or 42,000 people). The government has already “resettled” 1,500 families, who report that their standard of living has seriously deteriorated from the loss of land used for agriculture, unemployment, and reduced access to basic needs such as water and education.

Environmental Rights Concern: Alteration of the Vakhsh River’s flow and sediment transport will cause sustained environmental impacts, such as reduced downstream sediment loads and increased erosion. The hydroelectric facilities will also have major impacts on aquatic ecosystems by, for example, disrupting fish migrations, and injuring and killing aquatic species with its turbine blades. Dam construction also exacerbates climate change as it uses enormous amounts of cement and energy.

48. Tambon Nong Nae, Thailand

Human Rights Concern: Environmental activist and village head Prajob Naowa-opas was shot dead after spending years publicly opposing toxic dump sites in his local village, which police believe is the reason for his murder. One of the alleged killers was a senior government official (who was later convicted for the killing).

Environmental Rights Concern: Runoff from illegal dump sites in the Chachoengsao Province, where tambon Nong Nae is located, contaminates local waterways and ponds. Illegal dumping in the area also threatens the health of the Bang Pakong River, home to imperiled species like the Irrawaddy dolphin and the giant freshwater stingray.

49. Ardahan, Turkey

Human Rights Concern: Local Kurdish villagers report intimidation, false arrests, and torture by state security forces guarding BP’s oil pipeline.

Environmental Rights Concern: The pipeline reportedly transports 1 million barrels of oil every day from the Caspian Sea to Turkey. A 2008 oil pipeline rupture along the Turkey-Iraq border left a large oil slick and contaminated waterways near Ataturk.

50. Ilisu, Turkey

Human Rights Concern: Flooding caused by the Ilisu Dam, currently being built on the Tigris River, will displace over 25,000 people and inundate 300 historical sites in and around Turkey’s ancient city of Hasankeyf. The Ilisu Dam also threatens to dry up Iraq’s Mesopotamian marshes, which “Marsh Arabs” have relied upon for their livelihood and way of life for over 5,000 years.

Environmental Rights Concern: The Ilisu dam will reduce flows into Iraq’s Mesopotamian marshes, devastating wetlands that once occupied one-fifth of Iraq’s landmass and were the third largest wetlands in the world. The Mesopotamian marshes serve as vital habitat for migrating bird populations and other wildlife.

AUSTRALIA AND OCEANIA

51. Jabiru, Australia

Human Rights Concern: Indigenous people living near the Ranger uranium mine were unable to refuse its development in the 1970s, violating their right to free, prior, and informed consent. Cancer cases have since doubled among indigenous people living near the mine.

Environmental Rights Concern: The mine's tailings dams have reportedly released millions of liters of radioactive water into the Park's world heritage-listed wetlands. In December 2009, a dam collapsed and spilled 6 million liters of radioactive water into Gulungul Creek.

52. Queensland, Australia

Human Rights Concern: The Queensland government has opened up parts of the Mithaka People's traditional "Channel Country" lands to oil and gas extraction without their free, prior, and informed consent. The Mithaka culture is deeply interconnected with the area's winding rivers and wetlands, which are threatened by further fossil fuel extraction.

Environmental Rights Concern: A major oil or gas spill could devastate the larger Cooper Creek basin, which provides unique ephemeral and semi-permanent wetland habitat for water birds, fish, reptiles, and mammals. In 2013, 240,000 liters of oil spilled from Santos' Zeus Mine in Channel Country, which is located in close proximity to floodplains that feed Lake Eyre.

53. East New Britain, Papua New Guinea

Human Rights Concern: Widespread logging in Papua New Guinea's tropical rainforests is occurring without the free, prior, and informed consent of customary landowners. Police riot squads hired by logging companies have conducted violent raids and assaults on villages to suppress opposition.

Environmental Rights Concern: Papua New Guinea's rich tropical rainforests – home to 200 mammal species, 20,000 plant species, and 750 bird species (accounting for 5 to 7 percent of all known bird species) – shrinks by about 1.4 percent every year due to deforestation.



54. Tuvalu

Human Rights Concern: 11,000 citizens of Tuvalu will likely be displaced within 50 years due to coastal erosion, flooding, drought, declining fish populations, and groundwater and soil salinization – all due largely to climate change. In June 2014, a Tuvalan family (the Alesanas) became the first formally recognized refugees of climate change when they were granted residency by the New Zealand immigration court.

Environmental Rights Concern: Warming and acidification of the sea has bleached 80% of the coral reefs around Tuvalu, imperiling the island's fish populations and lagoon ecosystems. The salinization of soil and groundwater from increasing sea levels also threatens animal and plant life, including pulaka and coconut trees.



EUROPE

55. Rhineland, Germany

Human Rights Concern: In Rhineland, Germany, massive lignite mines have consumed many villages and forced thousands of people to relocate without their consent.

Environmental Rights Concern: The Hambach pit, a giant open-pit coal mine, destroyed 33 square miles of forests, fields, and a river. Plans to expand mining operations include the destruction of the adjacent Hambacher Forst (Hambach forest). Lignite – or “brown coal” – is the “dirtiest” form of coal, emitting one-third more CO₂ than black coal.

56. Kirkenes, Norway

Human Rights Concern: British, Australian, and Canadian mining companies are seeking to develop massive mines in parts of “Europe’s last wilderness,” located in northern Finland, Sweden, and Norway. The intrusion of the mining industry is expected to impact Sámi indigenous communities that rely on reindeer herding and fishing.

Environmental Rights Concern: Mining in this area could result in long-lasting damage to pristine rivers, lakes, and mountains that are home to bear, wolf, lynx, wolverine, and other species. As one example, Norwegian company Yara International has plans to develop a huge open-cast phosphorus mine in eastern Lapland that requires releasing billions of gallons of wastewater into pristine lakes and rivers.

57. Grabice, Poland

Human Rights Concern: In Poland, 3,000 people in the region of Lausitz are at risk of being forced to relocate by an open-cast lignite (brown coal) mine planned by the energy company PGE (Polska Grupa Energetyczna). Just across the border, villages in Germany are similarly at risk from the company Vattenfall’s plans to expand two open cast lignite mines.

Environmental Rights Concern: In addition to ripping out vast landscapes, open pit mining in the Lausitz region has contaminated local rivers – including from iron ochre, which can prevent plant photosynthesis, clog fish gills, and kill animals that ingest it.



58. Khanty-Mansi Region, Russia

Human Rights Concern: Frequent oil spills in the Khanty-Mansi Region – the number one oil-producing region in Russia – cause negative health impacts in residents, including cancer. Oil pollution has also impeded the ability of indigenous groups to maintain their traditional hunting livelihoods, which they rely upon for sustenance.

Environmental Rights Concern: Large-scale oil production and numerous oil spills in this area cause significant biodiversity loss in forests, contaminate soil, and pollute surface waters. Every year, a reported 300,000 to 500,000 tons of oil are leaked into the Ob and Yenisei River basins, which flow into the Arctic Ocean.

59. Khimki, Russia

Human Rights Concern: Government officials subjected prominent environmental activist Evgenia Chirikova to threats, multiple arrests, detention, and intimidation as she attempted to block a planned highway expansion through a federally protected forest.

Environmental Rights Concern: The highway expansion would cut through the 2,500-acre old growth Khimki Forest, cutting down oak groves, impeding a major animal corridor, and killing endangered plant species. Evgenia Chirikova continues to battle the planned construction.

60. Khover, Russia

Human Rights Concern: Private security guards reportedly severely beat environmental activists protesting the planned mining of the Elan nickel deposit.

Environmental Rights Concern: The mine is expected to decrease flow and increase pollution of the Khover River, threatening the nearby Khover Nature Reserve – a protected area that is home to imperiled species like the Russian desman, white-tailed eagle, and peregrine falcon.

61. Pervouralsk, Russia

Human Rights Concern: Police officers reportedly beat unconscious an environmental activist investigating discharges from a chromium plant. Investigators then questioned the activist for hours.

Environmental Rights Concern: The chromium plant allegedly discharges toxic waste into a marsh that feeds the Ural Mountains' iconic Chusovaya River. A study found that the the Chusovaya River ecosystem has been contaminated by hexavalent chromium, which can be extremely toxic to wildlife.



NORTH AMERICA

62. Sarnia, Ontario, Canada

Human Rights Concern: Recent tests suggest that members of the Aamjiwnaang First Nation are exposed to dangerous chemicals from a nearby cluster of over 60 refineries and chemical plants. Residents report health effects like headaches, skin irritation, nausea, miscarriages, and widespread asthma.

Environmental Rights Concern: The so-called “Chemical Valley” has discharged a slew of dangerous chemicals into local rivers and streams, including the St. Clair River, negatively impacting fish and other aquatic species.

63. Cotuí, Dominican Republic

Human Rights Concern: An estimated 27 deaths and many illnesses have been reported as a result of pollution from state- and Canadian-owned mining operations near the town of Cotuí. Several residents have high levels of cyanide and other toxins in their urine and blood from drinking contaminated water and breathing contaminated air, causing headaches, skin and eye irritation, respiratory problems, and other health impacts.

Environmental Rights Concern: Gold mining activities in the area have polluted the air, soil, and local waterways – such as the Maguaca River – with cyanide and other pollutants, devastating fish and crab populations.

64. Loma Miranda, Dominican Republic

Human Rights Concern: At Loma Miranda, a mountain in central Dominican Republic, the federal government is championing plans to mine for nickel, threatening to pollute the air, water, and soil. Protesters have faced intimidation by government security forces and threats by armed men believed to be mine supporters. Locals fear that their clean environment will end up like the nearby town of Cotuí, where residents suffer major health effects due to ongoing mining.

Environmental Rights Concern: Loma Miranda covers 16 square miles and contains much of the Dominican Republic’s biodiversity and freshwater resources. Nickel mining will disrupt this important ecosystem and threatens to contaminate waterways with acid mine drainage and harmful heavy metals.



65. San José del Progreso, Mexico

Human Rights Concern: Opponents of Fortuna Silver's Cuzcatlán silver and gold mine have reportedly been subject to death threats, harassment, arbitrary detention, and violence by local authorities and supporters of the mine. In one instance, a municipal police officer fired shots at a crowd of protesters, killing an anti-mining activist.

Environmental Rights Concern: Silver and gold mining causes acid mine drainage, which can imperil freshwater habitat by increasing acidity and introducing harmful sedimentation. The Cuzcatlán silver and gold mine is located in the sloping hills and grassy plains of a dry savannah climate.

66. Kivalina, Alaska, United States

Human Rights Concern: The 400-odd indigenous inhabitants of Kivalina are threatened by rising sea levels, coastal erosion, retreating sea ice, and increasingly severe storms. They can no longer rely on traditional livelihoods of hunting and fishing; for example, locals have recently been unable to pull their boats across the thinning sea ice, ruining their hunting season. By 2025, this village may be completely underwater.

Environmental Rights Concern: The sand spit on which Kivalina is located is rapidly eroding, and in 2012, floodwaters entered the village's landfill and spilled garbage and human waste into the sea. The retreating sea ice also threatens the survival of polar bears and other species.

67. Shishmaref, Alaska, United States

Human Rights Concern: As a result of climate change-induced sea level rise, engineers predict that a small Inuit village of 600 households on the Chukchi Sea may be underwater in 20 years, destroying their culture and displacing their entire society. The local drinking water supply has already been contaminated, and this is expected to worsen as seawater approaches the town dump.

Environmental Rights Concern: Marine ecosystems are threatened with pollution as the rising seawater quickly approaches the town dump. More broadly, thawing permafrost in the Arctic has caused landscape erosion, slope instability, and landslides that destroy habitat.



68. Richmond, California, United States

Human Rights Concern: Emissions from the Chevron refinery in Richmond exposes local citizens – predominantly lower-income residents and people of color – to benzene, mercury, and other hazardous substances that cause cancer and neurological and reproductive problems. A survey of Richmond citizens found that 46 percent of adults suffer from asthma. 17 percent of children also suffer from asthma, which is more than double the national average and 2.2 percent higher than the California average.

Environmental Rights Concern: The Chevron refinery has caused significant air and water pollution, including through the release of toxic wastewater into San Pablo Bay in the 1990s and the historic pollution of Castro Cove with oil and mercury. The majority of the oil processed at the Chevron refinery comes from overseas, especially Saudi Arabia, where oil extraction has resulted in significant pollution, including from land- and ocean-based oil leaks and spills.

69. Gulf Coast, United States

Human Rights Concern: Oil spill responders, coastal residents, and divers have reported negative health impacts from exposure to oil and dispersants from the Deepwater Horizon oil spill, including skin irritation, breathing problems, chest pains, and impaired lung function. Oil and dispersants can also cause long-term health impacts such as liver and kidney damage, genetic mutations, and immune system damage.

Environmental Rights Concern: The Deepwater Horizon oil spill released some 200 million gallons of oil into the Gulf of Mexico, devastating sensitive ecosystems such as the Mississippi River Delta wetlands. Responders may have worsened the disaster by using over 1.8 million gallons of dispersants that are toxic to marine life and have unknown long-term ecosystem impacts. The burning of dispersed oil also incinerated dolphins and sea turtles.

70. Mossville, Louisiana, United States

Human Rights Concern: Residents of Mossville suffer from burning eyes, sinus and ear infections, and cardiovascular illness caused by pollution, particularly dioxins, from fourteen local industrial facilities. High exposure to dioxins has long-term effects such as cancer, immune system impairment, and hormone disruption.

Environmental Rights Concern: Dioxins, which are highly toxic, persist in the environment and bioaccumulate in fish and other wildlife. Local industrial facilities regularly discharge toxic chemicals into the Bayou Verdine and other surface waters in and around the Calcasieu Estuary.



71. Oklahoma City, Oklahoma, United States

Human Rights Concern: Two environmental activists charged with committing a “terrorism hoax” were threatened with up to ten years in prison after officials alleged that glitter from their anti-tar sands mining signs resembled a biochemical agent. Copies of a PowerPoint presentation obtained by activists show that energy giant TransCanada previously encouraged law enforcement officials to charge environmentalist protestors under anti-terrorism laws.

Environmental Rights Concern: In Canada’s tar sands, oil companies clear cut boreal forest then dig out several hundred feet of topsoil, sometimes draining wetlands and diverting rivers in the process, leaving behind a “moonscape” where imperiled species like caribou once lived. Tar sands operations also contaminate Alberta’s Athabasca River with toxic heavy metals, including arsenic, mercury, and thallium.

72. Raleigh County, West Virginia, United States

Human Rights Concern: Protests over mountaintop removal activities on Coal River Mountain have led to over 74 arrests in ten incidents since 2009. Studies show that mountaintop removal coal mining increases birth defects; results in early mortality from heart, kidney, and lung disease; and causes clinical depression in affected communities.

Environmental Rights Concern: Over 500 mountains have been flattened by mountaintop removal in the Appalachian region, burying streams, wiping out forests, and destroying ecosystems. Coal River Mountain is the last mountain within Coal River Valley unaffected by mountaintop removal. Meanwhile, slurry impoundments from mountaintop removal activities threaten to pollute waterways. For example, the Brushy Fork coal slurry impoundment, which holds 6.5 billion gallons of toxic wastewater (with plans to expand to 8.5 billion gallons), failed 59 of 73 structural tests, threatening to pollute Coal River and the surrounding ecosystem.



SOUTH AND CENTRAL AMERICA

73. Andalgalá, Argentina

Human Rights Concern: More than 60 people were reportedly injured as police fired tear gas and rubber bullets at protesters of the proposed Agua Rica gold mine, including women and children who tried to block excavating equipment from entering the open pit mine site. The planned mine could displace 20,000 people.

Environmental Rights Concern: The open-pit mine would be located in a rich mountain valley with pristine water, depleting from the environment an estimated 3 billion liters of water per day for mining operations. Development of the mine has been delayed, although Yamana Gold since announced that production would start in 2018.

74. Central and Northern Argentina

Human Rights Concern: Massive soya farms in central and northern Argentina have forced farmers and indigenous communities off their land. Several protestors have also been murdered. Pesticides for GMO soya containing Glyphosate reportedly cause birth abnormalities, respiratory problems, and miscarriages (although Monsanto denies this link).

Environmental Rights Concern: Soybean production has gobbled up about 73,400 square miles (19 million hectares) of land in Argentina, destroying massive swaths of natural forests and depleting the soil of nutrients. Soya production has even expanded into the Yungas Rainforest (the “Clouded Rainforest”), a biodiversity hotspot that is home to the rare jaguar and forty unique tree species.

75. Matanza-Riachuelo, Argentina

Human Rights Concern: An estimated 15,000 industries, including many chemical manufacturers and petrochemical plants, release effluent into the Matanza-Riachuelo River Basin, causing local residents to suffer from respiratory disease, cancer, and other ailments.

Environmental Rights Concern: Due to industry pollution, the Matanza-Riachuelo River Basin is contaminated with high levels of lead, arsenic, chromium, zinc, and other substances. A study from Greenpeace found significant quantities of organic pollutants and heavy metals in water samples that likely have negative health impacts on numerous aquatic species.



76. Altamira, Brazil

Human Rights Concern: The Brazilian Government has started to construct what would be the world's third largest hydroelectric dam – the Belo Monte Dam complex, located on the Xingu River – with devastating local impacts. The project would displace an estimated 19,000 to 40,000 people. Many of those displaced are indigenous peoples who have actively fought the project for many years, making clear their position that the dam violates their right to free, prior, and informed consent.

Environmental Rights Concern: Belo Monte Dam operations would divert up to 80 percent of the Xingu River's flow, threatening nine fish species with extinction and depriving forests of their season floodwaters. The project would also permanently flood 400 square kilometers of forest.

77. Amazon Rainforest, Brazil

Human Rights Concern: Environmental and human rights groups describe various human rights abuses associated with soya production in the Amazon, including slave labor and forced community displacement through tactics such as arson and intimidation.

Environmental Rights Concern: Soya production is a major contributing factor to the Amazon's alarming deforestation rates, having destroyed at least 21 million hectares of forest in Brazil alone. Brazil is home to 15 percent of known terrestrial plant species and 10 percent of all mammals. Soya monocultures devastate biodiversity and increase pest outbreaks, among numerous other major environmental harms.

78. Guanabara Bay, Brazil

Human Rights Concern: On June 24 and 25, 2012, respectively, Almir Nogueira de Amorim and João Luiz Telles Penetra ("Pituca") were found murdered in Guanabara Bay, which they had been fighting to protect. Both men were leaders of AHOMAR (Association of Sea Men) and opposed the plans of Brazil's state-owned oil company, Petrobra, to deepen the Guaxindiba River, which would devastate the livelihoods of local fishermen.

Environmental Rights Concern: Guanabara Bay once contained clean beaches, healthy mangroves, and a thriving ecosystem. However, decades of reckless development and an oil leak from a Petrobras-owned pipeline have significantly degraded local ecosystems. Despite these ongoing harms, Petrobras is currently building a second massive oil refinery, Comperj, in the most pristine area of the Bay.



79. Pará, Brazil

Human Rights Concern: Environmental and human rights advocates say that logging companies in Pará commit violence with impunity against anyone who opposes them. On May 24, 2011, husband and wife anti-logging activists Jose Claudio Ribeiro da Silva and Maria do Espirito Santo da Silva were murdered in the rural town of Nova Ipixuna in Pará.

Environmental Rights Concern: Rampant logging, much of it illegal, contributes to the rapid destruction of the Amazon rainforest, resulting in soil erosion and loss of wildlife habitat and biodiversity. Over half of the Amazon's 15,000 tree species are at risk of extinction if the current rate of deforestation continues.

80. Raposa Serra do Sol, Roraima, Brazil

Human Rights Concern: On April 15, 2005, President Luiz Inácio Lula da Silva officially demarcated the 1.74 million hectare Raposa Serra do Sol indigenous reservation for as many of 20,000 indigenous peoples from Wapichana, Taurepang, Patamona, Macuxi, and Inagaricó communities. However, non-indigenous rice farmers refused to leave and responded with violence against indigenous peoples – burning bridges, blocking entrance points, and shooting them. Hired guards also fired assault rifles and threw homemade bombs at a Macuxi community, injuring 40 people. In 2009, the Federal Supreme Tribunal upheld the demarcation of the land as a contiguous territory and ordered the removal of non-indigenous farmers.

Environmental Rights Concern: From 1992 to 2005, rice plantations in the area of the reservation increased seven-fold, to 14,000 hectares. Rice growers polluted the Surumu, Contingo, and Tacutu Rivers with toxic agro-chemicals – killing birds, fish, and other animals – and caused significant deforestation of the Brazilian rainforest.

81. Arauca, Colombia

Human Rights Concern: A recent attack by Marxist rebels on the 480-mile Caño Limón pipeline contaminated U'wa Indian land with oil. There have also been recent explorations to expand oil development by the Cubogón River, which is sacred to the U'wa Indians. U'wa Indians have been battling oil development on their land for decades.

Environmental Rights Concern: Almost two million gallons of oil from the Caño Limón pipeline has spilled into lakes, rivers, and a variety of sensitive ecosystems. The recent attack on the Caño Limón pipeline contaminated the Royota River, a tributary of the Arauca River.



82. Cajamarca, Colombia

Human Rights Concern: On November 2, 2013, César García, a member of the Environmental Awareness Peasants' Committee (Comité Ambiental Conciencia Campesina) who opposed the La Colosa open-pit gold mining project and urged local farmers not to give up their land to miners, was shot to death. Only one month earlier, he had received a threatening phone call demanding that he cease his activism.

Environmental Rights Concern: The La Colosa mine, located in an Andean tropical cloud forest known for rich biodiversity, could produce up to 160,000 tons of mining waste daily, polluting the soil and water with heavy metals. It is also estimated that the mine will use over 4 million kilograms of toxic cyanide every year for leaching, threatening to contaminate the Bermellon, Cuello, and Magdalena Rivers.

83. Córdoba Department, Colombia

Human Rights Concern: BHP Billiton's Cerro Matoso open-pit nickel mine produces airborne chemicals and dust that reportedly cause increased rates of cancer, asthma, skin diseases, miscarriages, birth defects, and other negative health effects.

Environmental Rights Concern: The world's second-largest nickel mine contaminates local soil and waterways with nickel, which is toxic to fish species. Acid mine drainage from nickel mines can also cause significant surface water and groundwater contamination with sulfuric acid, which can leach toxic metals and kill fish.

84. Ituango, Colombia

Human Rights Concern: Police and soldiers disrupted two peaceful protests of the Ituango Dam in March 2013 with tear gas and arrests. One of the movement leaders, Nelson Giraldo Posada, was murdered by unknown persons in Ituango in September 2013. Activists say there has been a pattern of displacement, "forced disappearances," killings, torture, and threats against residents in twelve communities affected by the Ituango Dam.

Environmental Rights Concern: The dam will flood 15 square miles of dry forest habitat, including the area where the region's only known colony of threatened Military Macaws is located. Hydroelectric dams may also be a significant source of methane emissions, which are 35 times as potent a greenhouse gas as carbon dioxide.



85. Cordillera del Cóndor, Ecuador

Human Rights Concern: José Isidro Tendetza Antún – a Shaur indigenous leader and critic of the planned Mirador copper and gold mine – was found killed just days before he was set to testify in front of the International Rights of Nature Tribunal in Lima, Peru.

Environmental Rights Concern: The Mirador copper and gold mine (owned by the Chinese conglomerate Ecuacorriente) will harm an estimated 450,000 hectares of protected rainforest that are among the most biodiverse in the world.

86. Lago Agrio, Ecuador

Human Rights Concern: Pollution from Texaco's (now Chevron) oil drilling operations in northern Ecuador from 1967 until 1992 resulted in an epidemic of birth defects, miscarriages, and an estimated 1,400 cancer deaths, particularly devastating indigenous communities. Chevron is currently appealing a \$9.5 billion fine for damages and environmental cleanup costs that was upheld by Ecuador's National Court of Justice.

Environmental Rights Concern: Known as "Chernobyl in the Amazon," Texaco caused over one million acres of deforestation and polluted local rivers and streams with 18 billion gallons of toxic wastewater and contaminants from approximately 1,000 unlined toxic waste pits, severely damaging a formerly pristine rainforest of immense biodiversity.

87. Yasuni National Park, Ecuador

Human Rights Concern: Ecuador is moving forward with plans to exploit oil reserves in Yasuni National Park after President Rafael Correa abandoned an initiative to forego oil extraction in the Ishpingo-Tambococha-Tiputini (ITT) oil field. Among other concerns, the project threatens the way of life for the indigenous Tagaeri and Taromenane peoples by potentially disrupting their voluntary isolation and pushing them away from their current territory.

Environmental Rights Concern: Yasuni National Park is one of the most biologically rich places in the world, home to 1,100 tree species per 25 hectares on average, and one-third of the Amazon Basin's reptile and amphibian species. The ITT oil field is expected to cause significant deforestation. Oil spills and releases could also contaminate local ecosystems with toxic waste, as has occurred elsewhere in Ecuador.



88. San Miguel Ixtahuacán, Guatemala

Human Rights Concern: A University of Michigan study found abnormally high levels of lead, mercury, arsenic, zinc, and copper in residents living near the Marlin Mine, a gold mine owned by Montana Exploradora de Guatemala, S.A (a subsidiary of Canada-based Goldcorp). Local villages report threats and violence directed towards opponents of the mine.

Environmental Rights Concern: The Marlin Mine is estimated to use 250,000 liters of water per hour and will generate 14 million tons of contaminated tailings. A study found high concentrations of heavy metals in the Quivichil and Tzala Rivers downstream of the mine.

89. Santa Cruz Barillas, Guatemala

Human Rights Concern: The national government approved a dam on the Cambalan River despite its overwhelming rejection by indigenous Mayan communities. In 2012, security guards from Hidro Santa Cruz (the company in charge of the proposed dam) killed dam opponent Andrés Francisco Miguel. In response to resulting riots, President Molina declared martial law, and hundreds of military personnel arrived to intimidate and arrest dam opponents.

Environmental Rights Concern: According to environmental assessments, Santa Cruz Barillas is an area of high priority for conservation in Guatemala, as it harbors numerous unique amphibian and insect species. The dam would also harm fish and other aquatic species that live in the the Cambalan River.

90. Mazaruni District, Guyana

Human Rights Concern: The Guyana government hopes to build one or more large hydroelectric dams on the Upper Mazaruni River. These dams would flood the ancestral homeland of indigenous Akawaio and Arekuna peoples; many villages would become completely inundated. The dam project, originally scrapped in the 1970s, has reportedly been revived without consulting local indigenous communities.

Environmental Rights Concern: The reservoir for the dam project would destroy about 128,000 acres of pristine habitat, including upland tropical forests with vast amounts of endemic plant and animal species. The dam project would also significantly impede the flow of the Mazaruni River.

91. Rio Blanco, Honduras

Human Rights Concern: The Honduran Army shot at protestors of the Agua Zarca Dam, killing a community member and wounding his son. The government has reportedly awarded 41 land concessions for hydroelectric projects without the consent of local indigenous communities.

Environmental Rights Concern: The impacted area is home to a rugged mountain ecosystem featuring a thriving river, the Gualcarque. The Agua Zarca Dam, now under construction, would impede fish migration, affect flow, degrade water quality, flood surrounding ecosystems, and impede sediment transport.



92. Lake Nicaragua, Nicaragua

Human Rights Concern: The likely route of Nicaragua's planned 168-mile-long canal will force at least nine indigenous and Afro-Nicaraguan communities in Nicaragua's South Atlantic Autonomous Region to relocate without their consent.

Environmental Rights Concern: The massive canal is expected to cross nine protected areas (including the Island of Ometepe, a World Biosphere Reserve with pristine forests, volcanoes, and significant archaeological sites); contaminate Lake Nicaragua with seawater, diesel fuel and other harmful substances; and further imperil nesting sea turtles, jaguars, Baird's tapirs, and other endangered species.

93. Chiriquí, Panama

Human Rights Concern: Panama national police killed three Ngäbe-Buglé villagers, including a 16-year-old with a learning disability, and wounded dozens others while responding to protests of mining and hydroelectric projects.

Environmental Rights Concern: The Canadian company Inmet Mining plans to develop an open-pit copper mine in the Ngäbe-Buglé's territory, threatening a Mesoamerican Biological Corridor protected area – home to rain and cloud forests, mountains, and coastal mangroves. Also in this area is Petaquilla's Molejón Gold mine, which already destroyed 54.2 hectares of old growth and gallery forest, diverted rivers, and reportedly caused a fish kill.

94. Arroyito, Paraguay

Human Rights Concern: A leader of the peasant farmers' movement in Paraguay was murdered by gunmen. The leader was fighting the displacement of subsistence farmers by soy producers, who have already forced some 100,000 farmers to migrate to urban slums.

Environmental Rights Concern: The expanding soy industry causes significant deforestation in the Atlantic Forest – a biodiversity hotspot that is home to 1,000 bird species, some found nowhere else – and the western Chaco region, amongst other areas.

95. Curuguaty, Paraguay

Human Rights Concern: In June 2012, 300 police officers violently evicted 60 landless campesinos from rural Curuguaty. The resulting conflict led to the deaths of 17 people in total (11 campesinos and 6 police officers) and wounded 80 people. While peasants have been charged with attempted murder and other crimes, police officers have not been charged for their role in the violence.

Environmental Rights Concern: The proliferation of monoculture soy and other large-scale agro-businesses in Paraguay has displaced thousands of families and destroyed millions of acres of habitat. Areas such as the Atlantic Forest (a biodiversity hotspot that is home to about 20,000 plant species) and the Gran Chacho (a critical refuge for migrant bird species) have been especially impacted by deforestation, chemical pesticides, and other harms.



96. Bagua, Peru

Human Rights Concern: While clearing a peaceful blockade of primarily indigenous Awajúns and Wampis peoples, police shot at protestors. The resulting clashes lead to 20 deaths and hundreds of injuries. Following the violence, only protestors – no police officers – were brought to trial. A new Peruvian law grants police officers and soldiers impunity in some cases of violence and killing, so there is now even less accountability for violence directed towards environmental defenders.

Environmental Rights Concern: The indigenous protestors were objecting to new laws that allow extractive industries easier access to indigenous territory, such as the 29.6 million acres of Peruvian rainforest occupied by indigenous peoples. As one example of environmental harm caused by Peru's extractive industries, in 2014 a ruptured pipeline polluted the Marañón River with tens of thousands of gallons of crude oil, killing masses of fish.

97. Cajamarca, Peru

Human Rights Concern: Clashes between police and protestors over the proposed Conga mining project left five people dead. Local communities argue that the gold mine will deprive them of adequate clean water supplies.

Environmental Rights Concern: The Conga is a planned open-pit mine that will destroy approximately 12 square miles of sensitive wetlands, and also impact lakes, streams, and other habitats for imperiled species (including 13 endangered bird species). The project also plans to drain several lakes in the Andes Mountains by diverting their water into a series of reservoirs.

98. Department of Loreto, Peru

Human Rights Concern: Despite a 44-year history of frequent oil spills, the Peruvian Government licensed additional oil extraction in the Department of Loreto without the free, prior, and informed consent of indigenous peoples. About 98 percent of children in affected communities have unsafe levels of toxic metals in their blood, with locals reporting headaches, nosebleeds, nausea, stomachaches, and other health effects from oil spills.

Environmental Rights Concern: The region's main northern pipeline suffered five breaks in 2013 and 2014, coating the banks of the Marañón River in oil, causing massive fish kills, and otherwise harming the environment. In a biologically rich region that is known as the "heart of the planet," oil companies have cut down large areas of the Amazon rainforest – sometimes illegally – for pipelines, roads, and other oil-related infrastructure.



99. Huaraz, Peru

Human Rights Concern: One person died and at least four others were wounded when police tear-gassed and shot at protestors demanding clean water from operators of the Pierina open pit gold mine. At the same mine in 2006, police killed two miners who were protesting for increased wages.

Environmental Rights Concern: Barrick Gold's Pierina mine tore out a vast area of land in the Cayllon de Huaylas (Huaylas Valley) – an inter-Andean valley along the upper Santa River with rich grasslands and forests. Another mine in Peru owned by Barrick Gold, Lagunas Norte, pollutes the Perejil River with heavy metals such as cadmium, iron, and nickel, and also significantly reduced the river's pH, which can kill fish species and impair their physiological processes.

100. Ucayali Region, Peru

Human Rights Concern: Four opponents of illegal logging from the Alto Tamaya Saweto community in Peru were assassinated in a remote border region. One of those killed was Edwin Chota Valero, president of Saweto, an Ashéninka indigenous settlement. Regional human rights activist Robert Guimaraes Vásquez said the likely assailants are illegal loggers, who have long threatened anti-logging activists in the area.

Environmental Rights Concern: Peru experiences rampant illegal logging – accounting for up to 80 percent of its logging exports, according to the World Bank. Those illegal exports include rare trees like mahogany and topical cedar. Peru's forests, which include a large swath of the Amazon basin, are home to many endemic plant and animal species. An estimated 31 species, including many forest-dwelling species, face extinction in Peru.



REFERENCES

- ¹ World Resources Institute, “Forests,” at: www.wri.org/our-work/topics/forests.
- ² World Wildlife Fund, “Soil Erosion and Degradation,” at: <http://www.worldwildlife.org/threats/soil-erosion-and-degradation>.
- ³ UN-Water, “Statistics: Graphs & Maps,” at: <http://www.un.org/waterforlifedecade/scarcity.shtml>.
- ⁴ World Wildlife Fund, “Living Planet Report 2014,” at: http://wwf.panda.org/about_our_earth/all_publications/living_planet_report.
- ⁵ See International Coral Reef Initiative, “Benefits of Coral Reefs,” at: www.icriforum.org/about-coral-reefs/benefits-coral-reefs; see also U.S. Environmental Protection Agency, “Coral Reefs,” at: http://water.epa.gov/type/oceb/habitat/upload/2007_6_28_oceans_coral_documents_coralreefactsheet.pdf.
- ⁶ Jonathan L. Ramseur, “Deepwater Horizon Oil Spill: Recent Activities and Ongoing Developments,” CONGRESSIONAL RESEARCH SERVICE, pp. 1, 9, 12 (Apr. 17, 2015), at: <https://www.fas.org/sgp/crs/misc/R42942.pdf>.
- ⁷ J. Christopher Haney *et al.*, “Bird Mortality from the Deepwater Horizon Oil Spill. I. Exposure Probability in the Offshore of Mexico,” 513 MAR ECOL PROG SER 225-237 (2014).
- ⁸ Stephanie Venn-Watson *et al.*, “Adrenal Gland and Lung Lesions in Gulf of Mexico Common Bottlenose Dolphins (*Tursiops truncatus*) Found Dead Following the Deepwater Horizon Oil Spill,” PLOS ONE (May 20, 2015), at: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0126538>.
- ⁹ Science & Environmental Health Network, “Precautionary Principle,” at: www.sehn.org/pppra.html.
- ¹⁰ David Boyd, THE ENVIRONMENTAL RIGHTS REVOLUTION, p. 10 (UBC Press, Vancouver 2012); see also Scientific American, “Why Are Trace Chemicals Showing Up in Umbilical Cord Blood?” (Sept. 1, 2012), at: <http://www.scientificamerican.com/article/chemicals-umbilical-cord-blood>.
- ¹¹ Lara J. Akinbami *et al.*, “Asthma Prevalence, Health Care Use, and Mortality: United States, 2005-2009,” NATIONAL HEALTH STATISTICS REPORTS, No. 32 (National Center for Health Statistics, Centers for Disease Control and Prevention, Jan. 12, 2011), at: <http://www.cdc.gov/nchs/data/nhsr/nhsr032.pdf>. See also Centers for Disease Control and Prevention, “Asthma Fast-Stats,” at: <http://www.cdc.gov/nchs/fastats/asthma.htm>.
- ¹² Millennium Ecosystem Assessment Board, “Living Beyond Our Means: Natural Assets and Human Well-Being,” p. 15 (Mar. 2005), at: <http://www.millenniumassessment.org/documents/document.429.aspx.pdf>.
- ¹³ G. Ceballos *et al.*, “Accelerated Modern Human-Induced Species Losses: Entering the Sixth Mass Extinction,” SCIENCE ADVANCES 1:e1400253 (Jun. 19, 2015), at: <http://advances.sciencemag.org/content/advances/1/5/e1400253.full.pdf>. “[T]he ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.” *Id.*, p. 5.
- ¹⁴ Millennium Alliance for Humanity and Biosphere, “Scientific Consensus on Maintaining Humanity’s Life Support Systems in the 21st Century: Information for Policy Makers” (May 21, 2013), at: <http://mahb.stanford.edu/consensus-statement-from-global-scientists/>.
- ¹⁵ World Bank, “Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided” (2012), at: <http://documents.worldbank.org/curated/en/2012/11/17097815/turn-down-heat-4c-warmer-world-must-avoided>.
- ¹⁶ *Id.*; see also Anthony Barnosky *et al.*, “Approaching a State Shift in the Earth’s Biosphere,” 486 NATURE 52-58, at 52 (Jun. 7, 2012).
- ¹⁷ *Id.*, p. 54.

- 
- ¹⁸ National Snow & Ice Data Center, “Press Release: Arctic Sea Ice Shatters Previous Low Records” (Univ. of Colorado, Boulder Oct. 2, 2012), at: http://nsidc.org/news/press/20121002_MinimumPR.html.
- ¹⁹ NASA, “2015 Arctic Sea Ice Maximum Annual Extent Is Lowest On Record” (Mar. 19, 2015), at: <http://www.nasa.gov/content/goddard/2015-arctic-sea-ice-maximum-annual-extent-is-lowest-on-record>.
- ²⁰ UNEP News Centre, “Strengthened Governance and Management Required to Prevent Rush for Resources from Damaging Fragile Arctic Environment, Says UNEP Year Book 2013” (Feb. 16, 2013), at: <http://www.unep.org/newscentre/Default.aspx?DocumentID=2704&ArticleID=9397&l=en> (referencing UNEP, YEAR BOOK: EMERGING ISSUES IN OUR GLOBAL ENVIRONMENT (2013)).
- ²¹ *Id.*
- ²² See, e.g., Jared Diamond, *COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED* (Penguin Group USA, NY 2004).
- ²³ While human rights, including specifically the rights of indigenous peoples, have been relatively well-defined, nature’s rights have received less attention until recently.
- ²⁴ Earth Law Center, “Co-Violations of Rights,” at: <http://www.earthlawcenter.org/co-violations-of-rights>.
- ²⁵ Communities for a Better Environment, “Richmond Health Survey Report” (Jun. 2009), at: www.cbecal.org/wp-content/uploads/2012/05/Richmond-Health-Survey.pdf.
- ²⁶ See Office of the United Nations High Commissioner for Human Rights, “The Effects of Climate Change on the Full Enjoyment of Human Rights,” p. 3 (Apr. 30, 2015), at: <http://www.thecvf.org/wp-content/uploads/2015/05/humanrightsS-RHRE.pdf>.
- ²⁷ Women’s Environmental Network, “Gender and the Climate Change Agenda: The Impacts of Climate Change on Women and Public Policy,” p. 14 (2010) at: http://www.pacificdisaster.net/pdnadmin/data/original/WEN_2010_CC_women.pdf.
- ²⁸ This estimate excluded consideration of human security issues, extreme events (other than coastal flooding), and other areas of concern. See World Health Organization, “Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s” (2014), at: http://apps.who.int/iris/bitstream/10665/134014/1/9789241507691_eng.pdf?ua=1.
- ²⁹ DARA, “Climate Vulnerability Monitor: A Guide to the Cold Calculus of a Hot Planet,” Executive Summary, p. 17 (2012), at: <http://daraint.org/wp-content/uploads/2012/09/CVM2-Low.pdf>.
- ³⁰ Katie Valentine, “Heat-Related Deaths In Australia Are Set To Quadruple by 2050,” THINK PROGRESS (Aug. 1, 2013), at: <http://thinkprogress.org/climate/2013/08/01/2390701/heat-deaths-australia-global-heat-waves>.
- ³¹ Press Release, “International Human Rights Community Urges Heightened Ambition at COP21” (Jun. 10, 2015), at: <http://www.thecvf.org/wp-content/uploads/2015/06/CVF-Press-Release-10.06.-2015-Final11.pdf>.
- ³² Colin P. Kelley *et al.*, “Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought,” 112(11) PNAS 3241–3246 (2014).
- ³³ Marshall Burke *et al.*, “Climate and Conflict,” 7 ANNU. REV. ECON 577–617 (2015).
- ³⁴ A. Michelle Lawing & P. David Polly, “Pleistocene Climate, Phylogeny, and Climate Envelope Models: An Integrative Approach to Better Understand Species’ Response to Climate Change,” PLOS ONE (Dec. 2, 2011), at: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0028554>.



³⁵ Mark C. Urban, “Accelerating Extinction Risk from Climate Change,” 348 *SCIENCE* 571-573 (May 2015), at: www.science-mag.org/content/348/6234/571.

³⁶ National Oceanic and Atmospheric Administration, “What Is Ocean Acidification?” (Mar. 30, 2015), at: <http://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F>

³⁷ Alex D. Rogers & D. d’A. Laffoley, “International Earth System Expert Workshop on Ocean Stresses and Impacts: Summary Workshop Report,” p. 7 (Oct. 1, 2011).

³⁸ See e.g., Greenpeace, “Sea Level Rise” (Jul. 4, 2012), at: www.greenpeace.org/international/en/campaigns/climate-change/impacts/sea_level_rise/.

³⁹ Intergovernmental Panel on Climate Change, “Coastal Systems and Low-Lying Areas,” Fifth Assessment Report on Climate Change, p. 364 (2014) [hereinafter Fifth Assessment Report].

⁴⁰ Center for Biological Diversity, “Deadly Waters: How Rising Seas Threaten 233 Endangered Species” (Dec. 2013), at: www.biologicaldiversity.org/campaigns/sea-level_rise/pdfs/Sea_Level_Rise_Report_2013_web.pdf.

⁴¹ Celine Bellard *et al.*, “Potential Impact of Sea Level Rise on French islands Worldwide,” *NATURE CONSERVATION* (2013), at: <http://max2.esse.u-psud.fr/epc/conservation/PDFs/SLRfr.pdf>.

⁴² Universal Declaration of Human Rights, G.A. Res. 217A (III), U.N. Doc. A/810 at para. 71 (1948), at: <http://www.ohchr.org/EN/UDHR/Pages/Introduction.aspx>.

⁴³ Statement by Hernan Santa Cruz, Chile, at: <http://www.un.org/en/sections/universal-declaration/history-document/index.html> (emphasis added).

⁴⁴ Universal Declaration of the Rights of Mother Earth (2010), at: <http://pwccc.wordpress.com/programa>.

⁴⁵ Christopher Stone, “Should Trees Have Standing? – Toward Legal Rights for Natural Objects,” 45 *So. CAL. LAW REV.* 450, 489 (1972). Shortly after his essay was released, United States Supreme Court Justice William Douglas applauded the concept in his famous dissent in *Sierra Club v. Morton*, 405 U.S. 727 (1972), in which he stated that the voice of the natural world “should not be stilled.”

⁴⁶ *Id.*, pp. 458-459.

⁴⁷ *Vilcabamba River v. Provincial Government of Loja* (Provincial Justice Court of Loja, No 11121-2011-0010, 30 March 2011). See also Natalia Greene, “The First Successful Case of the Rights of Nature Implementation in Ecuador,” at: <http://therightsofnature.org/first-ron-case-ecuador>.

⁴⁸ The Plurinational State of Bolivia, Constitution of 2009, Arts. 33–34, 108.

⁴⁹ The Plurinational State of Bolivia, “Law of the Rights of Mother Earth,” Act No. 071 (Dec. 2010), at: http://f.cl.ly/items/212y0r1R0W2k2F1M021G/Mother_Earth_Law.pdf. The Plurinational State of Bolivia, “Law of Mother Earth and Integral Development for Living Well,” Act. No. 300 (Oct. 2012), at: <http://www.lexivox.org/norms/BO-L-N300.xhtml>.

⁵⁰ “Tutohu Whakatupua Agreement between the Whanganui Iwi and the Crown” (Aug. 30, 2012), at: <http://nz01.terabyte.co.nz/ots/DocumentLibrary%5CWhanganuiRiverAgreement.pdf>; New Zealand Office of Treaty Settlements, “Deed of Settlement Between the Crown and Tuhoe” (2013), at: <http://nz01.terabyte.co.nz/ots/DocumentLibrary/TuhoeSettlement-Summary.pdf>.

⁵¹ For a map and summary of most of these local laws, see www.earthlawcenter.org.



⁵² Home Rule Charter of the City of Pittsburgh, Pennsylvania, Ch. 618: Marcellus Shale Natural Gas Drilling, § 618.03(b), at: <http://www.earthlawcenter.org/local-communities/>.

⁵³ An Ordinance of the City Council of the City of Santa Monica Establishing Sustainability Rights, Santa Monica Municipal Code, Ch 4.75, at: http://www.smgov.net/departments/council/agendas/2013/20130409/s20130409_07A1.htm.

⁵⁴ *Id.*, § 4.75.040(b).

⁵⁵ “Report of the Special Rapporteur on the Situation of Human Rights Defenders, Margaret Sekaggya,” U.N. Doc. A/HRC/19/55 (Dec. 21, 2011).

⁵⁶ Global Witness, “Deadly Environment: The Dramatic Rise in Killings of Environmental and Land Defenders” (2014), at: <https://www.globalwitness.org/campaigns/environmental-activists/deadly-environment> (describing the rising threats to environmental and land rights advocates worldwide); *see also* Global Witness, “How Many More?” (April 2015), at: <https://www.globalwitness.org/campaigns/environmental-activists/how-many-more> (detailing the sharp increase in killings of environment and land defenders).

⁵⁷ Environmental Justice Organisations, Liabilities and Trade (EJOLT) Project, “Global Atlas of Environmental Justice,” at: <http://ejatlas.org> (interactive mapping platform detailing over 1,600 environmental conflicts globally as of 2015).

⁵⁸ Yes to Life, No to Mining, at: <http://www.yestolifenotomining.org>.

⁵⁹ John Vidal, “Mining Threatens to Eat Up Northern Europe’s Last Wilderness,” THE GUARDIAN (Sept. 3, 2014), at: www.theguardian.com/environment/2014/sep/03/mining-threat-northern-europe-wilderness-finland-sweden-norway; *see also* O. Eriksson *et al.*, “Heavy Metals in Reindeer and their Forage Plants,” 3 RANGIFER 315-331 (1990) (finding higher concentrations of copper in lichens near an open pit copper mine).

⁶⁰ *Id.*

⁶¹ Tina Andersen Vågenes, “‘Acutely Toxic’ Mine Waste Threatens the Death of Norway’s Fjords,” THE ECOLOGIST (Nov. 28, 2014), at: http://www.theecologist.org/News/news_analysis/2652197/acutely_toxic_mine_waste_threatens_the_death_of_norways_fjords.html.

⁶² *See* Linda Storholm, “Gruvesjefen Møtte Ungdomspolitikerne Til Spørretime,” HIGH NORTH NEWS (Sept. 29, 2015), at: www.highnorthnews.com/gruvesjefen-motte-ungdomspolitikerne-til-sporretime (translated from Norwegian).

⁶³ Vågenes, *supra* note 61.

⁶⁴ *Id.*

⁶⁵ John Vidal, “Conservationists Slam Plans to Dump Mining Waste into Norwegian Fjord,” THE GUARDIAN (Nov. 19, 2014), at: <http://www.theguardian.com/environment/2014/nov/19/conservationists-slam-plans-to-dump-mining-waste-into-norwegian-fjord>.

⁶⁶ Friends of the Earth Europe, “World Famous Fjords Threatened by Toxic Waste” (Nov. 18, 2014), at: <https://www.foeeurope.org/world-famous-fjords-threatened-toxic-waste-181114>.

⁶⁷ David Crouch, “Norway Approves Mine’s Controversial Plan to Dump Waste into Fjord,” THE GUARDIAN (Apr. 17, 2015), at: www.theguardian.com/environment/2015/apr/17/norway-approves-mines-controversial-plan-to-dump-waste-into-fjord.

⁶⁸ *Id.*



⁶⁹ Vågenes, *supra* note 61.

⁷⁰ Crouch, *supra* note 67.

⁷¹ Thomas Nilsen, "Yara: Mining in Lapland, Enrichment on Kola," BARENTS OBSERVER (Feb. 16, 2011), at: <http://barentsobserver.com/en/sections/business/yara-mining-lapland-enrichment-kola>; see also Vidal, *supra* note 59.

⁷² Trude Pettersen, "Yara Suspends Sokli Mining Project," BARENTS OBSERVER (Sept. 15, 2015), at: <http://barentsobserver.com/en/business/2015/09/yara-suspends-sokli-mining-project-15-09>.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ Ministry of Foreign Affairs, Norway and the Working Group on Indigenous Peoples in the Barents Euro-Arctic Council, "Extractive Industries and Indigenous Peoples," CENTRE FOR SÁMI STUDIES (UNIVERSITY OF TROMSØ) (Sept. 10, 2012), at: <https://uit.no/Content/327123/Extractive%20industries%20and%20indigenous%20peoples%20-%20Sep%2010%202012%20-%20Report.pdf>.

⁷⁶ The Swedish government officially apologized in 1998. Sámi Parliament and the Ministry of Agriculture, Food and Consumer Affairs, "The Sámi: An Indigenous People in Sweden," p. 63 (2005), at: www.samer.se/2137.

⁷⁷ The Local, "Mining Threatens Sámi Reindeer Grazing" (Dec. 24, 2013), at: www.thelocal.se/20131224/mining-threatens-Sámi-reindeer-grazing-traditions.

⁷⁸ Anna-Karin Lampou, "Mining Threatens Sámi Reindeer Herding in Sweden," PHYS.ORG (Dec. 24, 2013), at: <http://phys.org/news/2013-12-threatens-Sámi-reindeer-herding-sweden.html>.

⁷⁹ Vidal, *supra* note 59.

⁸⁰ President of Snowchange Cooperative and a scholar of Arctic biodiversity, climate change, and indigenous issues. See e.g., Tero Mustonen and Gleb Raygorodetsky, "Fishers of Eurasian Arctic Come Together in a Time of War," OUR WORLD (Oct. 7, 2014), at: <http://ourworld.unu.edu/en/fishers-of-eurasian-arctic-come-together-in-a-time-of-war>.

⁸¹ Vidal, *supra* note 59.

⁸² Arctic Newswire, "Lapland to Host Finland's Biggest Mine" (Jul. 15, 2014), at: www.adn.com/article/20140715/lapland-host-finlands-biggest-mine.

⁸³ *Id.*

⁸⁴ Tara Jeffrey, "Sarnia's Air Canada's Worst," THE SARNIA OBSERVER (Sept. 27, 2011), at: www.theobserver.ca/2011/09/26/sarnias-air-canadas-worst.

⁸⁵ U.S. Environmental Protection Agency, "Aquatic Resources Monitoring - Aquatic Indicators" (Apr. 6, 2011), at: <http://www.epa.gov/nheerl/arm/indicators/indicators.htm>.

⁸⁶ Albert Mumma & Susan Smith, POVERTY ALLEVIATION AND ENVIRONMENTAL LAW, p. 91 (Edward Elgar Pub, U.K. 2012).

⁸⁷ Steven Ralph & Michael Petras, "Caged Amphibian Tadpoles and in Situ Genotoxicity Monitoring of Aquatic Environments with the Alkaline Single Cell Gel Electrophoresis (Comet) Assay," 413 MUTATION RESEARCH 235-250 (1998), at: www.ingentaconnect.com/content/els/13835718/1998/00000413/00000003/art00024.



⁸⁸ Diana Kim Cryderman, “Metals Contamination and Chemical Exposures in Canada’s ‘Chemical Valley’: Implications for the Aamjiwnaang First Nation,” Dissertation for University of Michigan, p. 6 (2013), at: http://deepblue.lib.umich.edu/bitstream/handle/2027.42/97995/dkcryder_1.pdf?sequence=1.

⁸⁹ Garret Ellison, “Enbridge Can Begin Piping Tar Sands Oil Along Lake Ontario’s North Shore,” MLIVE (Oct. 7, 2015), at: www.mlive.com/news/index.ssf/2015/10/enbridge_can_begin_piping_tar.html.

⁹⁰ *Id.*

⁹¹ Barbara Simpson, “Ministry of Energy Officials Will Meet with Sarnia-Lambton Bitumen Upgrader Group in March,” THE OBSERVER (Feb. 10, 2015).

⁹² Thomas Homer-Dixon *et al.*, “Scientists Call for a Moratorium on Oil Sands Development,” at: www.oilsandsmoratorium.org/wp-content/uploads/2015/06/Oil-Sands-Moratorium-Message.pdf.

⁹³ Asthma Society of Canada, “Asthma Facts and Statistics,” at: <http://www.asthma.ca/corp/newsroom/pdf/asthmastats.pdf>.

⁹⁴ Cryderman, *supra* note 88.

⁹⁵ C. A Mackenzie *et al.*, “Declining Sex Ratio in a First Nation Community,” 113(10) ENVIRONMENTAL HEALTH PERSPECTIVES 1295-1298 (2005).

⁹⁶ Patrick McGuire, “I Left My Lungs in Aamjiwnaang,” VICE (Aug. 7, 2013), at: www.vice.com/read/i-left-my-lungs-in-aamjiwnaang-000300-v20n8; see also Nicolas A. Van Larebeke, “Sex Ratio Changes as Sentinel Health Events of Endocrine Disruption,” 14 INT. J. OCCUP. ENVIRON. HEALTH 138-143, 140 (2008), at: https://dspace.stir.ac.uk/bitstream/1893/597/1/IJOEH_April08_9Larebeke%20NVL.pdf. There have been surveys indicating a similar 2:1 sex ratio in some Arctic villages where pregnant women have high levels of chemicals in their blood. See Paul Brown, “Man-Made Chemicals Blamed as Many More Girls than Boys are Born in Arctic,” THE GUARDIAN (Sept. 11, 2007), at: www.theguardian.com/world/2007/sep/12/gender.sciencenews.

⁹⁷ *Id.*

⁹⁸ Nil Basu *et al.*, “Biomarkers of Chemical Exposure Assessment at Aamjiwnaang,” MCGILL ENVIRONMENTAL HEALTH SCIENCES LAB OCCASIONAL REPORT (2013).

⁹⁹ Ailish Morgan, “Aamjiwnaang First Nation Takes Shell to Court,” COUNCIL OF CANADIANS (Mar. 12, 2015), at: <http://rabble.ca/blogs/bloggers/council-canadians/2015/03/aamjiwnaang-first-nation-takes-shell-to-court>.

¹⁰⁰ EcoJustice, “Charge Laid Against Shell Canada for Refinery Spill in ‘Chemical Valley,’” at: <http://www.ecojustice.ca/charge-laid-against-shell-canada-for-refinery-spill-in-chemical-valley>.

¹⁰¹ Vice, “Canada’s Toxic Chemical Valley” (Documentary) (2013), at: <http://www.alldocumentaries.org/canadas-toxic-chemical-valley>.

¹⁰² *Id.*

¹⁰³ The current owner is CCRC-Tongguan Investment. Jonathan Watts & Dan Collyns, “Ecuador Indigenous Leader Found Dead Days Before Planned Lima Protest,” THE GUARDIAN (Dec. 6, 2014), at: <http://www.theguardian.com/world/2014/dec/06/ecuador-indigenous-leader-found-dead-lima-climate-talks>.



¹⁰⁴ Global Alliance for the Rights Of Nature, “The Case for Rights of Nature in Face of the Mirador Open Pit Copper Mining Project” (Feb. 26, 2013), at: <http://therightsofnature.org/latin-america/the-case-for-rights-of-nature-in-face-of-the-mirador-open-pit-copper-mining-project>.

¹⁰⁵ Dan Collins, “Was this Indigenous Leader Killed Because He Fought to Save Ecuador’s Land?” THE GUARDIAN (Jun. 2, 2015), at: www.theguardian.com/world/2015/jun/02/ecuador-murder-jose-tendetza-el-mirador-mine-project.

¹⁰⁶ Begüm Özkaynak & Beatriz Rodríguez-Labajos, “Mining Conflicts Around the World: Common Grounds from an Environmental Justice Perspective,” EJOLT, p. 48 (2012), at: http://www.ejolt.org/wordpress/wp-content/uploads/2012/11/121115_Ejolt-7_High.pdf.

¹⁰⁷ Heremy Hance, “Indigenous Leader Murdered Before he Could Attend Climate Summit,” MONGABAY (Dec. 8, 2014), at: <http://news.mongabay.com/2014/12/indigenous-leader-murdered-before-he-could-attend-climate-summit>.

¹⁰⁸ Alexander Zaitchik, “To Get the Gold, They Will Have to Kill Every One of Us,” SALON (Feb. 10, 2013), at: http://www.salon.com/2013/02/10/to_get_the_gold_they_will_have_to_kill_every_one_of_us.

¹⁰⁹ Global Alliance for the Rights of Nature, “The Case for Rights of Nature in Face of the Mirador Open Pit Copper Mining Project” (Feb. 26, 2013), at: <http://therightsofnature.org/latin-america/the-case-for-rights-of-nature-in-face-of-the-mirador-open-pit-copper-mining-project/>.

¹¹⁰ Esben Leifsen, “Struggle for Water Rights Envisioning a Wasteland: Big-Scale Mining and Local Responses in the Southern Ecuadorian Amazon,” INSTITUTE OF DEVELOPMENT STUDIES (Conference Paper), p. 8 (Sept. 7-9, 2015), at: <https://sourcepolitics2015.files.wordpress.com/2015/09/leifsen.pdf>.

¹¹¹ International Federation for Human Rights *et al.*, “Request for Review to Canada’s National Contact Point Under OECD Guidelines for Multinational Enterprises: Regarding Mining Activities by Corriente Resources Inc. and CRCC-Tongguan Investment (Canada) Co. Ltd. (Corriente-CRCC) in the Province of Zamora Chinchipe, Ecuador,” p. 22 (Jul. 25, 2013), at: https://www.fidh.org/IMG/pdf/request_mirador_25july2013_distribution.pdf.

¹¹² See Leifsen, *supra* note 110, p. 7.

¹¹³ See Zaitchik, *supra* note 108.

¹¹⁴ See Leifsen, *supra* note 110, p. 7.

¹¹⁵ *Id.*, pp. 11-12.

¹¹⁶ *Id.*, pp. 9-10.

¹¹⁷ “Condor-Mirador Mine Case,” at: <http://therightsofnature.org/wp-content/uploads/Condor-Mirador-Mine.pdf>.

¹¹⁸ Front Line Defenders, “Ecuador: Demolition of Homes of Human Rights Defenders and Shuar Community” (Oct. 8, 2015), at: <https://www.frontlinedefenders.org/node/29804>.

¹¹⁹ Barbara Fraser, “Hundreds March in Ecuador for Water Safeguards and Mining Protests Read,” INDIAN COUNTRY (Mar. 14, 2012), at: <http://indiancountrytodaymedianetwork.com/2012/03/14/hundreds-march-ecuador-water-safe-guards-and-mining-protests-102604>.

¹²⁰ See *e.g.*, Front Line Defenders, *supra* note 118.



- ¹²¹ Jonathan Watts and Dan Collins, "Ecuador Indigenous Leader Found Dead Days Before Planned Lima Protest," THE GUARDIAN (Dec. 6, 2015), at: <http://www.theguardian.com/world/2014/dec/06/ecuador-indigenous-leader-found-dead-li-ma-climate-talks>.
- ¹²² Planet Experts, "Body of Missing Ecuadorian Activist Found Bound & Buried" (Dec. 8, 2014), at: www.planetexperts.com/body-missing-ecuadorian-activist-found-bound-buried.
- ¹²³ Collins, *supra* note 105.
- ¹²⁴ Watts & Collins, *supra* note 103.
- ¹²⁵ Indigenous Peoples Links (PIPLinks), *supra* note 121.
- ¹²⁶ See Clifford Krauss & Keith Bradsher, "China's Global Ambitions, With Loans and Strings Attached," THE NEW YORK TIMES (Jul. 24, 2015), at: www.nytimes.com/2015/07/26/business/international/chinas-global-ambitions-with-loans-and-strings-attached.html?_r=0.
- ¹²⁷ Marc Becker, *ed.*, INDIGENOUS AND AFRO-ECUADORIANS FACING THE TWENTY-FIRST CENTURY, p. 63 (Cambridge Scholars Publishing, U.K. 2014).
- ¹²⁸ Ecuadorian Mining Law (2009), at: www.hidrocarburos.gob.ec/wp-content/uploads/downloads/2012/09/mining_law.pdf.
- ¹²⁹ Gloria Chicaiza & Ivonne Yanez, "The Mining Enclave of the Cordillera del Cóndor," ECOLOGICAL ECONOMICS FROM THE GROUND UP, p. 76 (Hali Healy *et al.*, eds., 2013).
- ¹³⁰ Eric Odada *et al.*, "Lake Chad: Experiences and Lessons Learned Brief," WORLD LAKES (2006), at: http://www.worldlakes.org/uploads/06_Lake_Chad_27February2006.pdf.
- ¹³¹ Daniel Kelly, "Climate Shift Shrunk Lake Mega-Chad A Millennium Ago," LAKE SCIENTIST (Jul. 2, 2015), at: <http://www.lakescientist.com/climate-shift-shrunk-lake-mega-chad-a-millennium-ago>.
- ¹³² Ngala Killian Chimtom, "Saving a Shrinking Lake," INTER PRESS SERVICE (Feb. 9, 2013), at: www.ipsnews.net/2013/02/saving-a-shrinking-lake/.
- ¹³³ Odada *et al.*, *supra* note 130.
- ¹³⁴ Mark Notaras & Obijiofor Aginam, "Sucking Dry an African Giant," OUR WORLD (Mar. 23, 2009), at: <http://ourworld.unu.edu/en/sucking-dry-an-african-giant>.
- ¹³⁵ See e.g. Kevin Chika Urama and Nicholas Ozor, "Impacts of Climate Change on Water Resources in Africa: The Role of Adaptation," AFRICAN TECHNOLOGY POLICY STUDIES NETWORKS (ATPS), p. 19 (Dec. 2010), at: www.ourplanet.com/climate-adaptation/Urama_Ozorv.pdf.
- ¹³⁶ Freedom C. Onuoha, "Climate Change, Population Surge and Resource Overuse in the Lake Chad Area: Implications for Human Security in the North-East Zone of Nigeria," CLIMATE CHANGE AND NATURAL RESOURCES CONFLICTS IN AFRICA, p. 23-24 (Donald Anthony Mwiturubani & Jo-Ansie van Wyk, eds., 2010), *citing* UNEP, "Africa's Lakes: Atlas of our Changing Environment" (2006).
- ¹³⁷ "Vital Water Graphics: An Overview of the State of the World's Fresh and Marine Waters," UNEP (2008), at: www.unep.org/dewa/vitalwater/article116.html; see also Ahmad Salkida, "Africa's Vanishing Lake Chad," AFRICA RENEWAL (Apr. 2012), at: www.un.org/africarenewal/magazine/april-2012/africa-s-vanishing-lake-chad.



¹³⁸ Chimtom, *supra* note 132.

¹³⁹ Salkida, *supra* note 137.

¹⁴⁰ World Wildlife Fund, “Lake Chad Flooded Savanna,” at: www.worldwildlife.org/ecoregions/at0904.

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ “Lake Chad, Once Upon a Time,” WORLD LAKE DATABASE, at: http://wldb.ilec.or.jp/data/ilec/WLC13_Papers/S8/s8-6.pdf.

¹⁴⁴ *Id.*

¹⁴⁵ Lake Chad is one of three major wetlands in the Sudano-Sahelian ecological zone, along with Mali’s Niger River Inner Delta and Sudan’s Sudd Swamps. See World Wildlife Fund, “Case Study on River Management: Lake Chad,” at: http://www.panda.org/about_our_earth/about_freshwater/rivers/irbm/cases/lake_chad_river_case_study.

¹⁴⁶ The Ramsar List of Wetlands of International Importance identifies important wetlands based on their ecology, botany, zoology, limnology, and/or hydrology. “The List of Wetlands of International Importance” (Oct. 7, 2015), at: <http://www.ramsar.org/about/wetlands-of-international-importance-ramsar-sites>.

¹⁴⁷ LCBC Member States of Cameroon, Central African Republic, Chad, Niger, and Nigeria, “Strategic Action Programme for the Lake Chad Basin” (Jun. 11, 2008), at: <http://iwlearn.net/iw-projects/767/reports/strategic-action-programme-for-the-lake-chad-basin>.

¹⁴⁸ An estimated 60 million people depend on Lake Chad for water. See Assaad W. Razzouk, “Don’t Mention Climate Change! Europe’s Response to the Refugee Crisis is Doomed to Fail,” THE ECOLOGIST (Apr. 24, 2015), at: www.theecologist.org/blogs_and_comments/commentators/2843295/dont_mention_climate_change_europes_response_to_the_refugee_crisis_is_doomed_to_fail.html.

¹⁴⁹ GRID-Arendal, “Lake Chad: Almost Gone” [2009], at: www.grida.no/graphicslib/detail/lake-chad-almost-gone_5aac.

¹⁵⁰ Environmental Justice Atlas, “Lake Chad Desertification, Chad,” at: <https://ejatlas.org/conflict/lake-chad-desertification-chad>.

¹⁵¹ Onuoha, *supra* note 136, p. 25.

¹⁵² *Id.*, p. 24.

¹⁵³ Senan Murray, “Lake Chad Fishermen Pack up Their Nets,” BBC NEWS (Jan. 15, 2007), at: <http://news.bbc.co.uk/2/hi/africa/6261447.stm>.

¹⁵⁴ This same trend has occurred elsewhere in Africa; for example, “[v]ariations in the size of the Okavango River, shared by Botswana and Namibia, have already almost led to military confrontation between the two countries.” Notaras & Aginam, *supra* note 134.

¹⁵⁵ François Gemenne *et al.*, “Climate and Security: Evidence, Emerging Risks, and a New Agenda,” 123(1) CLIMATE CHANGE pp. 1-9 (2014), at: <http://link.springer.com/article/10.1007/s10584-014-1074-7>.

¹⁵⁶ Senan Murray, “Lake Chad Fishermen Pack up Their Nets,” BBC NEWS (Jan. 15, 2007), at: <http://news.bbc.co.uk/2/hi/africa/6261447.stm>.



¹⁵⁷ Megan Darby, “Global Warming Raises Tensions in Boko Haram Region,” CLIMATE HOME (Jan. 16, 2015), at: www.climatechangenews.com/2015/01/16/global-warming-raises-tensions-in-boko-haram-region.

¹⁵⁸ Razzouk, *supra* note 148.

¹⁵⁹ CNN, “Massive African Lake Could Dry Up, U.N. Agency Says” (Oct. 15, 2009), at: <http://edition.cnn.com/2009/WORLD/africa/10/15/lake.chad/>.

¹⁶⁰ Earth Law Center, “Co-Violations of Rights,” at: <http://www.earthlawcenter.org/co-violations-of-rights>.

¹⁶¹ U.N. Doc. A/HRC/19/55, *supra* note 55.

¹⁶² *Id.*, p. 12.

¹⁶³ CETIM, “Mining and Human Rights Violations in Colombia: The Case of Anglo Gold Ashanti Vy the Afri-descendant Community of La Toma (Cauca)” (Mar. 7, 2014), at: <http://www.cetim.ch/mining-and-human-rights-violations-in-colombia-the-case-of-anglo-gold-ashanti-vy-the-afri-descendant-community-of-la-toma-cauca/>.

¹⁶⁴ ABC Birds, “Colombia Mega Dam Will Destroy Habitat for Threatened Macaw and Newly Discovered Wren” (Sept. 5, 2012), at: <http://abcbirds.org/article/colombia-mega-dam-will-destroy-habitat-for-threatened-macaw-and-newly-discovered-wren>.

¹⁶⁵ Ujjaini Halim, “Power Struggle: Sompeta Against Power Plant,” Pesticide Action Network Asia and the Pacific (Oct. 2010), at: www.panap.net/sites/default/files/S09_sompeta.pdf.

¹⁶⁶ News24, “Cops Ordered to Block Marikana Protesters” (Aug. 22, 2013), at: <http://www.news24.com/SouthAfrica/News/Cops-ordered-to-block-Marikana-protesters-20130822>.

¹⁶⁷ Watts & Collins, *supra* note 103.

¹⁶⁸ Wendy Laursen, “[Op-Ed] Is There Child Labor in Shipbreaking Yards?” THE MARITIME EXECUTIVE (Aug. 5, 2014), at: <http://www.maritime-executive.com/features/Is-There-Child-Labor-in-Shipbreaking-Yards-2014-08-05>; NGO Shipbreaking Platform, “Problems and Solutions,” at: <http://www.shipbreakingplatform.org/problems-and-solutions/>; Peter Gwin, “The Ship-Breakers,” NATIONAL GEOGRAPHIC (May 2014), at: <http://ngm.nationalgeographic.com/2014/05/shipbreakers/gwin-text>.

¹⁶⁹ Andrew Nikiforuk, “Oil Sands Pollute with Fish-Killing Toxins, New Study Shows,” THE TYEE (Mar. 7, 2010), at: <http://thetyee.ca/News/2010/08/30/TarSandsStudy>.

¹⁷⁰ Molly Redden, “A Glitter-Covered Banner Got These Protesters Arrested for Staging a Bioterror Hoax,” MOTHER JONES (Dec. 17, 2013), at: <http://www.motherjones.com/politics/2013/12/tar-sands-keystone-protesters-arrested-terror-ism-glitter>.

¹⁷¹ Andrew Curry, “Germany Plans to Raze Towns for Brown Coal and Cheap Energy,” NATIONAL GEOGRAPHIC (Feb. 13, 2014), at: <http://news.nationalgeographic.com/news/energy/2014/02/140211-germany-plans-to-raze-towns-for-brown-coal/>.

¹⁷² For global maps and other critical information on lands that are collectively held and used by indigenous peoples and local communities, see World Resources Institute, “LandMark: The Global Platform of Indigenous and Community Lands,” at: www.wri.org.

¹⁷³ U.N. Doc. A/HRC/19/55, *supra* note 55, p. 20.



¹⁷⁴ Human Rights Watch, “Ethiopia: Land, Water Grabs Devastate Communities” (Feb. 19, 2014), at: <http://www.hrw.org/news/2014/02/18/ethiopia-land-water-grabs-devastate-communities>; John Vidal, “Ethiopian Dam’s Ecological and Human Fallout Could Echo Aral Sea Disaster,” THE GUARDIAN (Mar. 5, 2014) at: <http://www.theguardian.com/global-development/2014/mar/05/ethiopian-dam-gibe-iii-aral-sea-disaster>.

¹⁷⁵ Tempo.Co, “Human Rights Abuses in Indonesian Palm Oil Industry” (Jul. 25, 2013), at: <http://en.tempo.co/read/news/2013/07/25/056499507/Human-Rights-Abuses-in-Indonesian-Palm-Oil-Industry>; Stephanie Wildes, “Indonesia’s Forest Communities Victims of Legal Land Grabs,” INTER PRESS SERVICE (Nov. 15, 2013), at: <http://www.ipsnews.net/2013/11/indonesias-forest-communities-victims-of-legal-land-grabs>.

¹⁷⁶ Global Witness, “Inside Malaysia’s Shadow State” (Mar. 19, 2013), at: <https://www.globalwitness.org/campaigns/forests/inside-malysias-shadow-state>.

¹⁷⁷ Cultural Survival, “Guatemala: We Are All Barillas- Stop a Dam on Our Sacred River!” (Aug. 20, 2012), at: <http://www.culturalsurvival.org/take-action/guatemala-we-are-all-barillas/guatemala-we-are-all-barillas-stop-dam-our-sacred-river>; Guatemala Human Rights Commission, “Santa Cruz Barillas,” at: <http://www.ghrc-usa.org/our-work/current-cases/santa-cruz-barillas>; Council on Hemispheric Affairs, “In Pursuit of Justice: a History of Conflict Between the Foreign Hydroelectric Industrial and Campesinos in the Guatemalan Town of Barillas” (May 14, 2012), at: <http://www.coha.org/?s=History+of+Conflict+Between+the+Foreign>.

¹⁷⁸ See e.g., Global Witness, “How Many More? 2014’s Deadly Environment: The Killing and Intimidation of Environmental and Land Activists, with a Spotlight on Honduras,” p. 13 (2015) (finding that at least 116 environmental activists were killed in 2014, and that “[i]ndigenous groups have been particularly hard-hit”).

¹⁷⁹ Human Rights Council, “Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, John H. Knox, Mapping Report,” U.N. Doc. A/HRC/25/53 (Dec. 30, 2013).

¹⁸⁰ *Id.*, para. 23 (citing Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) report, sect. II).

¹⁸¹ *Id.*, para. 24 (citing the Convention on the Rights of the Child, art. 24(2)(c)).

¹⁸² *Id.* (citing “Report of the Special Rapporteur on the Human Rights Obligations Related to Environmentally Sound Management and Disposal of Hazardous Substances and Waste,” Calin Georgescu, U.N. Doc. A/HRC/21/48, paras. 28–30 (2012)).

¹⁸³ U.N. Doc. A/HRC/19/55, *supra* note 55, pp. 19–20.

¹⁸⁴ See e.g., Kurdish Human Rights Project, “Evidence Of Human Rights Abuses Exposed In Turkey,” at: www.khrp.org/khrp-news/news-archive/2005-news/29-evidence-of-human-rights-abuses-exposed-in-turkey.html.

¹⁸⁵ Erin Conway-Smith, “Marikana Killings: Inquiry Blames Police for Deaths of 34 Striking Workers at South African Platinum Mine,” THE INDEPENDENT (Jun. 25, 2015), at: www.independent.co.uk/news/world/africa/marikana-killings-inquiry-blames-police-for-deaths-of-34-striking-workers-at-south-african-platinum-10346701.html.

¹⁸⁶ Global Witness, “A Hidden Crisis? Increase in Killings as Tensions Rise Over Land and Forests,” p. 9 (Jun. 19, 2012).

¹⁸⁷ Greenpeace, “Summary of Case: Human Rights Abuses Against Bosanga Community Members Following Village Protests Against SIFORCO Logging Company in Equateur Province,” at: <http://www.greenpeace.org/africa/Global/africa/publications/SIFORCO%20Summary%20of%20Case.pdf>.



¹⁸⁸ Center for International Environmental Law, “Land and Environmental Rights Defenders in Danger: An Overview of Recent Cases,” p. 3 (Dec. 2013).

¹⁸⁹ United Nations Office of the High Commissioner for Human Rights, “Rights Defenders Increasingly Branded ‘Enemies of the State’ Over Development Projects, UN Expert Warns,” (Oct. 29, 2013), at: <http://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=13912&LangID=E#sthash.ltv2rKkY.dpuf>.

¹⁹⁰ Center for International Environmental Law, *supra* note 188, p. 3.

¹⁹¹ *Id.*, p. 2.

¹⁹² U.N. Special Rapporteur on the Situation of Human Rights Defenders, “Commentary to the Declaration on the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms,” U.N. Doc. A/65/223, para. 34 (Jul. 2011), at: <http://www.ohchr.org/Documents/Issues/Defenders/CommentarytoDeclarationondefendersJuly2011.pdf>.

¹⁹³ Global Witness, “Deadly Environment: The Dramatic Rise in Killings of Environmental and Land Defenders” (2014), at: <https://www.globalwitness.org/campaigns/environmental-activists/deadly-environment>.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*, p. 24.

¹⁹⁶ Global Witness (2015), *supra* note 178.

¹⁹⁷ David Hill, “Peru Now Has a ‘Licence to Kill’ Environmental Protesters,” THE GUARDIAN (Jun. 29, 2014), at: <http://www.theguardian.com/environment/andes-to-the-amazon/2014/jun/29/peru-licence-to-kill-environmental-protestors>.

¹⁹⁸ Andy Grimm, “BP Oil Spill: Criminal Cases Largely Unresolved 5 Years After Deepwater Horizon Blowout,” THE TIMES-PICAYUNE (Apr. 17, 2015), at: www.nola.com/environment/index.ssf/2015/04/bp_oil_spill_criminal_cases_la.html.

¹⁹⁹ Dominic Rushe, “BP Set to Pay Largest Environmental Fine in US History for Gulf Oil Spill,” THE GUARDIAN (Jul. 2, 2015), at: www.theguardian.com/environment/2015/jul/02/bp-will-pay-largest-environmental-fine-in-us-history-for-gulf-oil-spill.

²⁰⁰ *Id.*

²⁰¹ See U.N. News Centre, “Climate Change Poses ‘Major Threat’ to Food Security, Warns UN Expert” (Nov. 3, 2015), at: <http://www.un.org/apps/news/story.asp?NewsID=52454#.VjmMiPmrTWJ> (“Increased frequency and intensity of extreme weather, rising temperatures and sea levels, as well as floods and droughts have a significant impact on the right to food”).

²⁰² See, e.g., The World Bank, “Future Impact of Climate Change Visible Now in Yemen” (Nov. 24, 2014), at: <http://www.worldbank.org/en/news/feature/2014/11/24/future-impact-of-climate-change-visible-now-in-yemen> (addressing the climate impacts being seen now on water supplies).

²⁰³ Greg Harman, “Has the Great Climate Change Migration Already Begun?” THE GUARDIAN (Sept. 15, 2014), at: <http://www.theguardian.com/vital-signs/2014/sep/15/climate-change-refugees-un-storms-natural-disasters-sea-levels-environment>.

²⁰⁴ Florent Baarsch & Lan Marie Nguyen Berg, “Warming Oceans and Human Waste Hit Tuvalu’s Sustainable Way of Life,” THE GUARDIAN (Mar. 4, 2011), at: <http://www.theguardian.com/global-development/poverty-matters/2011/mar/04/tuvalu-sustainable-way-of-life-disappears>.



²⁰⁵ Rebecka Schumann, “Kivalina Climate Change: Global Warming to Put Village in Alaska Underwater By 2025,” *INTERNATIONAL BUSINESS TIMES* (Jul. 30, 2013), at: <http://www.ibtimes.com/kivalina-climate-change-global-warming-put-village-alaska-underwater-2025-1364065>.

²⁰⁶ Statement by John H. Knox, Independent Expert on Human Rights and the Environment, “The Development of Environmental Human Rights” (Fourth Meeting of the Focal Points Appointed by the Governments of the Signatory Countries of the Declaration on the Application of Principle 10 of the Rio Declaration on Environment and Development in Latin America and the Caribbean) (Nov. 6, 2014), at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15274&LangID=E>.

²⁰⁷ United Nations General Assembly, “Harmony with Nature: Report of the Secretary-General” (Aug. 18, 2014), at: http://www.un.org/ga/search/view_doc.asp?symbol=A/69/322.

²⁰⁸ Millennium Alliance for Humanity and Biosphere, “Scientific Consensus on Maintaining Humanity’s Life Support Systems in the 21st Century: Information for Policy Makers” (May 21, 2013), at: <http://mahb.stanford.edu/consensus-statement-from-global-scientists/> [joint statement from over 475 scientists in 38 countries].

²⁰⁹ Statement of Dr. Frank Biermann, Chair, Steering Committee for the Earth System Governance Research Alliance, at Jon Turney, “What is Earth System Governance?” *FUTURE EARTH HOME* (Jul. 15, 2013), at: www.futureearth.org/blog/2013-jul-15/what-earth-system-governance; see also Dr. Frank Biermann, “Governance in the Anthropocene: Towards Planetary Stewardship,” Interactive Dialogue of the United Nations General Assembly on Harmony with Nature, New York City, New York (April 22, 2014), at: <http://www.harmonywithnatureun.org/content/documents/241Biermann%20Speech%20UNGA%20140422.pdf>.

²¹⁰ International Workshop on Deforestation and the Rights of Forest Peoples (March 2014), at: <http://www.forestpeoples.org/topics/rights-land-natural-resources/publication/2014/securing-forests-securing-rights-report-intern>.

²¹¹ Kari-Oca 2 Declaration, “Indigenous Peoples Global Conference on Rio+20 and Mother Earth,” Rio de Janeiro, Brazil (Jun. 17, 2012), at: <http://www.ieneearth.org/kari-oca-2-declaration/> (the “inseparable relationship between humans and the Earth, inherent to Indigenous, Peoples must be respected for the sake of our future generations and all of humanity”).

²¹² Statement by John H. Knox, *supra* note 206.

²¹³ Johannes Morsink, *THE UNIVERSAL DECLARATION OF HUMAN RIGHTS: ORIGINS, DRAFTING, AND INTENT*, p. 20 (Univ. of Penn. Press 1999).

²¹⁴ Christopher Stone, “Should Trees Have Standing? – Toward Legal Rights for Natural Objects,” 45 *SO. CAL. LAW REV.* 450, 489 (1972).

²¹⁵ Humanium, “The Convention on the Rights of the Child: Adoption of the Convention,” at: www.humanium.org/en/convention/adoption/.

²¹⁶ See Global Alliance for the Rights of Nature, “International Rights of Nature Tribunal,” at: <http://therightsofnature.org/rights-of-nature-tribunal>.

²¹⁷ Cormac Cullinan, “A Tribunal for Earth: Why it Matters” (2015), at: <http://therightsofnature.org/a-tribunal-for-earth-why-it-matters/>.

²¹⁸ Global Alliance for the Rights of Nature, “International Rights of Nature Tribunal – Quito,” at: <http://therightsofnature.org/rights-of-nature-tribunal-quito/>.



²¹⁹ Global Alliance for the Rights of Nature, “International Rights of Nature Tribunal – Lima,” at: <http://therightsofnature.org/lima-2014-tribunal/>.

²²⁰ Global Alliance for the Rights of Nature, “Stand up for Earth Rights in Paris,” at: <http://therightsofnature.org/stand-earth-rights-paris/>.

²²¹ Global Alliance for the Rights of Nature, “Chevron and Fossil Fuel Industry – Bay Area Peoples’ Tribunal on Rights of Nature,” at: <http://therightsofnature.org/chevron-tribunal/>.

²²² Australian Earth Laws Alliance, “Rights of Nature Tribunal, Brisbane,” at: www.earthlaws.org.au/15-october-rights-of-nature-tribunal-brisbane.

²²³ See, e.g., Cullinan, *supra* note 217.

²²⁴ European Court of Human Rights, at: <http://www.echr.coe.int/Pages/home.aspx?p=home&c=>.

²²⁵ Convention for the Protection of Human Rights and Fundamental Freedoms (“European Convention on Human Rights”), 213 U.N.T.S. 222 (Nov. 4, 1950), at: <http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/005>.

²²⁶ Inter-American Court of Human Rights, at: <http://www.corteidh.or.cr/index.php/en>.

²²⁷ Inter-American Commission on Human Rights, at: <http://www.oas.org/en/iachr/>.

²²⁸ American Convention on Human Rights, 1144 U.N.T.S. 143 (Nov. 21, 1969), at: <http://www1.umn.edu/humanrts/oasinstr/zoas3con.htm>.

²²⁹ American Declaration of the Rights and Duties of Man, OEA/Ser.L./V.II.23, doc. 21, rev. 6 (1948), at: <https://www.cidh.oas.org/Basicos/English/Basic2.American%20Declaration.htm>.

²³⁰ Organization of American States (OAS), Charter of the Organisation of American States (Apr. 30, 1948) at: http://www.oas.org/dil/treaties_A-41_Charter_of_the_Organization_of_American_States.htm.

²³¹ International Criminal Court, at: https://www.icc-cpi.int/en_menus/icc/Pages/default.aspx.

²³² Rome Statute of the International Criminal Court, U.N. Doc. A/CONF.183/9 (1998), at: https://www.icc-cpi.int/nr/rdon-lyres/ea9aeff7-5752-4f84-be94-0a655eb30e16/0/rome_statute_english.pdf.

²³³ See “Partnering Associations,” at: <http://iecc-tpie.org/partner.php?lang=en>.

²³⁴ “Charter of Brussels for the Creation of European and International Criminal Court of the Environment and Health” (2014), at <http://iecc-tpie.org/en>.

²³⁵ *Kawas-Fernández v. Honduras*, Inter-American Court of Human Rights, para. 148 (Apr. 3, 2009), at: www.corteidh.or.cr/docs/casos/articulos/seriec_196_ing.pdf (footnotes omitted).

²³⁶ U.N. Declaration of the United Nations Conference on the Human Environment of 5–16 June 1972, 11 I.L.M. 1416, at: www.unep.org/Documents/Multilingual/Default.asp?documentid=97&articleid=1503.

²³⁷ U.N., International Covenant on Civil and Political Rights (New York, Dec. 16, 1966), at: <http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>. The ICCPR, together with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered to be the “International Bill of Human Rights.”



²³⁸ See, e.g., David R. Boyd, “The Constitutional Right to a Healthy Environment,” *ENVIRONMENT MAGAZINE* (Jul.-Aug. 2012), at: www.environmentmagazine.org/Archives/Back%20Issues/2012/July-August%202012/constitutional-rights-full.html.

²³⁹ “Joint Statement by UN Special Procedures on the Occasion of World Environment Day” (Jun. 5, 2015), at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16049&LangID=E#sthash.6bjTPYt6.dpuf>.

²⁴⁰ See People’s Agreement of Cochabamba, World People’s Conference on Climate Change and the Rights of Mother Earth (April 24, 2010), at: <https://pwccc.wordpress.com/2010/04/24/peoples-agreement>.

²⁴¹ “To achieve the ultimate objective of the Convention to stabilize greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, we shall, recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius, on the basis of equity and in the context of sustainable development, enhance our long-term cooperative action to combat climate change.” Conference of the Parties, Decision 2/CP.15 (“Copenhagen Accord”), U.N. Doc. FCCC/CP/2009/11/Add.1, para. 1 (Mar. 30, 2010), at: <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf>.

²⁴² The Conference of the Parties, Decision 1/CP.16, “The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention,” U.N. Doc. FCCC/CP/2010/7/Add.1, para. 4 (Mar. 15, 2011), at: <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=2>.

²⁴³ James Hansen *et al.*, “Assessing ‘Dangerous Climate Change’: Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature,” *PLOS ONE* (Dec. 3, 2013), at: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0081648>.

²⁴⁴ *Id.*

²⁴⁵ Office of the United Nations High Commissioner for Human Rights, “The Effects of Climate Change on the Full Enjoyment of Human Rights,” p. 3 (Apr. 30, 2015), at: www.thecvf.org/wp-content/uploads/2015/05/humanrightsSRHRE.pdf.

²⁴⁶ See Joeri Rogelj *et al.*, “Energy System Transformations for Limiting End-Of-Century Warming to Below 1.5°C,” *NATURE CLIMATE CHANGE* (May 21, 2015), at: <http://www.nature.com/nclimate/journal/v5/n6/full/nclimate2572.html>.

²⁴⁷ The “People’s Agreement” that arose from the 2010 World People’s Conference on Climate Change and the Rights of Mother Earth calls for annual funding of at least six percent GDP by developed countries to address climate change impacts in developing countries. People’s Agreement of Cochabamba, *supra* note 240.

²⁴⁸ See *id.*

²⁴⁹ Alister Doyle, “Pacific Island Nation Calls for Moratorium on New Coal Mines,” *REUTERS* (Aug. 13, 2015), at: www.reuters.com/article/2015/08/13/us-climatechange-summit-coal-idUSKCN0QI1AD20150813.

²⁵⁰ While the amount fluctuates annually, one recent estimate is that there is about \$775 billion (or more) in fossil fuel subsidies every year, with about \$100 billion in production subsidies and \$675 billion in consumption subsidies (\$45 billion in developed countries and \$630 billion in developing countries). Oil Change International, “International Fossil Fuel Subsidies,” at: <http://priceofoil.org/fossil-fuel-subsidies/international>.

²⁵¹ See <http://unionsagainstfracking.org/>.

²⁵² See, e.g., The Gaia Foundation, African Biodiversity Network, *et al.*, “A Call for Legal Recognition of Sacred Natural Sites and Territories, and their Customary Governance Systems” (Nov. 2015), at: http://www.gaiafoundation.org/sites/default/files/call_to_african_commission.pdf. For comprehensive information on sacred sites recognition, importance, and protection, see The Gaia Foundation, “Sacred Sites Networks,” at: <http://www.gaiafoundation.org/sacred-sites-networks>.



²⁵³ Seventeen of the 29 murders that were compiled in the co-violations involved extractive industries and energy production (see *supra*, “Trends in Co-Violations of Human and Environmental Rights”).

²⁵⁴ Global Witness (2014), *supra* note 193, pp. 5, 16.

²⁵⁵ See *supra*, “Trends in Co-Violations of Human and Environmental Rights.”

²⁵⁶ A 2014 report by Global Witness asserts that only one percent of the killings of environmental defenders that occurred between 2002 and 2013 resulted in the trial, conviction, and sentencing of the suspected perpetrator. Global Witness (2014), *supra* note 193, p. 5.

²⁵⁷ “Report of the Special Rapporteur on the Situation of Human Rights Defenders, Margaret Sekaggya,” U.N. Doc. A/HRC/25/55, para. 58 (Dec. 23, 2013).

²⁵⁸ As described by Isolete Wichinieski, “what feeds the violence is the impunity.” Global Witness Interview with Isolete Wichinieski, National Coordinator, Comissão Pastoral de Terra, Brazil (Mar. 14, 2014).

²⁵⁹ See, e.g., Shannon K. O’Neil, “Rethinking Accountability at the World Bank,” COUNCIL ON FOREIGN RELATIONS (May 7, 2015), at: <http://blogs.cfr.org/development-channel/2015/05/07/rethinking-accountability-at-the-world-bank>.

²⁶⁰ International Corporate Accountability Roundtable, Recommendation Letter, pp. 4-5 (Apr. 23, 2013), at: <http://www.accountabilitycounsel.org/wp-content/uploads/2013/03/April-23-2013-International-Corporate-Accountability-Roundtable-Statement-to-USG-on-UN-Guiding-Principles.pdf>.

²⁶¹ Human Rights Council, “Elaboration of an International Legally Binding Instrument on Transnational Corporations and Other Business Enterprises with Respect to Human Rights,” U.N. Doc. A/HRC/26/L.22/Rev.1, para. 1 (Jun. 25, 2014), at: <http://daccess-dds-ny.un.org/doc/UNDOC/LTD/G14/064/48/PDF/G1406448.pdf?OpenElement>.

²⁶² Global Witness (2015), *supra* note 178.

²⁶³ U.N. Doc. A/HRC/25/55, *supra* note 257, para. 58.

²⁶⁴ “Report on the Special Rapporteur on the Situation of Human Rights Defenders,” U.N. Doc. A/70/217 (July 20, 2015), at: http://www.un.org/en/ga/search/view_doc.asp?symbol=A/70/217.

²⁶⁵ Rules of Procedure of the Inter-American Commission on Human Rights, Art. 25, at: <https://www.oas.org/en/iachr/mandate/Basics/rulesiachr.asp>.

²⁶⁶ Inter-American Commission on Human Rights, Resolution 29/2014, para. 18 (October 6, 2014), at: <https://www.oas.org/es/cidh/decisiones/pdf/2014/MC60-14-ES.pdf>.

²⁶⁷ U.N. Doc. A/HRC/25/53, *supra* note 179, para. 76.

²⁶⁸ “Report of the Special Rapporteur on the Rights of Indigenous Peoples, James Anaya,” U.N. Doc. A/HRC/18/35, para. 26 (Jul. 11, 2011), at: www.ohchr.org/Documents/Issues/IPeoples/SR/A-HRC-18-35_en.pdf.

²⁶⁹ People’s Agreement of Cochabamba, *supra* note 240.

²⁷⁰ See e.g., Special Procedures of the United Nations Human Rights Council, “Individual Report on the Rights of Indigenous Peoples, Report No. 8” (“Mapping Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment”) (Dec. 2013).



²⁷¹ International Labor Organization, “Ratifications of C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169),” at: www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO::P11300_INSTRUMENT_ID:312314.

²⁷² *Id.*

²⁷³ See e.g., Global Witness (2014), *supra* note 193, p. 7.

²⁷⁴ See U.N. Doc. A/HRC/25/53, *supra* note 179, para. 41 (*citing* Special Rapporteur on the Situation of Human Rights Defenders, “Situation of Human Rights Defenders,” paras. 70-73 (Aug. 5, 2013)).

²⁷⁵ United Nations, “Declaration on the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms,” A/RES/53/144 (March 8, 1999), at: <http://www.ohchr.org/Documents/Issues/Defenders/Declaration/declaration.pdf>.

²⁷⁶ U.N. Doc. A/70/217, *supra* note 264, pp. 20-21.

²⁷⁷ U.N. Special Rapporteur on the Situation of Human Rights Defenders, “Commentary to the Declaration on the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms,” p. 71 (July 2011), at: <http://www.ohchr.org/Documents/Issues/Defenders/Commentaryto-DeclarationondefendersJuly2011.pdf>.

²⁷⁸ U.N., “Report of the Secretary-General on the Rule of Law and Transitional Justice in Conflict and Post-Conflict Societies” (Aug. 23, 2004), at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N04/395/29/PDF/N0439529.pdf?OpenElement>.

²⁷⁹ U.N., “United Nations and the Rule of Law,” at: <http://www.un.org/en/ruleoflaw/index.shtml>.

²⁸⁰ *Id.*

²⁸¹ See, e.g., “UN Experts Urge Latin America and the Caribbean to Adopt Trend-Setting Agreement on Environmental Democracy” (Oct. 22, 2015), at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16638&LangID=E#sthash.JDqoQQpw.dpuf>.

²⁸² “Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.” United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, Principle 10, U.N. Doc. A/CONF.151/26 (Aug. 12, 1992), at: <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.

²⁸³ For an analysis of the benefits of regional environmental access rights conventions over other options, see David Banisar *et al.*, “Moving From Principles to Rights: Rio 2012 and Access to Information, Public Participation, and Access to Justice,” WORLD RESOURCES INSTITUTE (2011), at: http://www.stakeholderforum.org/fileadmin/files/P10%20joint%20paper%20Final_AZ_LB%20CE%20LDS.pdf.

²⁸⁴ See “Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, John H. Knox: Compilation of Good Practices,” U.N. Doc. A/HRC/28/61 (Feb. 3, 2015).

²⁸⁵ See Economic Commission for Latin America and the Caribbean, “Principle 10,” at: www.cepal.org/en/principio-10.

²⁸⁶ “Statement by United Nations Experts on the ECLAC’s Negotiation of a Regional Instrument on Environmental Democracy” (Oct. 22, 2015), at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16630&LangID=E>.



²⁸⁷ See, e.g., Global Witness (2015), *supra* note 178.

²⁸⁸ See, e.g., Linda Sheehan, “Implementing Rights of Nature through Sustainability Bills of Rights,” 13 NEW ZEALAND J. OF PUBLIC AND INT’L LAW (2015) (in print).

²⁸⁹ Declaration on Human Rights Defenders, *supra* note 275, Art. 2(a).

²⁹⁰ U.N. Doc. A/70/217, *supra* note 264, p. 21.

²⁹¹ U.N. General Assembly, Resolution 66/288, “The Future We Want,” para. 38 (Sept. 11, 2012), at: <http://www.uncsd2012.org/content/documents/727The%20Future%20We%20Want%2019%20June%201230pm.pdf>.

²⁹² Robert Costanza, “Ecological Economics: Reintegrating the Study of Humans and Nature,” 6(4) ECOLOGICAL APPLICATIONS 978-990, 980 (1996), at: http://doctoradoagroecoudea.files.wordpress.com/2013/04/costanza_1996_ecological_economics_reintegrating_the_study_of_humans_and_nature.pdf.

²⁹³ See, e.g., World Changing, “Ecological Economics: An Interview with Joshua Farley” (Sept. 5, 2008), at: www.world-changing.com/archives/008487.html. See also Herman Daly & Joshua Farley, ECOLOGICAL ECONOMICS (Island Press, Washington D.C. 2010).

²⁹⁴ See <https://www.transitionnetwork.org/>.

²⁹⁵ See, e.g., Ecocity Builders, “Why Ecocities,” at: www.ecocitybuilders.org/why-ecocities.

²⁹⁶ See, e.g., Business Alliance for Local Living Economies (BALLE), at: <https://bealocalist.org/>.

²⁹⁷ See, e.g., Sustainable Economies Law Center, at: <http://www.theselc.org/>.

²⁹⁸ Aldo Leopold, “The Round River — A Parable,” A SAND COUNTY ALMANAC, WITH ESSAYS ON CONSERVATION FROM ROUND RIVER (Oxford University Press, 2d ed., New York 1949).

