



# 2016 Update: FIGHTING FOR OUR SHARED FUTURE

Protecting Both Human Rights  
and Nature's Rights



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Protecting Both Human  
Rights and Nature's Rights

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Most of all, ELC thanks those environmental defenders who protect our human and environmental rights in the face of an onslaught of pollution, deforestation, extraction, and other harmful activities. ELC also acknowledges other organizations that are working to put an end to co-violations of human and environmental rights, including but not limited to the **Yes to Life No to Mining Campaign**, **Global Witness**, and **EJOLT**.

Finally, ELC acknowledges those ever-dwindling ecosystems and species that have been lost or harmed due to human activities. We hope that this report will help nature and humans thrive together on our shared planet.

Cover photo by **Emily Arasim/Women's Earth and Climate Action Network (WECAN)**, taken at a march held during the COP22 U.N. Climate Change Conference in Marrakech, Morocco (2016).

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# EXECUTIVE SUMMARY

The world economy's misguided and unachievable drive for infinite economic growth on a finite planet is running roughshod over the fundamental rights of people and nature. In December 2015, Earth Law Center (ELC) examined 100 "co-violations" of human and environmental rights and made recommendations on how to establish a better future for people and planet.

Since then, a wave of new, increasingly violent cases of rights co-violations has swept across the globe. Many involve acts of arrest and murder intended to silence frontline environmental defenders protecting ecosystems and communities from destruction and contamination. These acts are rarely punished, with human victims branded as enemies of "progress," and environmental victims viewed as commodities rather than life.

This 2016 update of ELC's 2015 report, *Fighting for Our Shared Future*, analyzes an additional 100 case studies that demonstrate the increasing breadth and severity of co-violations worldwide. The update also ties in new data compiled by partners working with frontline rights defenders, and proposes additional, urgently needed solutions. Among other findings, the 200 case studies collected by ELC indicate that:

- Co-violations of nature's rights and human rights are expanding across the globe, though the Global South is proportionately more affected.
- Thirty percent of the cases examined involved harm to indigenous peoples' rights, despite their comprising only five percent of the population.
- With regard to violations of nature's rights, pollution and biodiversity loss appear most often.
- Human rights violations parallel and co-exist with the expanding scope and depth of nature's rights violations. Chillingly, 28 percent of human rights violations examined involved at least one murder.
- Perpetrators include both government and economic actors – with 43 percent of cases involving both as the perpetrators.

Earth Law Center examined the 200 cases for inclusion in the report based on comparison with three international rights instruments: the U.N. Declaration of Human Rights, the U.N. Declaration on the Rights of Indigenous Peoples, and the Universal Declaration on the Rights of Mother Earth. This report uses four representative case studies to show how these three rights agreements can be invoked to identify, prevent, and redress rights co-violations.

The case studies examine: (1) suppression of tribal and other voices opposing the dangerous Dakota Access pipeline at Standing Rock; (2) eradication of Indonesia's forests, species, and indigenous communities for massive palm oil plantations; (3) murder and violence directed towards opponents of mega-dams and other destructive projects in Honduras; and (4) the global destruction of our oceans, which is tied to violations of workers' rights within the fishing industry and other abuses.

Action is needed now to raise awareness of these co-violations of fundamental human rights

and nature's rights, and to shift our economic worldview toward one that respects rather than ignores those rights. Recommendations include, among others:

- 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
- Prioritize cases before the International Criminal Court that involve co-violations of human rights and nature's rights
- Formulate an international treaty to prevent and address human rights and nature's rights violations by transnational and national business enterprises
- Provide emergency protection to at-risk environmental defenders
- Adopt a system for receiving information and reporting on violations of the rights of nature and of environmental human rights defenders

This 2016 co-violations update adds to the growing evidence of systematic human and environmental rights violations by governments and industries worldwide, as documented by dozens of reports and thousands of tragic stories – many still unheard. To prevent these harms from further destroying communities and nature, we must not only hold all perpetrators accountable. We must also transform our laws to reflect the goal of shared well-being with other humans and the natural world, rather than short-term profit for the few at the expense of the many. Together as a global community, we can achieve this vision.



*Curious child in northern Nepal*

## I. CO-VIOLATIONS OF NATURE'S RIGHTS AND HUMAN RIGHTS ARE ESCALATING

Across the globe, we injure both people and ecosystems by treating the natural world as mere property to fuel incessant economic growth. A 2016 United Nations report found

*intensified competition for natural resources in recent decades has led to multiple social and environmental conflicts all over the world . . . In a globalized world, the quest for economic growth has resulted in a neo-colonial environment that exacerbates conflicts between communities and business actors.<sup>1</sup>*

In 2016, this pattern was starkly demonstrated by an escalating number of actions worldwide to silence environmental defenders. In 2015, at least 185 land and environmental defenders were killed across 16 countries, a 59 percent increase over the year before.<sup>2</sup> That trend continued in 2016 and included two Goldman Environmental Prize winners: Berta Cáceres, murdered due to her advocacy with the indigenous Lenca people of Honduras against projects such as the Agua Zarca Dam; and Maxima Acuña de Chaupe, viciously attacked in Peru for her work on gold mining.

The scope of threats, harassment, intimidation, and killings indicates a “truly global crisis.”<sup>3</sup> Indeed, the U.N. Special Rapporteur on the Situation of Human Rights Defenders found that “the killing of

environmental human rights defenders is only the tip of the iceberg.” He strongly urged nation states to immediately address this “disturbing trend”<sup>4</sup> and fight the “demonization of the brave individuals and groups who strive to defend and promote environmental and land rights.”<sup>5</sup> As he concluded, they “spoke truth to power, and were murdered in cold blood.”<sup>6</sup>

The rising number of threats and violent actions against human rights defenders arises from an economic system that treats nature as property rather than partner. As the Special Rapporteur observed, the “commodification and financialization of nature often lead[s] to simplifying the real ‘value’ of the environment, ignoring the social or cultural dimensions and the complex interactions of elements within and between ecosystems.”<sup>7</sup>

The increasing pace of human rights violations against these defenders of the environment parallels the increasing number and scope of nature’s rights violations worldwide, with ecosystems and species being decimated and destroyed at an accelerating pace. For example, skyrocketing illegal trade in endangered and threatened species is pushing many to extinction.<sup>8</sup> A new study demonstrates that humans have destroyed a tenth of Earth’s remaining wilderness in just the last two decades, with the rate of wilderness loss nearly double the rate of protection efforts.<sup>9</sup>

Earth Law Center’s research into these “co-violations” of nature’s rights and human rights was first introduced in our December 2015 report, *Fighting for Our Shared Future: Protecting Both Human Rights and Nature’s Rights*.<sup>10</sup> In light of the escalation of rights violations since that report’s release, we examine new data and offer additional solutions. We urge that governments, businesses, and stakeholders worldwide implement these and other actions immediately in order to stop and reverse such grave injustices.

**“ [They] spoke truth to power, and were murdered in cold blood. ”**

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

## II. DISTURBING TRENDS IN CO-VIOLATIONS CALL FOR SWIFT ACTION

ELC'S *Fighting for Our Shared Future* report examined 100 cases of co-violations worldwide, where "co-violations" are defined as situations in which governments, industry, or both violate human and nature's rights with the same activity. An example is a mining project that pollutes the environment with heavy metals and also significantly and broadly impacts the health of people in the surrounding community. These 100 cases are mapped on ELC's website,<sup>11</sup> demonstrating the global reach and systemic nature of the problem.

As discussed in more detail in our December 2015 report,<sup>12</sup> several international instruments can provide metrics for assessing rights violations. The first is the Universal Declaration of Human Rights (UDHR), which recognizes that "[a]ll human beings are born free and equal in dignity and rights."<sup>13</sup> The second is the Universal Declaration on the Rights of Indigenous Peoples (UNDRIP), which calls for the promotion of the rights of indigenous peoples.<sup>14</sup>

Finally, the third is the Universal Declaration of the Rights of Mother Earth (UDRME), which, like the UDHR,<sup>15</sup> recognizes that the fundamental rights of ecosystems and species arise from their very existence on our shared planet.<sup>16</sup> The UDRME emerged from the April 2010 World Peoples' Conference on Climate Change and the Rights of Mother Earth in Cochabamba, Bolivia, attended by upwards of 35,000 people from 140 nations.<sup>17</sup> The rights of nature have been recognized constitutionally in Ecuador,<sup>18</sup> by statute<sup>19</sup> and constitution<sup>20</sup> in Bolivia, by treaty agreement in New Zealand,<sup>21</sup> in local rights of nature laws in dozens of communities in the United States,<sup>22</sup> and by numerous other governmental and civil society institutions.<sup>23</sup> For example, Ecuador's constitutional Article 71 states that "Nature or Pachamama,

where life is reproduced and exists, has the right to exist, persist, maintain itself and regenerate its own vital cycles, structure, functions and its evolutionary processes."

This report adds another 100 cases of co-violations of nature's rights and human rights worldwide (including special attention to violations of the rights of indigenous peoples), and updates the original 100 as needed with new information. We document these 200 co-violations in Appendix 1. Notably, few of the original 100 co-violations have been remedied, mitigated, or otherwise addressed.

As in our December 2015 report, the 200 co-violations described in Appendix 1 demonstrate that governments and industries worldwide are committing systematic co-violations of human and environmental rights through a variety of activities, such as mining, dam building, oil extraction, deforestation, and many others. A disproportionate amount of harm affects areas of great biodiversity, particularly in South and Central America and Asia. Within human communities, indigenous peoples are heavily targeted by violence, displacement, and, increasingly, murder. These and other trends reveal a global story of how treating nature as property rather than a partner continues to promote injustices against humans and nature.



Leather tanneries pollution in Bangladesh, Photo by Daniel Lanteigne

## Rights-Based Agreements Illustrate the Flaws of Our Economic System

Our economic system assumes that nature and humans are “resources,” to strengthen the economy for itself. This worldview increasingly ignores the inherent rights of humans, and consistently ignores the rights of nature. We must forge a path forward that prioritizes human rights and nature’s rights, one in which the economic system serves those rights rather than violates them. Three agreements can help guide us on this path.

**Universal Declaration of Human Rights (U.N. 1948).** Rights include:

- **Art. 3:** right to “life, liberty and security of person”
- **Art. 5:** right to be free from “torture or to cruel, inhuman or degrading treatment or punishment”
- **Art. 9:** right to not be subjected to “arbitrary arrest, detention or exile”
- **Art. 20(1):** right of “freedom of peaceful assembly and association”
- **Art. 23(1):** right to “just and favorable conditions of work”

**Universal Declaration on the Rights of Indigenous Peoples (U.N. 2007).** Rights include:

- **Art. 5:** right of indigenous peoples to “maintain and strengthen their distinct political, legal, economic, social and cultural institutions”
- **Art. 7(1):** right to “life, physical and mental integrity, liberty and security of person
- **Art. 11:** right to practice and “revitalize their cultural traditions and customs”
- **Art. 18:** right to “to participate in decision-making in matters which would affect their rights”
- **Art. 19 and Art. 32(2):** right to “free, prior and informed consent”
- **Art. 31(1):** right to “maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions”

**Universal Declaration of the Rights of Mother Earth (World People’s Congress, 2010).** Rights of “Mother Earth and all beings of which she is composed” include:

- **Art. 2(1)(a):** right “to life and to exist”
- **Art. 2(1)(b):** right “to be respected”
- **Art. 2(1)(g):** right to “integral health”
- **Art. 2(1)(h):** right to be free from “contamination, pollution and toxic or radioactive waste”
- **Art. 2(1)(j):** right to “full and prompt restoration for violation of the rights recognized”

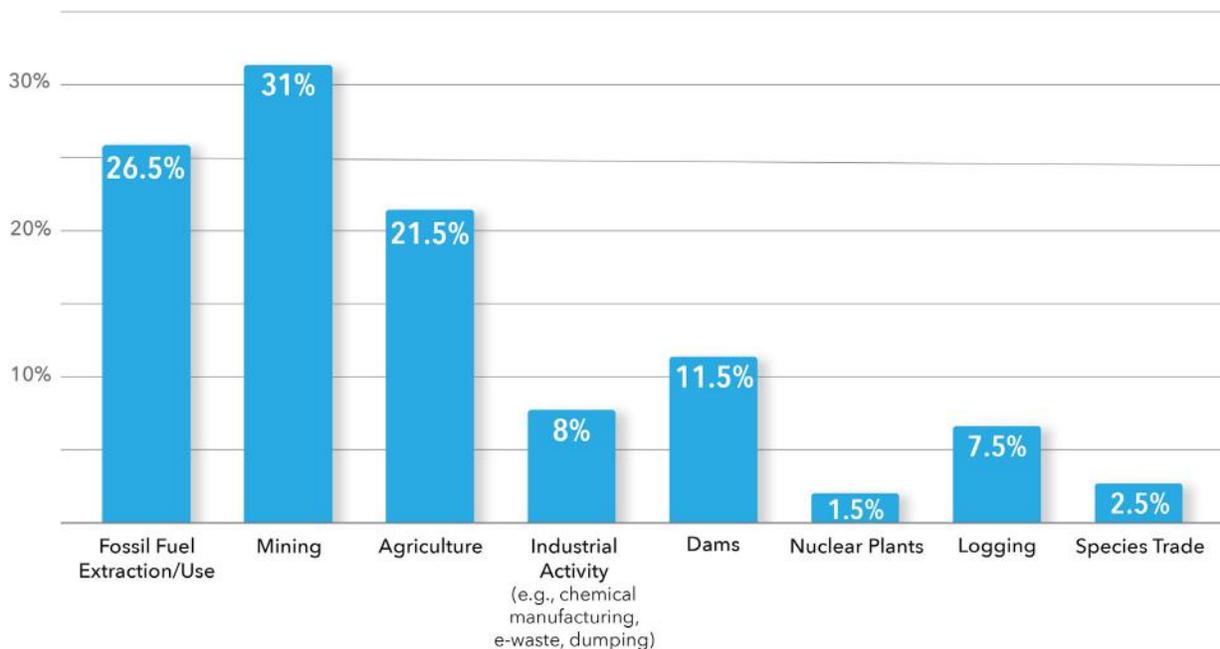
## A. Data Demonstrate Growing Co-Violations Across the Globe, with Key Trends Emerging

Earth Law Center analyzed 200 cases of co-violations worldwide by compiling information from a variety of sources; these are referenced in the case summaries in the Appendix and the online map. Much of the information came directly from affected communities, who continue to fight and suffer from the impacts of these projects, as well as sources such as United Nations reports.

A number of trends have emerged from the data that we have compiled to date. In our 2015 co-violations report, we found that:

- Co-violations of nature's rights and human rights are expanding across the globe, though the Global South is proportionately more affected.
- Co-violations are frequently connected to extractive industries and energy production.
- Environmental destruction is strongly associated with violations of the rights of indigenous peoples.
- State interests often side with private industry rather than with human or nature's rights advocates.
- It is rare that the sources of co-violations are adequately addressed.
- Addressing violations of the planet's right to a healthy climate is needed to protect human rights overall.

**Figure 1. Primary Source of Co-Violation**



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

The additional co-violation data analyzed in 2016 reaffirms these trends and adds additional, important information. For example, with regard to sources of co-violations:

- Mineral and metal mining activities were found to be the primary factor in almost one-third of the cases examined by ELC, more than any other co-violation source. About a third of all mining cases also had a secondary co-violation source of logging, as forests are cleared to reach the minerals below.
- “Fossil fuel mining and extraction” was the primary source of over a quarter of co-violations. This category also strongly correlated with logging, particularly for coal mines.
- Agriculture – including palm oil and eucalyptus plantations, sugar production, and over-diversion of waterways – followed close behind, causing just under a quarter of co-violations.
- Dams and water projects accounted for over 11 percent of the co-violations we compiled, and over a quarter of dam and water project cases had agriculture as a secondary source of co-violations.

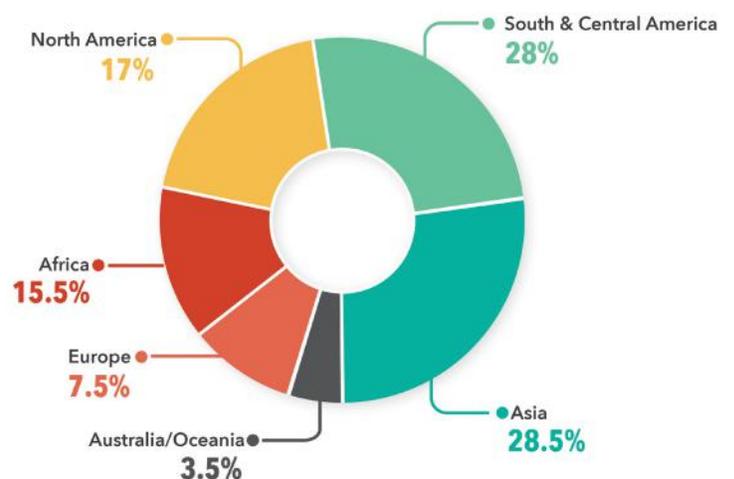
The new co-violations data also highlights inequities between the Global North and Global South, including the following:

- The majority of co-violations examined occur in the Global South – particularly Asia and South and Central America, which accounted for over half of the co-violations compiled to date.

- Africa was the third most common location of co-violations at 17 percent, closely followed by North America at 16 percent. This result highlights that while the majority of co-violations occur in the Global South, they also occur in the Global North, although they are proportionately less common in Europe than elsewhere.

Finally, as described in greater detail below, the additional co-violation data revealed important new trends in environmental and human rights concerns. Importantly, environmental destruction is closely associated with harms to indigenous peoples. Thirty percent of co-violation cases were found to impact indigenous populations, despite the fact that indigenous peoples make up only five percent of the global population. On the environment side, trends show that the majority of co-violations are strongly associated with biodiversity loss, an escalating problem worldwide.

**Figure 2. Co-Violation Cases by Region**



## B. Violations of Nature's Rights Are Expanding

The toll of human activities on nature have taken an alarming turn. The world is now on track to lose two-thirds of Earth's animal life by 2020.<sup>24</sup> Species naturally go extinct at an estimated background rate of 2 mammals per 10,000 species per 100 years.<sup>25</sup> However, the current rate of extinction is estimated to be 53 times the natural extinction rate. "[R]eptiles are vanishing 24 times faster, birds 34 times faster, mammals and fishes about 55 times faster, and amphibians 100 times faster than in the past."<sup>26</sup>

The rapid loss in biodiversity over the last few hundred years reveals that we are likely living through the Earth's sixth mass extinction, which itself appears to be occurring much faster than the previous five events. Once we lose a species, we lose biodiversity and the specific role that species provided to the complex, interconnected web of life. We also fail in our moral obligations toward all life on Earth.

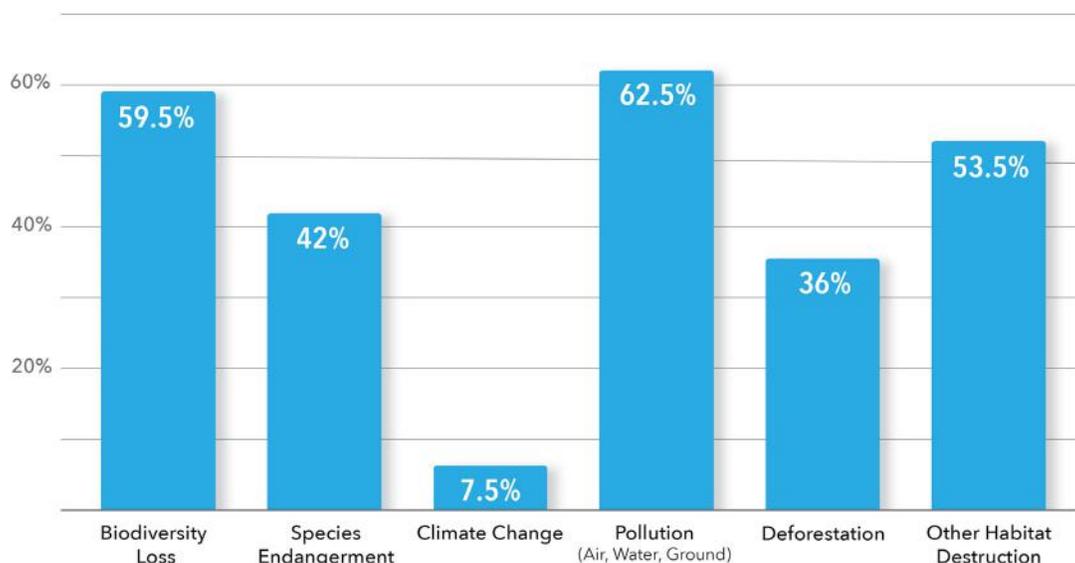
Biodiversity loss appears frequently in co-violations cases, arising in over half of the cases examined.

It widely arose as a result of activities involving destruction and degradation of habitat, such as deforestation (36 percent of cases) and pollution of the air, water, and ground (68.5 percent of cases). Biodiversity loss, of course, also occurred in nearly all cases of species endangerment.

Effects are not merely land-based. A notable number of cases involved impacts to marine species and ecosystems. Overfishing, pollution, and climate change are posing serious threats to the form, function, cycles, and survival of marine ecosystems. Marine vertebrate populations have declined by about 50 percent since 1970,<sup>27</sup> and large predatory fish have plummeted an estimated 90 percent.

ELC's data also highlights the breadth of harms to our ecosystems. The category of "other habitat destruction" – such as the dewatering of rivers and streams, impairment of riparian ecosystems due to mega-dams, and stripping off layers of soil for mine construction – occurred in over half of analyzed cases. Additionally, climate change impacts occurred in some 7.5 percent of cases; this number will grow significantly in the future, as

**Figure 3. Nature's Rights Violations**



the pace of impacts attributable to climate change accelerates.

The nature and extent of nature's rights violations vary by region. For example, in North America, air, water, and land pollution cause over 80 percent of the violations of nature's rights. Fossil fuel-related pollution alone was the source of about half of the cases, including the majority of those involving pollution. Impacts were particularly significant on biodiversity, with losses a concern in 47 percent of cases in North America. These results reflect our flawed perspective on economic growth, which largely disregards and often facilitates environmental degradation.

South and Central America experience these threats and impacts more. Deforestation is a

particularly significant threat in this region. In Brazil, 80 percent of the logged timber is reported to come from illegal operations in the Amazon.<sup>28</sup> Scientists predict that as many as 57 percent of the tree species in the Amazon will soon be listed under the IUCN Red List of Threatened Species, another indication of the rapid decline of forests.<sup>29</sup>

Finally, in Asia, instances of co-violations featuring biodiversity loss were 17 percent higher than the rest of the planet. Species endangerment, pollution (air, water, ground), and other habitat destruction were also higher than on other continents. Many of these trends can be attributed to the destruction of forests in Southeast Asia, including for timber (much of it arising from illegal logging), dam construction, and the global explosion of the palm oil industry.<sup>30</sup>



Mumbai, India, Photo by Franco Beccari (available at: [www.flickr.com/photos/francobeccari](http://www.flickr.com/photos/francobeccari))

### C. Human Rights Violations Parallel and Co-Exist with Expanding Nature’s Rights Violations

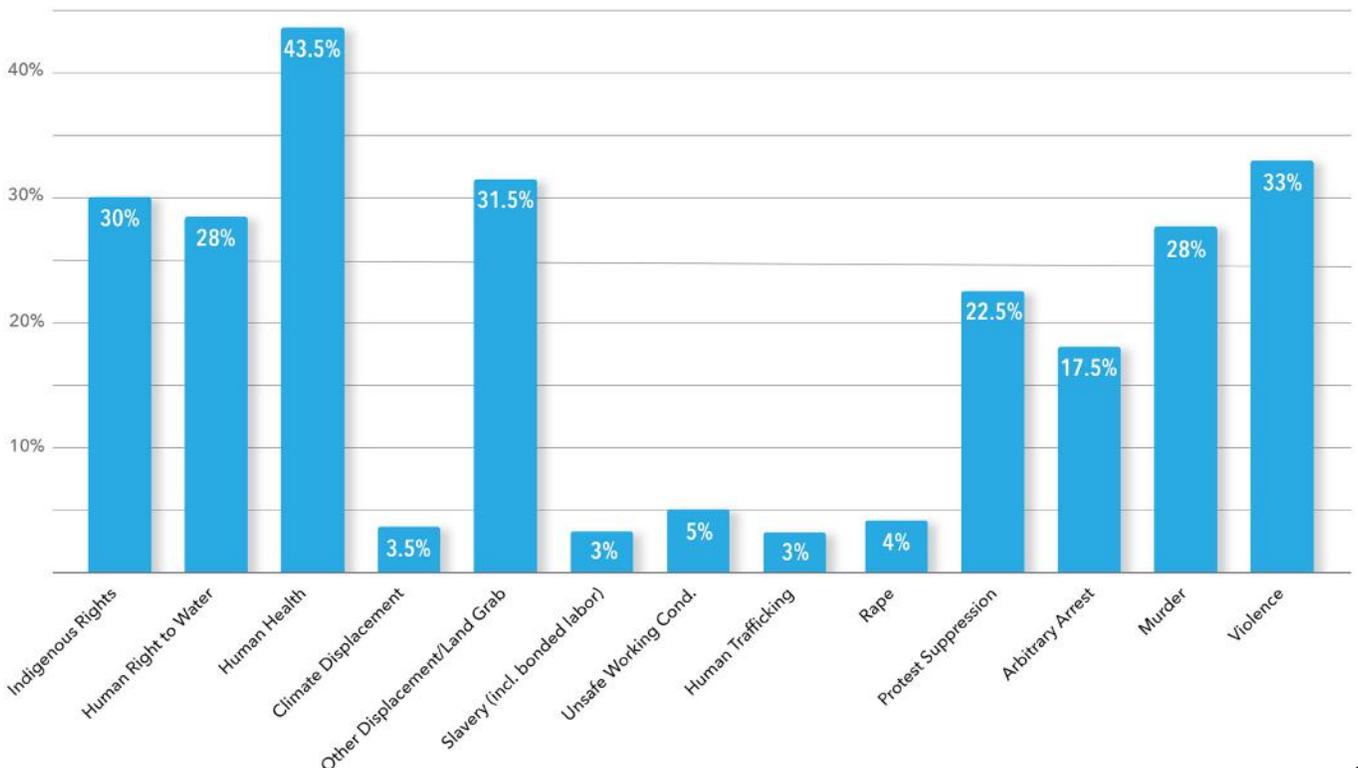
In addition to the rights of species and ecosystems to be healthy, thrive, and evolve, the rights of people are also affected by activities that seek short-term, individual profit over larger social and ecological good. This includes direct attacks on defenders of the environment, as well as the effects on those who suffer as a result of environmental deterioration. The U.N. Human Rights Council has found that environmental degradation impacts “the effective enjoyment of all human rights,” both directly and indirectly.<sup>31</sup>

A healthy natural world provides food security, human health, medicines, well-being, clean air and water, cultural and spiritual fulfillment, and also contributes directly to people’s livelihoods.<sup>32</sup> As just one sobering example, ecosystem degradation has been assessed to pose a threat to the water

security of 80 percent of the world’s population.<sup>33</sup> “The human right to water is indispensable for leading a healthy life in human dignity. It is a pre-requisite to the realization of all other human rights.”<sup>34</sup> Without a secure water future, humanity is in grave danger.

Since the release of *Fighting for Our Shared Future* in late 2015, new studies have revealed increased intensity and severity of rights co-violations worldwide. For instance, in a mid-2016 report, Global Witness revealed that 2015 was the deadliest year on record for environmental defenders, with 185 activists killed in just 16 countries, almost 40 percent of whom were indigenous peoples.<sup>35</sup> Global Witness reported that fifty of these killings were in Brazil, 33 in the Philippines, and 26 in Colombia,<sup>36</sup> making these areas a priority for intervention and action by advocates and the international community. On average, over three activists were killed per week.<sup>37</sup>

**Figure 4. Human Rights Violations**





**28%** of human rights violations examined involved at least one **murder**

Mining and extractive industries give rise to many of such killings.<sup>38</sup>

ELC's data similarly shows that an alarming 28 percent of the cases we compiled involved at least one murder, with multiple cases involving several murders. Our case studies additionally showed that defenders of the environment are also regularly subjected to violence, threats, intimidation, and attacks, which occurred in two-thirds of the 200 cases we compiled. Suppression of protests, such as those against destructive projects, accounted for almost a quarter of cases. Notably, over a quarter of cases involving violence or murder involved indigenous groups.

Violence against those protecting the environment was not the only human rights violation found. ELC's data showed significant effects on human health in 43.5 percent of the 200 cases examined, forced displacement in 31.5 percent, and lack of clean water for human needs in 28 percent. Additionally, unsafe working conditions occurred in 5 percent of cases and slavery in 3 percent.

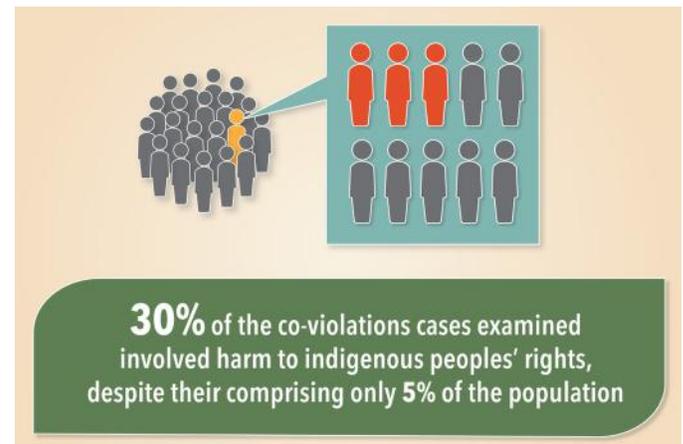
The types of co-violations of human rights vary somewhat by area of the globe. According to ELC's data, South and Central America suffered the highest murder rates, with over half of analyzed cases involving killing of environmental defenders. These findings are supported by those of Global Witness, which in particular highlights violence against environmental defenders in South and Central America. For example, Honduras has quickly become one of the deadliest countries to protect, with 101 activists killed between 2010 and 2014, often due to resistance against development projects.<sup>39</sup>

Asia had high murder rates, as well, occurring in 32 percent of analyzed cases. People in Asia also suffer from significant violence, adverse health effects, and displacement. In Africa, adverse health effects were seen in over 50 percent of the cases, with a significant amount arising from gold and platinum mining. And in North America, human health effects were found in over two-thirds of cases, with right to water being implicated in 53 percent. Though developed countries may not be

seeing as many murders or violence, the growing harm to human health and lack of access to clean water highlights the continued significance and scope of the problem arising from our inattention to the impacts of our flawed economic system.

Finally, ELC's data shows once again that environmental destruction is closely associated with harms to indigenous peoples. Thirty percent of analyzed co-violations impacted indigenous populations, despite the fact that indigenous peoples make up only five percent of the global population. Thus within ELC's sample, indigenous groups were targeted at a rate six times that which would be expected based on their population. This amounts to an epidemic of violence being directed

towards indigenous populations defending their land – including natural areas of great biodiversity. This injustice must be immediately addressed.



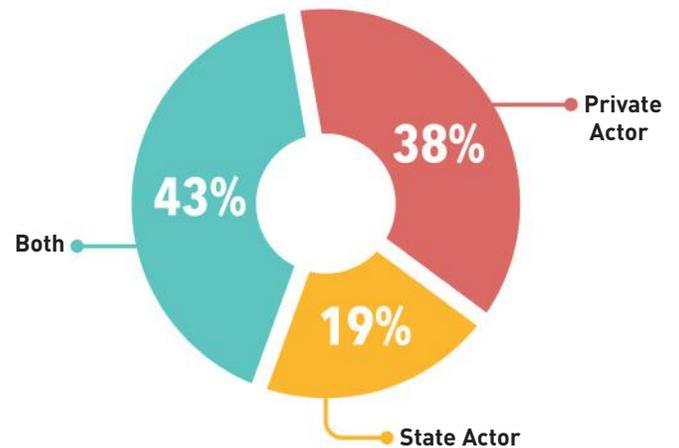
*Aftermath of the Bento Rodrigues iron ore tailings dam disaster in Brazil, Photo by Rogério Alves/TV Senado (Wikimedia Commons)*

## D. Perpetrators Include Both Government and Economic Actors

Unfortunately, governments – which are charged with representing the well-being of citizens and residents – continue too often to be the perpetrators of co-violations worldwide. ELC’s data shows that governments were solely responsible for co-violations in 19 percent of the cases, while private economic actors (such as corporations) accounted for 38 percent. Government and private actors were jointly responsible in 43 percent of cases.

Further, in cases where private interests appeared to be responsible, governments contribute to the violations by largely failing to provide justice and reparation to the people and natural systems affected. This pattern reinforces the need for attention, intervention, prevention, and redress by the international community.

**Figure 5. Total Perpetrators By Percentage**



*Child playing near pollution source*

### III. CASE STUDIES ILLUSTRATE CHALLENGES AND OPPORTUNITIES FOR CHANGE

#### A. Dakota Access Pipeline, USA

The Dakota Access Pipeline – dubbed by indigenous peoples as the “black snake”<sup>40</sup> – threatens the drinking water, traditions, sacred sites, and sovereignty of the Standing Rock Sioux tribe and others. The 1,172-mile, four-state pipeline would transport a minimum of 470,000 barrels of crude oil per day from North Dakota to Illinois.<sup>41</sup> Located a mere half-mile from the Standing Rock Sioux Reservation and squarely within Sioux treaty lands,<sup>42</sup> the pipeline as planned would run under the Missouri River at Lake Oahe, where an oil spill could destroy local and downstream ecosystems and wildlife. Peaceful protests by thousands of Native Americans and other so-called “water protectors” have been met by intimidation, violence, and mass arrests by police officers and private security guards. This case study pins indigenous and environmental rights squarely against the corporate interests and environmental

devastation of the fossil fuel industry as supported by government.

#### 1. Impacts on the Rights of Nature

The Missouri River is home to rich ecosystems and abundant wildlife, including imperiled species such as the Pallid Sturgeon<sup>43</sup> and the Paddlefish.<sup>44</sup> The pipeline as proposed would rush 17,000 gallons of oil under the river every minute,<sup>45</sup> risking a major environmental disaster in the event of an oil spill or leak.<sup>46</sup>

The Dakota Access Pipeline would also cross some 209 rivers, creeks, and tributaries upon completion,<sup>47</sup> including the Mississippi River and every major watershed in Iowa.<sup>48</sup> Elsewhere, the pipeline would snake through forests, wetlands, and endangered species habitat.<sup>49</sup>



“Water Protectors” trying to protect ancestral burial grounds, Photo by Richard Bluecloud Castaneda (Greenpeace USA)

While proponents of the Dakota Access Pipeline downplay the risk of a spill, pipeline accidents are common in the United States. From 1995 to 2015, an average of over 100 significant pipeline accidents involving crude oil and refined petroleum products occurred each year – over 2,000 in total. As one example, a January 2015 pipeline breach spilled up to 1,200 barrels of crude oil into the Yellowstone River.<sup>50</sup> Similar pipeline accidents will undoubtedly continue to occur.

The Dakota Access Pipeline would also accelerate our planet’s march towards a climate disaster. The pipeline would result in an additional 101.4 million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) released every year – as much as nearly 30 coal plants or 21.4 million cars.<sup>51</sup> Already, one-in-six species face extinction by 2100 under a “business as usual” greenhouse gas emissions scenario.<sup>52</sup>

Finally, the Dakota Access Pipeline stands to further entrench North Dakota’s destructive hydraulic fracturing (“fracking”) boom, which operates with near impunity.<sup>53</sup> Over 18.4 million gallons of oil and chemicals entered North Dakota’s air, soil, and waterways between 2006 and late-2014 due to fracking-related accidents.<sup>54</sup> In addition to pollution, fracking activities are also known to cause earthquakes, as has occurred in Oklahoma<sup>55</sup> and other states.<sup>56</sup>

The Dakota Access Pipeline in particular, and the fossil fuel extraction industry more generally, contributes to multiple violations of the rights of nature as recognized by the UDRME and nature’s rights laws, including the “right to life and to exist” (UDRME Art. 2(1)(a)); 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)); and the “right to full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities” (Art. 2(1)(j)).

## 2. Impacts on Human Rights

The same disregard by proponents of the Dakota Access Pipeline for ecosystems and species extends to humans. “Water protectors” have been subjected to violence, threats, intimidation, and arrest while trying to protect sacred sites and natural systems. In one instance, private security guards violently suppressed peaceful protesters (including children) with pepper spray and attack dogs.<sup>57</sup> In another instance, over 100 police officers in riot gear confronted protestors with armored vehicles and LRAD (“Long Range Acoustic Device”) sound cannons capable of causing severe headaches and permanent hearing loss.<sup>58</sup> In late November, tear gas, freezing cold water, and rubber bullets were used to disperse 400 protesters in temperatures as low as 23 degrees, leaving more than 150 people injured, many with hypothermia.<sup>59</sup> Other acts of violence and humiliation perpetrated by the U.S. government include macing elders in the face and dragging them from sweat lodges,<sup>60</sup> the strip searching of a young woman by a group of male and female security guards,<sup>61</sup> and attacking protesters engaged



*Standing Rock, Photo by Emily Arasim  
(Women’s Earth and Climate Action Network (WECAN))*

in prayer and song with rubber bullets and pepper spray.<sup>62</sup> Such incidents are indicative of the “latest chapter in a brutal history of injustice” against, and violations of the rights of, Native Americans.<sup>63</sup>

“

**[We] have come together to stand in opposition to the latest chapter in a brutal history of injustice.**”

”

**-Dave Archambault II, Chairman of the Standing Rock Sioux tribe**

The Dakota Access Pipeline also threatens to pollute clean water – the “lifeblood of Mother Earth”<sup>64</sup> The Missouri River is the primary source of drinking water for the Standing Rock Sioux and millions of others who live downstream.<sup>65</sup> Consumption of oil-contaminated water can increase cancer rates and cause digestive problems, while exposure (such as from bathing or laundry) causes skin problems and other health impacts.<sup>66</sup>

Both the U.N. Special Rapporteur on the rights of indigenous peoples<sup>67</sup> and the U.N. Permanent Forum on Indigenous Issues<sup>68</sup> have condemned the U.S.’s failure to adequately consult the Standing Rock Sioux Tribe; they have called for a halt to pipeline construction until free and informed consent is secured. As concluded by the latter body, the environment is an important part of the lives of indigenous peoples, and any threats to it impacts “families, ancestors and future generations.”<sup>69</sup>

Finally, while the Army Corp of Engineers announced in early December 2016 that it had decided not to grant the easement affecting tribal land and water sources and will require an environmental impact statement that considers alternative routes, the incoming Trump administration may reverse this decision,<sup>70</sup> and the

pipeline company, Energy Transfer Partner, vowed to complete the pipeline as planned.<sup>71</sup> Accordingly, we must continue to be vigilant in protecting human and environmental rights from this harmful project.

The violent suppression of peaceful protests by police and private security guards, as well as the failure to secure Native American consent for a project that could pollute their primary source of drinking water, implicates multiple human rights violations under the UDHR. These include the right to “life, liberty and security of person” (UDHR, Art. 3); the right to not be subjected to “cruel, inhuman or degrading treatment or punishment” (Art. 5); the right to not be subjected to “arbitrary arrest, detention or exile” (Art. 9); the right to “freedom of peaceful assembly and association” (Art. 20(1)); the right to a “social and international order in which the rights and freedoms set forth in [the UDHR] can be fully realized” (Art. 28); and the right to “an effective remedy by the competent national tribunals for acts violating the fundamental rights” (Art. 8).

The failure to consult with Native Americans before approval of the Dakota Access Pipeline, the acts of violence directed towards Native Americans, and destruction of sacred sites implicates multiple potential violations of the UNDRIP as well. These include the right of indigenous peoples to “life, physical and mental integrity, liberty and security of person” (UNDRIP Art. 7); their right to “practise and revitalize their cultural traditions and customs” (Art. 11); their right to “maintain, protect, and have access in privacy to their religious and cultural sites” (Art. 12); their right to “participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures” (Art. 18); their right to ensure states meet their obligation to “consult and cooperate in good faith ... in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them” (Art. 19) or “before approving any project affecting their lands

or territories and other resources” (Art 32(2)); their right to the “lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” (Art. 26); and their right to the “conservation and protection of the environment and the productive capacity of their lands or territories and resources” (Art. 29(1)).

## B. Palm Oil Industry, Indonesia

The palm oil industry is carving up Indonesia’s rainforests at breakneck speed. Palm oil is used in about half of all packaged supermarket goods, including a wide variety of foods, cosmetics, and household products such as soap, pet food, shampoo, chips, and many more.<sup>72</sup> As palm oil companies rake in profits from the \$61 billion industry,<sup>73</sup> inhabitants of the rainforest fight for survival. Indigenous and other communities suffer from land grabs and abusive labor practices, while scores of species face imminent extinction. Unless such injustices are halted, Indonesia’s rainforests will dwindle to mere remnants and many of its indigenous communities may cease to exist.

## 1. Impacts on the Rights of Nature

Indonesia’s rainforests, scattered across 18,000 islands, represent the world’s largest rainforest area after the Amazon and the Congo Basin. They are a biodiversity stronghold, home to 12 percent of the world’s mammal species, 17 percent of bird species, and 10 percent of higher plant species,<sup>74</sup> despite representing only one percent of Earth’s land mass.<sup>75</sup>

This natural splendor is being erased. Every hour, roughly 300 football fields of Indonesian rainforest is destroyed for palm oil plantations.<sup>76</sup> At current rates, some of Indonesia’s rainforests could disappear almost entirely within 20 years.<sup>77</sup>

One hotspot of palm oil plantations is the island of Sumatra,<sup>78</sup> where the Leuser Ecosystem features 6.5 million acres of lowland and montane rainforests and peatlands.<sup>79</sup> This ecosystem is the only place on Earth where sun bears, tigers, rhinos, elephants, and orangutans coexist in the wild.<sup>80</sup> The palm oil industry has destroyed millions of acres of



Action at P & G Palm Oil Supplier in Kalimantan, Photo by Greenpeace

this ecosystem, driving species towards extinction, fragmenting habitat and diminishing water systems relied upon by both ecosystems and millions of people.<sup>81</sup>

Another palm oil hotspot is on the island of Borneo, which is home to the world's oldest tropical rainforest. Tragically, palm oil cultivation and other threats, such as logging and mining, have destroyed half of the island's natural forests, which formerly blanketed 90 percent of the island.<sup>82</sup>

Many species in Sumatra and Borneo face imminent extinction, including the orangutan. Only about 14,600 Sumatran orangutans and 54,000 Bornean orangutans exist in the wild.<sup>83</sup> About eighty percent of their habitat has been destroyed over the last two decades, primarily due to palm oil plantations.<sup>84</sup> Palm oil workers, who often view orangutans as pests, club to death many of those who remain.<sup>85</sup> The IUCN Red List lists both species

as critically endangered, and experts predict they could become extinct in less than 25 years.<sup>86</sup>

The destruction of Indonesia's rainforests and peatlands, which store billions of tons of carbon, is also unleashing a "carbon bomb." Over 60 percent of Indonesia's greenhouse gas emissions result from forest and peatland degradation.<sup>87</sup> The scale is so massive that Indonesia is now among the world's five largest greenhouse gas emitters.<sup>88</sup> Worldwide, deforestation accounts for 15 to 20 percent of all greenhouse emissions.<sup>89</sup>

The destruction of Indonesia's rainforests, peatlands, and other ecosystems for palm oil plantations implicates multiple potential violations of the rights of nature. As recognized by the UDRME, these potential violations include the right to life and to exist (UDRME Art. 2(1)(a)); the right to regenerate bio-capacity and to continue "vital cycles and processes free from human disruptions"



*Orangutan mother and child in the rainforest of Borneo*

(Art. 2(1)(c)); the right to “integral health” (Art. 2(1)(g)); and the right to “full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities” (Art. 2(1)(j)).

## 2. Impacts on Human Rights

Palm oil production also fuels rampant human right abuses. The U.S. Department of Labor identified palm oil as one of the four most notorious sources of forced and child labor in the world.<sup>90</sup> Debt bondage (considered modern day slavery), human trafficking, unsafe working conditions, abuse, and delayed or unpaid wages also frequently occur.<sup>91</sup>

The palm oil industry also fuels illegal land grabs. The Indonesian government has stolen vast swaths of customary land from indigenous peoples for palm oil companies.<sup>92</sup> Many forest-dependent communities are now forced to work as low-wage workers while witnessing the destruction of their land.<sup>93</sup> The intrusion of the palm oil industry also tears at the social fabric of communities that relied upon the land not only for sustenance, but also for culture, medicine, and identity.<sup>94</sup>

In one instance, two palm oil plantations and a coal plant occupied the village of Muara Tae without the free, prior, and informed consent of the indigenous Dayak Benuaq tribe. Locals allege that palm oil plantation-owner PT Borneo Surya Mining Jaya damaged spring water sources (disrupting river flows into the village) and destroyed the village’s forests and traditional medicines.<sup>95</sup> “If my forests are gone, our lives will end,” said Dayuk leader Pak Singko.<sup>96</sup>

**“If my forests are gone,  
our lives will end.”**

**-Dayuk leader Pak Singko**

Finally, peatland infernos, driven largely by the palm oil industry, kill thousands of people. Peatlands essentially become kindling when drained for palm oil plantations. While some fires are accidental, many are set intentionally to prepare the land for palm oil and pulp cultivation. Widespread peatland fires in Indonesia during 2015 burned 2.1 million acres of land<sup>97</sup> and blanketed communities in a thick, sepia-colored smog for months on end. Experts report that the 2015 fires will result in an estimated 100,300 premature deaths, most of them from cardiovascular disease.<sup>98</sup>

The displacement of local communities from their traditional lands, the destruction of waterways and other natural systems relied upon by communities for sustenance, the pattern of labor abuse and slavery arising from the palm oil industry, and the deaths of thousands of people from palm oil industry-related fires implicates 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” (UDHR Art. 3); the right to be free from being “held in slavery or servitude” (Art. 4); the right to be free from “cruel, inhuman or degrading treatment or punishment” (Art. 5); the right to be free from arbitrary deprivation of property (Art. 17(2)); the “right to work, to free choice of employment, [and] to just and favourable conditions of work” (Art. 23(1)); and the right to “an effective remedy by the competent national tribunals for acts violating the fundamental rights” (Art. 8).

Illegal land grabs of indigenous territory, the displacement of indigenous peoples, and harm to the clean water and lands enjoyed by indigenous peoples also implicates multiple potential violations of the UNDRIP. These include the right of indigenous peoples to “participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures” (Art. 18); their right to good faith consultation and “free,

prior and informed consent” before approval of “any project affecting their lands or territories and other resources” (Art 32(2)); their right to ensure states meet their obligation to “consult and cooperate in good faith ... in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them” (Art. 19); their right to the “lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” (Art. 26); and their right to the “conservation and protection of the environment and the productive capacity of their lands or territories and resources” (Art. 29(1)).

## C. Dams and Extraction Activities, Honduras

In 2016, Honduras was the epicenter of violence against our planet’s defenders. With 109 killings between 2010 and 2015, more environmental and land activists are murdered here than any other country except Brazil,<sup>99</sup> which has over 20 times more people. Perpetrators of these killings (both state and private actors) act with near impunity.<sup>100</sup> A significant amount of violence is directed towards activists staving off massive hydroelectric

dams (or “mega dams”), including the Agua Zarca Dam. This case study highlights the deep interconnection between exploiting nature for profit and the systemic violence perpetrated against environmental activists.

### 1. Impacts on the Rights of Nature

Following a 2009 military coup in Honduras, the government quickly granted 47 dam concessions. Together, these dams will fragment riverine ecosystems, impede fish migration, and inundate vast natural areas of the country. In large part, Honduras is approving these dams to support hundreds of new mines operated by multinational corporations – many from Canada – which destroy habitats and contaminate remaining land and water with toxic chemicals.<sup>101</sup> As declared by human rights attorney Victor Fernandez: “Honduras is the victim of international theft.”<sup>102</sup>

One dam concession went to the Agua Zarca Dam, one of four interconnected mega-dams that would devastate the Gualcarque River, home to a wide range of fish species and rich riparian ecosystems. The dam is expected to disrupt fish migration and spawning ground access, impede flows,



Agua Zarca Dam construction site by the Gualcarque River, Photo by COPINH

degrade water quality, and interfere with sediment transport, fundamentally changing the character of the free-flowing Gualcarque River.<sup>103</sup>

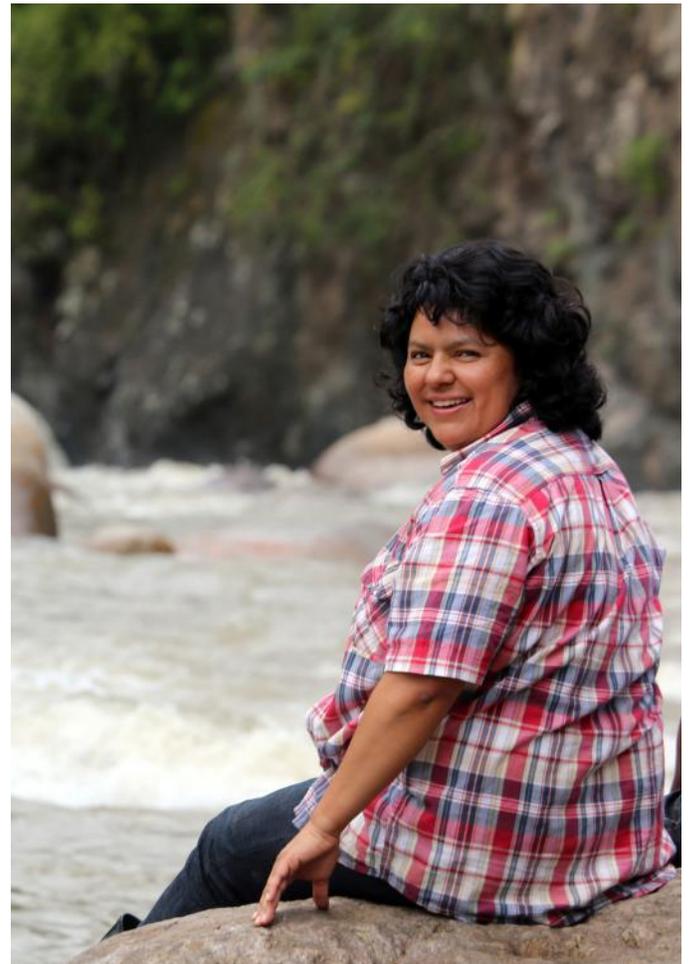
Another massive dam project in Honduras is the Patuca III, slated for completion in 2018. The hydroelectric project would impede the flow of the Patuca River, which is Central America's second longest river. This waterway is critical to the health of the Mesoamerican Biological Corridor, an area of incredible biodiversity that spans from Colombia to Mexico.<sup>104</sup> The dam is expected to destroy large swaths of habitat in both upstream and downstream areas.<sup>105</sup>

Worldwide, populations of freshwater species have declined 76 percent since the 1970s due to dam construction and other destructive practices – a significantly faster rate than both marine and terrestrial species (each of which declined by approximately 39 percent).<sup>106</sup> There are now over 800,000 dams across the globe, including over 40,000 “large dams” and 300 “major dams.”<sup>107</sup> In addition to harming local ecosystems, dams contribute to climate change, with the methane released from hydropower reservoirs accounting for over four percent of all GHG emissions.<sup>108</sup>

The destructive impact of mega-dams on rivers and a wide variety of ecosystems in Honduras, as well as the impacts of the associated mining projects, implicate multiple violations of the rights of nature as recognized by the UDRME. These include the “right to life and to exist” (UDRME Art. 2(1)(a)); the right to regenerate bio-capacity and continue “vital cycles and processes free from human disruptions” (Art. 2(1)(c)); the right to maintain “identity and integrity as a distinct, self-regulating and interrelated being” (Art. 2(1)(d)); the right to water (Art. 2(1)(e)); the right to integral health (Art. 2(1)(g)); the right to be “free from contamination, pollution and toxic ... waste” (Art. 2(1)(h)); and the right to “full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities” (Art. 2(1)(j)).

## 2. Impacts on Human Rights

Defenders of waterways in Honduras have been subjected to violence and murder by police officers and private security guards.<sup>109</sup> In March 2016, several gunmen entered the house of renowned activist Berta Cáceres and shot her dead. Cáceres had just won the 2015 Goldman Environmental Prize for her 20-year effort to stop the Agua Zarca Dam and others like it. Despite an international outcry, the Honduran government has refused to conduct an independent investigation of Cáceres's death.<sup>110</sup> In the same incident, the gunmen shot and almost killed Gustavo Castro Soto, Director of Friends of the Earth Mexico, who was then held by the government for almost a month and reportedly tortured.<sup>111</sup> Like many dams in Honduras, the Agua



Berta Cáceres, Photo by Goldman Environmental Prize

Zarca Dam was put into motion without free, prior, and informed consent of local indigenous residents – in this case, the Lenca people, who hold the Gualcarque as sacred.<sup>112</sup>

Other members of Cáceres’s organization, COPINH (the Civic Council of Popular and Indigenous Organizations of Honduras), have also been targets. Examples include the murders of Nelson García<sup>113</sup> and Lesbia Janeth Urquía,<sup>114</sup> and the attempted assassinations of Tomás Gómez Membreño (COPINH’s coordinator after Cáceres) and Alexander García Sorto.<sup>115</sup> There have also been many cases of police violence against COPINH demonstrators.<sup>116</sup>

Violence against environmental defenders in Honduras also expands far beyond COPINH. Indigenous leaders have been murdered, such as anti-logging and mining leader Luis de Reyes Marcía and other members of the Tolupan indigenous community.<sup>117</sup> So too have Campesino activists, including Silmer Dionicio George and Jose Ángel Flores – the President of the Movimiento Unido Campesino del Aguán (Aguán United Farmers’ Movement, or “MUCA”).<sup>118</sup>

According to a former Honduran soldier, the names and images of Cáceres and dozens of other social and environmental activists were on a hit list that was given to Honduran special forces.<sup>119</sup> “I’m 100% certain that Berta Cáceres was killed by the army,” he told *The Guardian*.<sup>120</sup> “There’s been a systematic strategy to eliminate the most belligerent social leaders,” said Vitalino Álvarez, a member of MUCA, who is also reportedly on the list.<sup>121</sup>

The U.S. government has sent approximately \$200 million in military aid to Honduras since 2010,<sup>122</sup> despite the U.S. State Department recognizing the “unlawful and arbitrary killings and other criminal activities by members of [its] security forces.”<sup>123</sup> The pattern of violence against environmental defenders will continue until the international community takes a stand against it.

“ **There’s been a systematic strategy to eliminate the most belligerent social leaders.** ”

**-Vitalino Álvarez, member of the MUCA**

Intimidation, threats, arrests and murders of defenders of the environment in Honduras implicate multiple human and indigenous rights violations. These include the following UDHR violations: the right to “life, liberty and security of person” (UDHR, Art. 3), the right to be free from “torture or [] cruel, inhuman or degrading treatment or punishment” (Art. 5); 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 “freedom of peaceful assembly and association” (Art. 20(1)); and the right to a “social and international order in which the rights and freedoms set forth in [the UDHR] can be fully realized” (Art. 28).

The failure to receive the free, prior, and informed consent of indigenous communities impacted by the Agua Zarca Dam and other dams and extraction projects, as well as the impact on the well-being and way of life of these communities, implicates multiple potential violations of the UNDRIP. These include: the right of indigenous peoples to “practise and revitalize their cultural traditions and customs,” (UNDRIP, Art. 11); their right to “participate in decision-making in matters which would affect their rights” (Art. 18); their right to good faith consultation and “free, prior and informed consent” before approval of “any project affecting their lands or territories and other resources” (Art 32(2)); their right to “the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” (Art. 26); and their right to the “conservation and protection of the environment” (Art. 29(1)).

## D. Escalating Threats to the World's Oceans – the Source of Life

The ocean covers over 70 percent of our planet, generates more than half of its oxygen, regulates the climate, and provides food and (for humans) jobs. The ocean supports all life on Earth, yet significant changes to its systems and cycles are now spreading beyond the salty deep and onto land, generating human and nature's rights concerns. Despite international laws and agreements designed to sustain and protect the ocean, marine biodiversity and health is declining. Climate change is a major factor, along with our ongoing, unsustainable exploitation of marine ecosystems as "resources" and "fish stocks" for short-term economic gain.

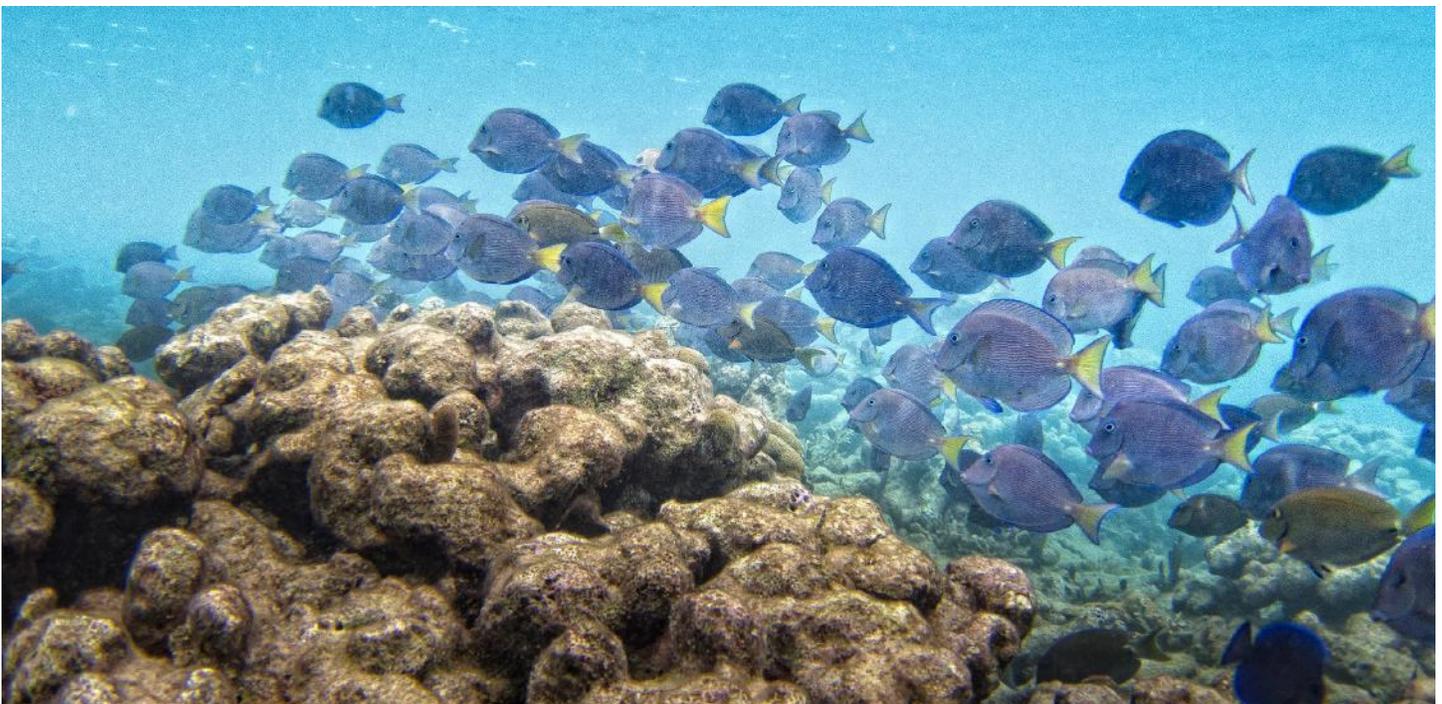
We outline below just a few of the many threats to the health of the oceans, and the impacts of these stressors on humans. The fact that we are now able to significantly degrade the global ocean – the source of all life on Earth – should spur us to immediate, collective action.

### 1. Impacts on the Rights of Nature

Overfishing is considered the greatest threat to marine biodiversity worldwide.<sup>124</sup> The Food and Agriculture Organization of the United Nations estimates that at least one-third of commercial fish populations are taken at unsustainable levels, with marine populations in 2012 falling to about half of 1970 populations.<sup>125</sup> Today, over 70 percent of the world's fish species are either fully exploited or depleted.<sup>126</sup>

There has been an especially large decline in larger fish, whose populations have plummeted by 90 percent from historic levels. Analyzing nearly 50 years of data, marine scientists found that fishing has killed off all but 10 percent of populations of large prized tuna, swordfish, marlin, and other fish species, and the average weights of those remaining fish have declined sharply.<sup>127</sup>

Overfishing is not limited to larger fish, unfortunately. Fish scientists have concluded that "harvest rates commonly need to be less than



*Shoal of tang above a dead coral reef, Photo by Sarah Kelman (Flickr)*

“  
**We must protect our ocean  
 as if our lives depend upon it,  
 because they do.**  
 ”

**-Sylvia Earle**

10 percent of the magnitude of those used in much of today’s management,”<sup>128</sup> yet more fish are taken as populations drop and the price of the remaining fish goes up accordingly.

Dolphins and whales are also declining due to fishing bycatch, direct hunting, and bioaccumulation of toxic pollution. Many whale species face imminent extinction, such as the North Atlantic right whale (with only about 300 individuals left) and the Western Pacific gray whale (estimated to have fewer than 100 individuals left).<sup>129</sup> Other marine mammals, as well as turtles, seabirds, and other species, are killed in large numbers by “ghost fishing” and derelict fishing gear.<sup>130</sup>

Climate change is also destroying marine ecosystems worldwide, particularly the world’s coral reefs. Greenhouse gas emissions have caused a 30 percent increase in ocean acidification since the Industrial Revolution, and seawater acidity is expected to increase 150 percent by the end of the century unless we fundamentally change our behavior.<sup>131</sup> More acidic environments essentially dissolve the shells and structures of oysters, clams, sea urchins, corals, some plankton, and other species, putting the entire marine food web at risk.<sup>132</sup>

Marine scientists caution that without immediate action to reverse current trends, “we now face losing marine species and entire marine ecosystems, such as coral reefs, within a single

generation.” They add that our actions have a “high risk of causing . . . the next globally significant extinction event in the ocean” – and soon.<sup>133</sup> About 27 percent of coral reefs worldwide have already been lost to ocean acidification and other climate factors such as warmer sea temperature and sea level rise.<sup>134</sup> Half of the Great Barrier Reef is already “dead or dying,” and 93 percent of it suffers from some level of bleaching.<sup>135</sup> Coral reefs are critical to marine biodiversity, housing 25 percent of marine life despite comprising less than one percent of the marine environment.<sup>136</sup>

Finally, plastic pollution and marine debris is now pervasive in ocean ecosystems. As much as eight million tons of plastic enters the ocean every year,<sup>137</sup> and estimates show that the ocean may already contain upwards of 150 million tons of plastic.<sup>138</sup> Plastic ingestion causes physiological stress, liver cancer, and endocrine dysfunction in fish species.<sup>139</sup> Forty-five percent of species on the IUCN Red List were reported to have ingested or become entangled in marine debris,<sup>140</sup> and as many as 100,000 marine mammals die every year in the North Pacific due to entanglement in plastic nets and fishing line.<sup>141</sup> Plastic ingestion by seabirds, half of which are in decline worldwide, is predicted to reach 99 percent of all seabird species by



*A child fishing in Ghana (Wikimedia Commons)*

2050.<sup>142</sup> By 2025, there could be one ton of plastic for every three tons of fish in the ocean.<sup>143</sup>

Our actions are gravely threatening the world's oceans and all life within them, putting at risk the life yet to come. Our actions rise to the level of violations of the rights of nature, including the following rights recognized in the UDRME: the right to life and to exist (UDRME, Art. 2(1)(a)); the right to regenerate bio-capacity and to continue vital cycles and processes (Art. 2(1)(c)); the right to integral health (Art. 2(1)(g)); the right to be free from contamination and pollution (Art. 2(1)(h)); and the right to full and prompt restoration for violation of the rights recognized in the UDRME caused by human activities (Art. 2(1)(j)).

## 2. Impacts on Human Rights

The rapid decline in fish populations threatens a critical food source for the twenty percent of the population that relies on fish as its primary source

of protein. The impact of declining fish populations also goes beyond nutrition. The FAO has estimated that 120 million people rely on fish for all or part of their livelihoods,<sup>144</sup> and other estimates are even higher.<sup>145</sup> For example, when the Canadian government closed the groundfish fishery in Newfoundland in 1992,<sup>146</sup> 40,000 jobs were lost and entire communities virtually disappeared.<sup>147</sup> Sustainable relationships with fish populations could have avoided this result.

An additional human rights concern arises from a growing number of fishing operations that have been closely associated with slavery, human trafficking, drug smuggling, and other harmful activities.<sup>148</sup> In Thailand, thousands of migrants have been kidnapped and forced to work on fishing boats.<sup>149</sup> Stories from freed slaves relate the horror of cages, beatings, lack of food and sleep, and the fear of being thrown overboard. Globally, an estimated 10 to 15 percent of fisherman “work under conditions that make them virtual modern-day slaves.”<sup>150</sup>



*Polar bears trying to survive in the Arctic*

The health of marine ecosystems is also strongly correlated to well-being of indigenous populations that rely upon the ocean for spiritual traditions and subsistence. For example, in Australia, many marine species once gathered by Aboriginals are either depleted or licensed for take, and Aboriginals have been largely excluded from the fishery management process.<sup>151</sup> Additionally, over 70 indigenous groups rely on the collapsing Great Barrier Reef for their culture and livelihoods.<sup>152</sup> Similarly, in the United States, Native Americans in the Pacific Northwest struggle to maintain their traditional diet of and cultural relationship with salmon, with five salmon populations listed as endangered and 23 as threatened under the U.S. Endangered Species Act.<sup>153</sup>

Finally, climate change impacts to the oceans affect human populations worldwide. Sea level rise could displace up to 760 million people, or about 10 percent of the world's population, in this century.<sup>154</sup> It could also completely wipe out island nations such as Kiribati by 2100.<sup>155</sup> In the United States, the

world's second largest greenhouse gas emitter, sea level rise could displace 13 million people.<sup>156</sup> Increased ocean temperatures are linked to an increase in the intensity, frequency, duration of North Atlantic hurricanes and other storms, which destroy homes and result in significant loss of life.<sup>157</sup>

We are intimately and integrally tied to the ocean. As we mistreat and exploit the ocean and its creatures, we mistreat ourselves, with impacts that rise to the level of human rights violations under the UDHR. These include: the right to "life, liberty and security of person" (Art. 3); the right to be free from being "held in slavery or servitude" (Art. 4); the right to be free from "torture or [] cruel, inhuman or degrading treatment or punishment" (Art. 5); the right to free movement among countries (Art. 13(2)); the "right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment" (Art. 23(1); and the right to equal pay for equal work (Art. 23(2)).

The decline in marine health and biodiversity also implicates violations of the UNDRIP, including the right of indigenous peoples to "maintain and strengthen their distinct political, legal, economic, social and cultural institutions" (Art. 5); their right to "life, physical and mental integrity, liberty and security of person" (Art. 7(1)); their right to practice and "revitalize their cultural traditions and customs" (Art. 11); their right to "to participate in decision-making in matters which would affect their rights" (Art. 18); their right to "free, prior and informed consent" (Art. 19 and Art. 32(2)); the right to "be secure in the enjoyment of their own means of subsistence" (Art. 20(1)), and the right to "just and fair redress" when deprived of such (Art. 20(2)); their right to "maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied ... waters and coastal seas" (Art. 25); and the right to "maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions" (Art. 31(1)).



Purse seine fishing in Peru (Wikimedia Commons)

## IV. RECOMMENDATIONS

### A. Summary of 2015 Recommendations from *Fighting for Our Shared Future*

In its 2015 co-violations report, ELC put forth a series of recommendations in order to prevent and correct co-violations and create a world in which humans and nature thrive together. These included the following recommendations for the international community, state actors, and other actors such as businesses and private individuals:

#### ***United Nations/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

#### ***States***

- 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

#### ***Other Actors***

- 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
- Make the full observation of human and nature’s rights mandatory company practice

## B. Additional Recommendations

What we do to the environment, we do to ourselves. It is critical going forward that we recognize and understand the connections between humanity and nature, and “transition to an approach that decouples human and economic development from environmental degradation.”<sup>158</sup> Recognition of the rights of nature is key to this transition.

In commenting on the killings of environmental defenders, the U.N. Special Rapporteur observed the “overall impunity with which the perpetrators of these crimes can act,” as well as the “woefully lacking or ineffective protection measures available for environmental human rights defenders at risk,” with both government and corporate actors involved in the murders of environmental human rights defenders.<sup>159</sup>

In late August 2016, the United Nations released an “Expert Report on Earth Jurisprudence,”<sup>160</sup> or Earth-centered law, policy and science, by a worldwide network of experts.<sup>161</sup> Among its conclusions, the report calls for recognition of

the “fundamental legal rights of ecosystems and species to exist, thrive and regenerate.” The international community and nation states should apply the Earth Jurisprudence report’s recommendations toward implementing new laws and practices for recognizing nature’s rights.

Other recommendations for action can be developed from the recommendations of the August 2016 U.N. Special Rapporteur report on the growing threats to the well-being and rights of human rights defenders working to protect the environment.<sup>162</sup> One essential step for moving forward effectively is better information. Accordingly, the U.N. General Assembly and the Human Rights Council should establish a comprehensive system for receiving information on, monitoring, and reporting on violations of the rights of nature and environmental human rights defenders.

The process of gathering this information, however, does not preclude immediate action in other areas. Additional recommendations include but are not limited to those below.



*Elephants in Sri Lanka, Photo from Wikimedia Commons*

***The international community should:***

- Prioritize cases before the International Criminal Court that involve co-violations of nature's rights and human rights, consistent with the ICC's expanded focus on environmental issues;
- Publicly scrutinize and condemn violations of the rights of environmental human rights defenders and nature;
- Ensure that any future bilateral and multilateral trade agreements involving countries where environmental human rights defenders and/or nature's rights are under threat include measures to prevent, investigate, and remedy such violations; and
- Formulate an international treaty to prevent and address human rights and nature's rights violations by transnational and national business enterprises.

***States should:***

- Ensure a nature's rights and human rights-based approach to development in all relevant legal and policy regulations, including multilateral and bilateral agreements or contracts, and establish mechanisms for due diligence concerning the protection of environmental human rights defenders and nature's rights;
- Develop protection mechanisms for nature's rights and for environmental human rights defenders, taking into account the intersectional dimensions of violations against women defenders, indigenous peoples and rural and marginalized communities; and

- Ensure prompt and impartial investigations into alleged threats and violence against environmental human rights defenders, and bring to justice direct perpetrators and those that participated in the commission of crimes.

***United Nations organizations and agencies should:***

- Implement the recommendations of the U.N. Expert Report on Earth Jurisprudence," which calls for recognition of the "fundamental legal rights of ecosystems and species to exist, thrive and regenerate";
- Address the legal gaps that heighten risks for nature's rights and environmental human rights defenders, including the lack of an international instrument recognizing nature's rights, weak environmental standards, and unimplemented laws protecting the rights of indigenous peoples, their land rights and customary title to territories and resources;
- Formulate and implement strategies and action plans to strengthen the participation and protection of defenders and to prevent violations against them; and
- Adopt a system for receiving information and reporting on co-violations of nature's rights and human rights.

***International financial institutions should:***

- Integrate nature's rights- and human rights-based approaches in their policies for fund allocation and management; condition their funds on such approaches, in consultation with affected communities, representatives of nature's rights, and environmental human

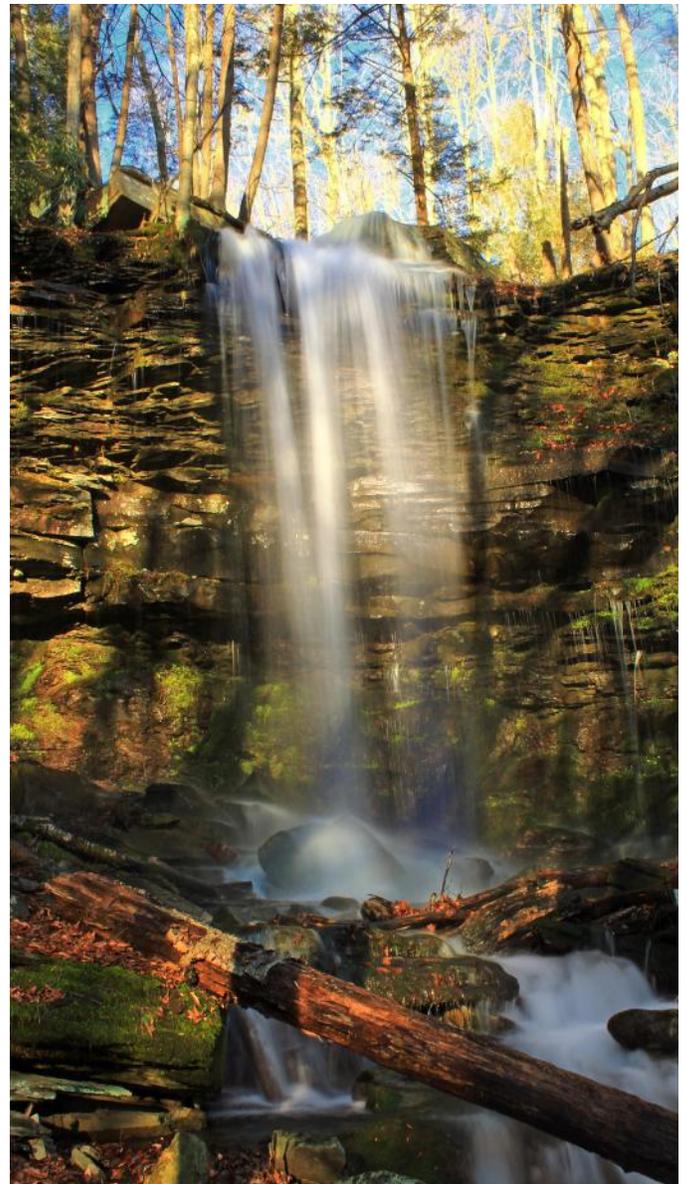
rights defenders; and seek their continued support in the implementation of human rights and nature's rights safeguards.

**Business enterprises should:**

- Fulfill legal and ethical obligations, including rigorous human rights and nature's rights due diligence, and perform nature's rights and human rights impact assessments for every project, ensuring full participation by and meaningful consultation with affected communities, representatives of nature's rights, and environmental human rights defenders;
- As recommended in the 2016 Report of the Special Rapporteur for the Rights of Indigenous Peoples, tackle the issue of corporate participation in violations of indigenous peoples' rights, and work to ensure compliance with indigenous peoples' rights in international law;<sup>163</sup> and
- Disclose information related to planned and ongoing large-scale development projects in a timely and accessible manner to affected communities, representatives of nature's rights, and environmental human rights defenders.

Finally, NGOs and other advocates can follow the lead of the International Union for Conservation of Nature (IUCN), the world's only environmental organization with official United Nations Observer Status. In 2012 the IUCN passed a Rights of Nature Resolution calling for nature's rights to be a "fundamental and absolute key element in all IUCN decisions." The Resolution notes in support that "the quality of life of current and future generations depends not only on the health of nature, its constituent elements, functions and ecosystem services, but also on their capacity to regenerate."<sup>164</sup> IUCN Members took the next

step at their Quadrennial Congress in September 2016, approving a final 2017-2020 Programme that commits the IUCN and members to take action to implement nature's rights in the next four years.<sup>165</sup> Among other actions, the IUCN's 2017-2020 Programme of work priorities "aims to secure the rights of nature" by, among other steps, specifically supporting a "rights-based approach to conservation" in its work to advance CITES<sup>166</sup> and other wildlife conventions.



Jacoby Falls, Pennsylvania, Photo by Nicholas A. Tonelli  
(Unedited photo; available at <http://bit.ly/2gh8DTb>)

## V. WHAT YOU CAN DO

### A. Report Co-Violations to the Special Rapporteurs

The U.N. Human Rights Council has established various Special Rapporteurs (also known as “special procedures”) to provide expertise and advice on human rights issues. These include the Special Rapporteur on the Rights of Indigenous Peoples, the Special Rapporteur on the Situation of Human Rights Defenders, and the Special Rapporteur on Human Rights and the Environment. It is within the mandate of each Special Rapporteur to communicate with states in which alleged rights violations are or may be occurring. For example, since 2013, the Special Rapporteur on Human Rights and the Environment has issued 31 communications to states on alleged violations of human rights, including “urgent appeals” when there is an imminent danger of rights violations related to environmental issues.<sup>167</sup> Other mandates include making recommendations for states to prevent, end, or remedy ongoing human rights violations; undertaking country visits; raising awareness on human rights issues; engaging in human rights advocacy; and contributing towards development of human rights standards.<sup>168</sup> Special Rapporteurs accept and act upon information on alleged violations from individuals, groups, civil society organizations, and other actors.

**Submission procedures for the Special Rapporteurs can be found online at <https://spsubmission.ohchr.org>.**

### B. Submit Co-Violations Online to ELC’s Website

In November 2016, ELC launched an online form to report co-violations of human and environmental rights. The form invites members of the public to submit information on cases not yet included in ELC’s co-violations reports or online map, as well as updates to those cases already summarized.

ELC then reviews the submitted information, adds summaries of qualified cases to its online map, and analyzes new cases in future co-violations reports. ELC will also work with partners worldwide to bring attention to these co-violations while continuing to collaborate with civil society, international organizations (including U.N. bodies), and others to implement practical solutions.

**ELC’s co-violations submission form can be found online at [www.earthlawcenter.org/co-violations-of-rights](http://www.earthlawcenter.org/co-violations-of-rights).**



ELC’s Online Co-Violations Map

### C. Reach Out to Other Organizations that Address Ongoing Co-Violations

A growing number of organizations are highlighting the inseparable connection between human and environmental rights concerns. Some of the groups providing invaluable summary reports and coordinated, worldwide action on rights co-violations include Global Witness,<sup>169</sup> EJOLT,<sup>170</sup> and the Yes to Life No to Mining Campaign.<sup>171</sup> Additionally, international coalitions such as the Global Alliance for the Rights of Nature<sup>172</sup> are working to ensure that nature’s rights are explicitly recognized alongside human rights and indigenous rights. These efforts and others are essential in order to protect those communities and ecosystems most vulnerable to rights violations.

## VI. CONCLUSION

What we do to the planet, we do to ourselves. We cannot continue to exploit ecosystems and species for profit without harming all life. “Any progress of the human at the expense of the larger life community must ultimately lead to a diminishment of human life itself.”<sup>173</sup> The inexorable march of rights co-violations spreading across the globe is testament to this truth.

Fundamental rights are not only to be enjoyed by the powerful, the rich, or the influential. Nor are fundamental rights only for humans, who co-evolved with the rest of nature over millennia. Our mistakenly-perceived dominance over the

planet is a relatively new concept that runs counter to generations of indigenous wisdom, and is the source of most of our challenges today. Fundamental rights are inherent to all living creatures – humans as well as ecosystems and their inhabitants – and arise from our very existence in the universe. We must recognize nature’s rights in law and practice, a movement that is beginning to take hold. And crucially, we must enforce all fundamental rights – by acting to halt co-violations worldwide, and by moralizing our flawed legal and economic systems to achieve shared well-being for all. This is not a dream – it is a necessity.



Lake Tekapo, New Zealand, Photo by Michelle Bender

# APPENDIX



## Co-Violation Examples Worldwide

from [www.earthlawcenter.org](http://www.earthlawcenter.org)

online map available at: <http://bit.ly/2h7QzMM>

# 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 CKGR is a shrubby desert area defined by expansive plains, salt pans, and fossilized riverbeds. It 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 which 30 to 50 percent are 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. Kahuzi Biega National Park, Democratic Republic of Congo

**Human Rights Concern:** Two park rangers, Munganga Nzonga Jacques and Oscar Byamungu Mianziro, were killed in the Kahuzi Beiga National Park in the latter half of 2016 by rebel groups supportive of illegal hunting and civil unrest.

**Environmental Rights Concern:** The National Park protects 136 species of mammals, 42 endemic bird species, and bamboo forests. The Grauer gorillas are critically endangered, with fewer than 3,800 still living in the wild due to losses attributed largely to illegal hunting.

## 8. Lubumashi and Kipushi, Democratic Republic of Congo

**Human Rights Concern:** Copper and cobalt mines in the Democratic Republic of Congo have caused serious health effects in communities living in the surrounding areas, including respiratory disorders and birth defects.

**Environmental Rights Concern:** Acids and waste discharged from the mines create widespread water pollution, damaging aquatic life and supportive ecosystems. Strips of land are void of life following the dumping of acidic mining waste, and birds that once thrived in that area have disappeared.

## 9. 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 the 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.

## 10. 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.

**UPDATE:** Electricity generation at the Gibe III Dam has begun. The filling of the Dam's reservoir has held back flows needed by 200,000 indigenous peoples.

## 11. 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.

## 12. Shama District, Ghana

**Human Rights Concern:** Illegal mining operations in Ghana threaten the livelihoods of fishermen and farmers of the region. Specifically, mercury is polluting waterways used for drinking water, agriculture, and fishing. Deforestation from the mining is resulting in a loss of productive farmland.

**Environmental Rights Concern:** An estimated 75 percent of surface water is polluted in Ghana as a direct result of illegal gold mining. Local waterways are highly polluted and the pollution is now reaching coastal waters, negatively impacting fisheries and other wildlife. Mining operations have also harmed forest-based ecosystems in Ghana.

## 13. 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.

## 14. 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.

## 15. 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.

## 16. Marrakesh, Morocco

**Human Rights Concern:** Trash burning is common in Morocco, where the practice generates dioxins and produces other threats to human health. Morocco has also imported waste from Italy to be incinerated, although such imports were suspended after community protests.

**Environmental Rights Concern:** Toxic substances from burning garbage often enter the water table, polluting rivers and imperiling marine life. Such leachate water is one hundred times more toxic than raw sewage.

## 17. 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.

## 18. Ekuri Community Forest, Cross River State, Nigeria

**Human Rights Concern:** Indigenous and local communities around the Ekuri Forest in Nigeria have managed the tropical rainforest for thousands of years, but they now are seeing their heritage and livelihoods threatened by a proposed super highway in Nigeria's Cross River State. An illegal government land grab of areas adjacent to the proposed highway is expected to displace nearly one million people.

**Environmental Rights Concern:** The superhighway will require clearing over 5,000 square kilometers in the Ekuri, one of the last tropical rain forests in Nigeria. The forest contains many rare, vulnerable, and endangered species, including common chimpanzees, drills, Cross River gorillas, the gray parrot, and the olive long-tailed cuckoo.

## 19. 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 CO<sub>2</sub> 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.

## 20. 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.

## 21. Gusau, Nigeria

**Human Rights Concern:** Twenty eight children died from lead poisoning from illegal gold mining in the remote Yangalma village in Gusau, Nigeria. Doctors are continuing to treat thousands impacted by toxic chemical and metal pollution from the mining, and many children are threatened with irreversible neurological damage, according to Doctors Without Borders.

**Environmental Rights Concern:** Excessive levels of mercury and other toxic chemicals from illegal mining in Nigeria and other African states result in air and noise pollution, water contamination, deforestation, aggravated soil erosion, and turbidity and oxygen deprivation in nearby rivers and streams.

## 22. Carletonville, South Africa

**Human Rights Concern:** Legal and illegal gold mines are scattered all over South Africa. Mine workers suffer from a variety of illnesses, including respiratory diseases such as silicosis and tuberculosis, as well as cancer, organ damage, and skin irritation. Communities have been left out of the discussion on relocation options.

**Environmental Rights Concern:** Acid mine drainage from the gold mines pollutes the water and threatens wildlife. As an example, years of toxic mine effluent releases into Robinson Dam in Randfontein essentially stripped the area of all life. Mining also fills the air with noxious dust and the soil surrounding mines is often radioactive and toxic.

## 23. 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.

## 24. 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.

## 25. Amadiba, Lurholweni township, Mbizana, South Africa

**Human Rights Concern:** Sikhosphi ‘Bazooka’ Rhadebe, a leader of the opposition to an open-cast titanium mine by MRC (an Australian mining company) in the Pondoland Wild Coast, was murdered in front of his family on March 22, 2016. Previous cases of violence against anti-mining activists have also occurred, including assaults, robberies, and shootings. The mine threatens to cause adverse health impacts from air and water pollution and also interfere with local residents’ subsistence livelihoods.

**Environmental Rights Concern:** The coastal dunes of the Wild Coast are known as a biodiversity hotspot and one of the last remaining pristine environments in South Africa. Adverse environmental impacts from titanium mining include biodiversity loss, siltation of wetlands, loss and contamination of estuarine nursery grounds, desertification, surface water and groundwater pollution, air pollution, soil contamination, deforestation, mine tailing spills, and further contribution to climate change.

## 26. Rustenburg, South Africa

**Human Rights Concern:** Studies report that one in four women living in South Africa’s platinum belt have been raped, although only five percent of the women report the rapes and even fewer cases result in prosecution. Additionally, sulphur dioxide and dust exposure from platinum mining results in respiratory diseases, cancer, and increased mortality.

**Environmental Rights Concern:** Negative environmental impacts from platinum mining include air and water pollution; emissions of sulphur dioxide, dust, and carbon dioxide; and construction of precarious solid waste tailing dams that threaten to devastate local ecosystems and wildlife.

## 27. Tanzania

**Human Rights Concern:** The World Bank granted a waiver from its Indigenous Peoples Policy to the Southern Agricultural Corridor of Tanzania (SAGCOT), a government initiative promoting commercial agricultural production. Borrowers are no longer required to seek indigenous approval for proposed projects resulting in the forceful and often violent eviction of thousands of indigenous people.

**Environmental Rights Concern:** SAGCOT will convert 350,000 hectares of biodiverse land into commercial biofuel crop production, which is a major driver of greenhouse gases emissions. Use of genetically modified seeds and pesticides also contribute to water pollution and local water scarcity.

## 28. 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.

## 29. 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.

### 30. Masvingo, Zimbabwe

**Human Rights Concern:** Severe rainfall and the partial failure of the Tokwe-Mukorsi dam – incomplete for 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.

### 31. 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.

## ASIA

### 32. 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.

### 33. Sundarbans Mangrove Forest, Bangladesh

**Human Rights Concern:** Two proposed coal-fired power plants threaten the water supply and air quality of local people. Arsenic, chromium, nickel, cadmium, nitrogen oxide, and sulfur dioxide emissions from the plants will increase respiratory illnesses and cardiovascular disease for residents. Protesters have endured police brutality and threats from armed supporters of the projects.

**Environmental Rights Concern:** The proposed coal-fired power plants threaten to pollute waterways and coastal waters with toxic coal ash to be used as landfill and stored as slurry in vast waste ponds vulnerable to ocean tide flooding. The area is home to the world’s largest mangrove forest and threatened and endangered species such as Royal Bengal tigers, Irawaddy dolphins, and estuarine crocodiles.

### 34. Kampong Speu, Cambodia

**Human Rights Concern:** 830,000 Cambodians have been affected by land grabbing since 2000. The government has granted concessions for sugar production without local consultation, forcefully evicting communities with no compensation. People suffer from food insecurity and disease once placed into resettlement camps, and activists have been killed for documenting and speaking out against the government’s abuse of power.

**Environmental Rights Concern:** The Phnom Penh Sugar Co. sugarcane plantation dumps waste into nearby streams, causing fish and livestock kills. Nearly 250,000 acres of land has been cleared for sugar production in just three provinces in Cambodia, contributing to biodiversity loss and reduced ecological and hydrological connectivity.

### 35. 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.

### 36. 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.

### 37. Hepu County, China

**Human Rights Concern:** The Stora Enso paper company, its intermediaries, 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.

### 38. Jiangsu Province, China

**Human Rights Concern:** Thousands of Chinese people protested against a possible nuclear waste reprocessing plant in the eastern city of Lianyungang. There were reports of physical violence against protesters, including police shootings to control demonstrators, in addition to nearly 100 arrests.

**Environmental Rights Concern:** The 2011 Fukushima incident in Japan has escalated fears of nuclear disaster in China. Waste metals and chemicals – including plutonium, uranium, benzene, mercury and cyanide – are carcinogenic and/or mutagenic for wildlife and humans and remain hazardous for hundreds of years. Improper nuclear waste disposal could potentially contaminate entire food webs in aquatic, marine, estuarine, and forest ecosystems.

### 39. Ningde, Hubei, and Hunan provinces, China

**Human Rights Concern:** Chinese activists were increasingly targeted by the government in 2015–2016 for speaking out against environmental pollution. For example, the Chinese government censored the viral air pollution video, *Under the Dome*, after it exposed major health impacts arising from China's severe smog. There have also been a series of arrests of Chinese environmental activists and protestors, including the arrest of two people who inquired into the wetland impacts of nickel mining in Ningde province.

**Environmental Rights Concern:** Air, water, and soil pollution problems in China are substantial. For example, at least 20 percent of China's soil is contaminated with chemical and heavy metal residue. The soil in the country's largest rice-growing province, Hunan, is so heavily polluted that a significant proportion of the country's food supply has allegedly been tainted. Additionally, desertification now encompasses 1,740,000 square kilometers of land in China, resulting in the loss of natural habitat for wildlife.

### 40. Poyong Lake, China

**Human Rights Concern:** Local fishermen have seen their livelihoods dwindle with the drying up of Poyong Lake in China. While the lake usually dries up in the winter, the fishing season ended two months earlier than normal in 2016. Local rice farmers have also suffered, as lake water is normally used to irrigate rice paddies.

**Environmental Rights Concern:** Local fish populations have dwindled and fish have decreased in size in Poyong Lake. The shrinking of the lake is directly connected to lower levels of water in the Yangtze River as a result of climate change and other human activities. Many mammals and birds, such as the finless porpoise and Siberian cranes, are threatened by the rapidly decreasing water levels in the lake and the adjoining wetlands.

#### 41. Shanxi Province, China

**Human Rights Concern:** Old coal mines are causing the ground to sink and homes to crumble in the Shanxi province. Thousands of residents have been displaced but others, too poor to move until compensated, continue to live in the area in a state of fear.

**Environmental Rights Concern:** The mined land is completely destroyed, and mining waste continues to contaminate soil and water. The land subsidence is considered a geological disaster.

#### 42. 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.

#### 43. 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.

#### 44. Bhopal, India

**Human Rights Concern:** Union Carbide's pesticide plant disaster in 1984 continues to pollute the contiguous water and land, causing severe health effects for Bhopal residents. The disaster resulted in an estimated 15,000 deaths over thirty years, unsafe drinking water, and new generations born with mental or physical disorders.

**Environmental Rights Concern:** Approximately 2,000 animals were killed as a direct result of the chemical leak, including goats and buffalo. Lakes, rivers, and the fish within are now contaminated with heavy metals and other compounds. Despite the massive pollution, neither the company nor the government have yet to conduct an adequate cleanup.

#### 45. Chhattisgarh, India

**Human Rights Concern:** The Forest Rights Act recognized land rights of indigenous communities in the forests in Chhattisgarh. But the government later decided that coal and iron ore mining interests were more lucrative, leading to forced evictions and violence against protesting villagers, many of whom suffer from respiratory diseases and anemia due to Bhilai Steel Plant emissions.

**Environmental Rights Concern:** A new iron ore mine proposed in the Rowghat mountains will lead to deforestation of approximately 2,030 hectares of forest. The region is considered a corridor for migratory species and the area is surrounded by tiger reserves. The mine and the steel plant will continue to pollute the air, soil, and water with heavy metals and toxic dust.

#### 46. Barkuta, Chhattisgarh, India

**Human Rights Concern:** State-owned Coal India was given permission to expand the Kusmunda opencast coal mine without the consent of local communities. Local villagers were evicted and routinely shut out from decision-making concerning their traditional lands and land-related rights. The coal expansion is expected to displace 9,250 families in 17 villages and impact another 5,475 families.

**Environmental Rights Concern:** India's coal expansion involves the acquisition of an additional 1,127 hectares of land, including a total of 372 hectares of diverted forest land, resulting in serious environmental impacts. These include air and water pollution from coal dust, mining waste runoff that contaminates rivers and streams, and the destruction of forest habitat.

#### 47. Kaziranga National Park, India

**Human Rights Concern:** A child in the Oroan tribe living nearby Kaziranga National Park was shot by park guards, who have adopted a 'shoot first' policy as part of an apparent government effort to evict tribal peoples from their ancestral forests in the name of conservation. The government's militarized approach to conservation has resulted in serious harms against indigenous forest dwellers, including arrests, beatings, harassment, and threats to make them leave their homes.

**Environmental Rights Concern:** As explained by a tribal activist, "[f]orest conservation is not possible without tribal and local communities." For example, in southern India, tribal peoples won the right to stay on their ancestral land and have been effective stewards, with tiger populations rebounding in the area. Excluding local tribes from conservation may in fact further imperil the land.

#### 48. 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 while impacting endangered species such as tigers, leopards, and elephants.

#### 49. 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.

**UPDATE:** Approximately 20,000 people have been displaced, and 2,000 hectares of villages, cropland, and forest have been inundated upstream from the dam. Communities have lost access to basic amenities, resulting in hunger and malnourishment, negative health impacts, and impacts on well-being and culture.

#### 50. 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.

## 51. Sompeta, India

**Human Rights Concern:** Police opened fire on villagers opposing the construction of a 2,640 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.

## 52. Tamil Nadu, India

**Human Rights Concern:** Sand and stone mining in Tamil Nadu has damaged local communities by increasing lung related diseases, reducing food production, and polluting drinking water. Protesters objecting to the mining have been attacked, arrested, and even murdered.

**Environmental Rights Concern:** Thousands of truckloads of sand are mined every day, causing bank erosion on the Thamiparani River and the destruction of local coconut trees. Surface water and groundwater levels have both dropped, and most rivers have turned a redish-brown as a result of sediment and toxic heavy metal pollution.

## 53. Idinthakarai, Tirunelveli District, India

**Human Rights Concern:** Fishing villagers, leading protests against the active Kudankulam nuclear power plant, were hit with tear gas and live ammunition by police. Some activists were killed and others arrested on sedition charges as passports were seized and bank accounts of protest leaders examined.

**Environmental Rights Concern.** Uranium mining and production results in the radioactive contamination of freshwater and terrestrial ecosystems. Nuclear power operations also demand huge quantities of water, depleting local waterways. Additionally, nuclear thermal discharges kill fish and other aquatic life simply by raising the temperature of surrounding bodies of water.

## 54. 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 and 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.

## 55. 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. 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.

## 56. 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.

**UPDATE:** The government of Aceh is deliberating a new plan for palm oil production of the Leuser Ecosystem in violation of indigenous rights of free, prior, and informed consent. Meanwhile, fires on Sumatra and Borneo have burned 261,000 hectares of forests and peatland and killed thousands of people.

## 57. Hormozgan Province, Iran

**Human Rights Concern:** In June 2016, three Geno Biosphere Reserve park rangers were murdered by poachers, bringing the documented instances of ranger murders in Iran to 119.

**Environmental Rights Concern:** The Geno Biosphere is considered a highly unique area for flora and fauna. Illegal wildlife trade in the area is driving some species toward extinction, including the endangered Saker falcon and critically endangered Asiatic cheetah. The Caspian tiger has already been declared extinct.

## 58. Taiji, Japan

**Human Rights Concern:** Thousands of dolphins in Taiji are slaughtered every year. Activist Richard “Ric” O’Barry, who vehemently opposes the slaughter, has been repeatedly arrested and held in jail in Japan without trial. Dolphin meat companies have also used false labeling to mislead Japanese consumers into buying dolphin meat, which is high in mercury and particularly dangerous to school-aged children.

**Environmental Rights Concern:** Huge numbers of Bottlenose and Risso dolphins fall prey to slaughter off the coast of Taiji during the annual hunt from September to March. Hundreds of other dolphins are captured and put in excessively small tanks by the lucrative dolphin show industry, causing depression and other adverse health effects.

## 59. 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 to the Amazon River in terms of fish diversity.

## 60. 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.

## 61. 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.

## 62. 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, 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.

## 63. Uyanga County, Ovorkhangai Province; Gurvanbulag County, Bayankhongor Province; Ulaanbaatar, Mongolia

**Human Rights Concern:** The Delhiin Mongol Nagoon Negdel (DMNN) group has been opposing illegal coal and gold mining operations in Mongolia. Members have been attacked and threatened by local mining company workers. The DMNN leader, Beejin Khastumur, has been intimidated, threatened, arrested, and denied due process stemming from spurious criminal charges. The mines themselves are unsafe for workers, unventilated, and prone to collapse, putting lives at risk and accounting for numerous deaths. Mongolian herders and local communities are also threatened by environmental pollution caused by mines.

**Environmental Rights Concern:** Mining exacerbates water scarcity and quality – polluting above-ground water supplies and leaving rivers dry by diverting underground sources – and damages protected forests and grasslands. Sediment and phosphorous from mining also destroy spawning grounds for the endangered Taimen salmon.

## 64. 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.

## 65. Kachin State, Myanmar

**Human Rights Concern:** Scientists predict Lake Indawgyi in Myanmar will shrink by one-third in the next decade due to the impact of unregulated gold mining pollution. Most of the 35,000 people who live in the area depend on lake-related farming, fishing, and eco-tourism for their livelihoods. Government inspectors are known to accept bribes from illegal mining operations.

**Environmental Rights Concern:** Fish populations in Indawgyi have declined and 170 acres of the lake have thickened into a muddy delta due to sediment pollution. The lake is part of the Indawgyi Wildlife Sanctuary and has been declared a RAMSAR site of international importance. It supports 20,000 migratory birds, seven native fish varieties, and several threatened species, including the White-rumped vulture, Asian elephant, Asian brown tortoise, and Himalayan black bear.

## 66. 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.

## 67. 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.

## 68. River Indus, Gilgit-Baltistan, Pakistan

**Human Rights Concern:** The Diamer-Bhasha mega-dam was approved without the consent of the local indigenous population. Its construction will destroy 32 villages, displace around 50,000 people, and flood thousands of acres of land. The peoples of Gilgit-Baltistan have protested, contending that Pakistan has no right to build a dam where the land ownership is disputed.

**Environmental Rights Concern:** Construction of the dam could devastate local ecosystems, including through biodiversity loss, landscape degradation, soil erosion, deforestation, groundwater pollution and depletion, and the flooding of natural forest and wetlands. Dam construction is slated to begin in 2017.

## 69. Agusan del Sur, Philippines

**Human Rights Concern:** Lito Abion, an anti-mining activist, was killed by two gunmen on September 28, 2015. He was a member of Tagdumahan, a Lumad indigenous group in San Luis, Agusan del Sur that resisted gold mining operations that threaten the ancestral lands of native people. Paramilitary groups and state security forces have campaigned for the mining companies while also threatening anti-mining activists.

**Environmental Rights Concern:** Coffee-colored, heavy metal-contaminated water in rivers and streams has spread fine mining sediment as far as the ocean's coral reefs near Agusan Del Sur, destroying reef development. Illegal mining has also damaged forests and rivers, including those in the Mt. Magdiwata watershed and the Agusan Marsh, a wildlife sanctuary that holds fifteen percent of the area's freshwater.

## 70. Bataan Province, Philippines

**Human Rights Concern:** Gloria Capitan was shot dead by two unknown assailants in July 2016 after she opposed the expansion of coal mines and storage facilities in her community. The coal companies are allegedly responsible for intimidation and threats directed at community protesters. Villagers have also suffered from skin allergies, respiratory diseases, cancer, neurological damage, and developmental problems due to the coal dust pollution.

**Environmental Rights Concern:** Coal ash can spread up to 40 kilometers from the plant. As a result, the water and air in the surrounding area has become severely polluted and the coastline and seabed have incurred significant damage.

## 71. 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.

## 72. 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.

### 73. Pantukan, Mindanao, Philippines

**Human Rights Concern:** Fifty-four anti-mining activists have been killed in Southern Mindanao since 2010, allegedly by formed battalions of the Philippine Army. The indigenous Mansaka tribe and other community members, who oppose the operations of Nadecor and St. Augustine Mining Companies, also report harassment and illegal detention by these paramilitary groups.

**Environmental Rights Concern:** The proposed King-king Copper-Gold Project would destroy 1,600 hectares of the Pantukan region and result in severe environmental impacts, including water and air pollution. According to a preliminary study, the project will threaten twelve vulnerable or critically endangered endemic plant species, six endemic bird species, seventeen mammals, and ten reptiles, amongst these species the Philippine eagle and sea cow.

### 74. Barangay, Nueva Vizcaya, Philippines

**Human Rights Concern:** Mine owner OceanaGold employs private security guards to intimidate anti-mining activists who have objected to the mining operations that were reactivated in June 2016. Residents have been coerced to sell their land at below-market prices. Armed guards have also destroyed property and harassed and arrested community members.

**Environmental Rights Concern:** A 370-metre open pit gold mine has led to rapid environmental degradation and pollution in the surrounding area, including turbid river and stream waters that impede normal development of aquatic plants and algae. Copper and other heavy metals have caused the disappearance of water snails, shrimp, carp, and other fish in the Dipidio River, and has also harmed wildlife that populates the surrounding forests.

### 75. Panay, Philippines

**Human Rights Concern:** The proposed Jalaur Mega Dam would displace 17,000 indigenous people and negatively impact at least sixteen native communities. If built, the dam would flood agricultural lands, submerge homes, and damage sacred burial grounds and sites. Water access in the area would also be controlled by corporate interests rather than local communities.

**Environmental Rights Concern:** Biodiverse habitats would be flooded, threatening several endangered species, including the Visayan writh-billed hornbill, the red-vented cockatoo, and the Visayan warty pig. The dam would also result in deforestation and noise and air pollution.

## 76. 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.

**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.

**UPDATE:** The province banned open pit mining in 2010. The Tampakan mine operations have been suspended with recognition that environmental clearance should never have been granted. The project can be reconsidered if it is no longer planned as an open-pit mine.

## 77. Bayto, Zambales, Philippines

**Human Rights Concern:** Massive flooding that destroyed homes and killed seven people is attributed by the local community to nearby nickel mining operations. Local communities formed a barricade to protest the mine, resulting in the arrest of least three peaceful protesters by police. Protesters claim the nickel mines threaten their “right to live, right of the next generation, right to livelihood, and the right to a healthy and balanced ecology.”

**Environmental Rights Concern:** Nickel laterite from mining pollutes local waterways and the ocean, resulting in declining fish populations in three major rivers and the nearby ocean. Fertile land has also been polluted, resulting in significant harvest losses of palay and carabao mango.

## 78. 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.

## 79. Weliveriya, 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.

## 80. 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 migration, 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.

## 81. Ayutthaya, Thailand

**Human Rights Concern:** Villagers in the Ayutthaya area are battling air and noise pollution from coal and flour transporters. Some local activists have received death threats from industry supporters. Coal transportation causes coal dust to diffuse in the air and fall on nearby communities, producing chronic allergic and respiratory disease concerns.

**Environmental Rights Concern:** Eight million tons of coal is transported annually on the Pa Sak River. Coal dust, spread by wind and rain, pollutes the surrounding land and water. Pollution of the river’s banks has allowed the invasive hyacinth weed to clog the river, thereby threatening the survival of other aquatic life.

## 82. Buriram Province, Thailand

**Human Rights Concern:** In 1976, the Thai government displaced Kao Iad villagers from their forest lands, awarding their territory to large corporate interests for eucalyptus plantation franchises. Years of protests by the villagers to reclaim the land have been met by threats, intimidation, harassment, arbitrary arrests under martial law, and ongoing military persecution by the government.

**Environmental Rights Concern:** Droughts, torrential rains, and deforestation from corporate farming in Thailand has created a host of environmental problems, including soil erosion, sedimentation of rivers, and loss of natural habitat for wildlife. In November 1988, heavy rains washed away the soil of newly deforested slopes, causing massive flooding and killing 400 people and thousands of domestic animals.

## 83. 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.

## 84. Achok Yultso, Tibet

**Human Rights Concern:** On June 2, 2016, indigenous people from Achok Yultso township protested a Chinese gold mining project on Mount Nyenchen Gong-ngon Lari. The protestors claimed that the mining project breached Chinese law by failing to obtain local consent. Some protesters have reportedly been harassed, tortured, and imprisoned.

**Environmental Rights Concern:** Heavy metal mining has dumped toxic waste into rivers and on land while also resulting in deforestation and large-scale erosion near the mining locations. Fish and other aquatic life have been killed, and the poisonous runoff from the mine has contaminated critical groundwater supplies.

## 85. 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.

## 86. Artvin, Turkey

**Human Rights Concern:** Police teargassed locals in Artvin, Turkey who were protesting new gold and copper ore mines in the Cerattepe region. The mining project was originally rejected in 2014 due to environmental concerns, but an appeal was approved in 2015. Law enforcement prepared for violence by warning the local hospital to have additional medical staff available.

**Environmental Rights Concern:** The Cengiz Holding mining company plans to cut down a virgin forest to start construction on the mine. The deforestation and resulting water pollution threatens a biologically diverse area near the Black Sea that hosts more than 2,000 different plant species, 124 endemic species, and hundreds of other animal species.

## 87. 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.

## 88. Ha Tinh Province, Vietnam

**Human Rights Concern:** In May 2016, thousands of people in Ha Tinh province took to the streets demanding an investigation into mass fish kills off the coast near the Vung Ang industrial zone. Police and security forces used unnecessary and excessive force, including house arrests and lengthy detentions, to prohibit protesters from participating in the environmental demonstrations.

**Environmental Rights Concern:** Thousands of fish died likely due to a powerful toxin in the seawater that included poisonous industrial chemicals. A fisheries association report targeted humans as the likely cause of the kill, which possibly resulted from underground construction work that polluted the ocean. Damage to local ocean ecosystems is currently being assessed.

## AUSTRALIA / OCEANIA

### 89. 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.

### 90. 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.

### 91. Queensland, Australia

**Human Rights Concern:** Coal seam gas (CSG) development in Australia results in severe health problems for local communities, including respiratory illnesses, rashes, muscle and joint pains, nausea, increased cancer risks, and other illnesses that primarily affect children and the elderly.

**Environmental Rights Concern:** CGS development produces substantial greenhouse gas emissions, surface water pollution, groundwater depletion, and contamination and damage to wildlife habitat, including the Wet Tropics of Queensland. A UNESCO World Heritage Site, this region is home to 65 endemic vertebrates and 674 endemic plant species.

### 92. Lapoinya, Tasmania, Australia

**Human Rights Concern:** Tasmania's government passed the Workplaces (Protection from Protesters) Act in 2014, an anti-protest law, stripping community members of freedom of expression rights. Protesters against a plan to deforest 49 hectares in Lapoinya, Tasmania, have been arrested and charged, including Bob Brown, the former Australia Greens leader.

**Environmental Rights Concern:** Logging in Lapoinya's north-west forest would threaten the survival of the endangered Tasmanian giant freshwater lobster and a disease-free population of Tasmanian devils. The old-growth forest is also home to rare tree species, including myrtle, sassafras, and huon pine, reputedly the oldest tree in Australia.

### 93. 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.

### 94. Woodlark Island, Papua New Guinea

**Human Rights Concern:** Kula Gold Limited was granted a mining lease in 2014 to develop the Woodlark Gold Mine, which involves the relocation of 10 percent of the island's population. Local communities have complained about the lack of consultation and transparency by the mining company and government.

**Environmental Rights Concern:** The mine and related exploration projects would cover half of Woodlark Island. An estimated 12.6 Megatons of tailings waste, composed of heavy metals and cyanide from the mine, could be dumped into the Wamunon Bay in the Pacific Ocean, threatening marine species and ocean ecosystems.

### 95. 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 percent 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

### 96. Sivens, France

**Human Rights Concern:** 5,000 people were opposing a proposed dam on the Tescou River at Sivens in 2014 when protester Remi Fraisse was killed by a police grenade. In 2015, 15 protesters at the site were arrested after police used tear gas, stun grenades, and rubber bullets to dispel the group. The EU is currently reviewing the economic and environmental impact of the dam.

**Environmental Rights Concern:** 185 dams have already interfered with the Tescou River's flow. This project would destroy 29 hectares of the last remaining humid forest in a region that is home to 96 endangered species of animals. It would also submerge the Testet wetland, considered one of the most important wetlands in the area, due to its biodiversity.

### 97. 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 CO<sub>2</sub> than black coal.

**UPDATE:** Activists resisting the expansion of coal mining in the Hambach Forest have been beaten, pepper sprayed by security workers, and kidnapped. Only 20 percent of the Hambacher remains intact, with the rest having been destroyed by the coal company.

### 98. Skouries, Halkidiki peninsula, Greece

**Human Rights Concern:** An illegal, accelerated procedure to sell public lands, inhabited areas, and protected forests to mining interests has led to years of protests in Greece. As one example, local protesters claim they were not properly consulted for a new open-pit gold mine proposed in Skouries. Violent police actions and an “anti-mafia” law criminalizing opposition to the mines reflect the government's pro-mining position.

**Environmental Rights Concern:** The use of cyanide and arsenic in mining poses serious environmental impacts, including pollution of surface water, groundwater, and soil, threatening local fish species and other animals. The proposed Skouries mine will also require vast deforestation and will dewater local ecosystems (such as by lowering the water table by up to 400 meters).

## 99. Belfast, Northern Ireland

**Human Rights Concern:** In June 2016, peaceful protests against the environmental risks associated with fossil fuel exploration at the controversial oil drilling site at Woodburn Forest (near Belfast in Northern Ireland) lead to arrests. Local activists resisting exploratory drilling were met by heavy-handed policing efforts at the site.

**Environmental Rights Concern:** Exploratory drilling using toxic chemicals has created risks of spillage less than 400 meters from the city's primary public water supply. A minor oil leak has already entered a small waterway that runs across the InfraStrata site, threatening local wildlife and forests.

## 100. 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.

## 101. Bialowieza Forest, Poland

**Human Rights Concern:** The Bialowieza forest supports an indigenous population that derives its livelihood largely from harvesting forest crops and forest-related tourism. The government recently permitted a 300 percent increase in logging.

**Environmental Rights Concern:** The Bialowieza area is one of the largest and last intact parts of an 8,000-year-old forest. It is a UNESCO World Heritage site and home to Europe's tallest tree, the Norway Spruce. It has the largest recovered wild bison population, comprising 25 percent of the world's total. The forest is also home to nearly 20,000 animal species, including 59 mammals, 250 birds and 12,000 invertebrates, and 5,500 plants.

## 102. 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.

## 103. Baia Mare Region, Romania

**Human Rights Concern:** In 2000, the Baia Mare Gold mine waste dam failed, and 3.5 million cubic feet of toxic chemicals were released into the Tisza and Danube Rivers, contaminating drinking water for 25 million people. None of them were ever compensated for the adverse health effects or loss of livelihoods. A new plant owner is now proposing more mining activities in the region.

**Environmental Rights Concern:** The cyanide spill killed thousands of fish and wiped out most downstream aquatic life. It took roughly ten years to restore plants and wildlife in the area. Expanded mining in the region would likely cause irreversible ecosystem damage.

## 104. Chelyabinsk Region, Ural Mountains, Russia

**Human Rights Concern:** Recent Russian regulations define prohibited political activity so broadly that the government can crack down on all types of advocacy, stifling freedom of expression and protest. For example, activist Nadezhda Kutepova, who provided education on the nuclear disaster zone in the Ural Mountains, learned that her NGO had been classified as a “foreign agent,” exposing the organization to additional regulations and fines, outlawing any non-Russian funding, and subjecting her supporters to “unscheduled” interrogations and raids to stifle their advocacy.

**Environmental Rights Concern:** Nuclear waste contamination has caused permanent environmental damage in Southern Siberia and the Ural Mountains, devastating woody plants like pine trees and adversely affecting animal species. Sulphur and other airborne pollutants cover vegetation and accumulate in lakes and rivers, killing surrounding vegetation and displacing northern wildlife, including the Amur tiger, brown bear, and reindeer.

## 105. 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.

### 106. 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.

### 107. Khoper, 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 Khoper River, threatening the nearby Khoper Nature Reserve – a protected area that is home to imperiled species like the Russian desman, white-tailed eagle, and peregrine falcon.

### 108. Usinsk, Komi Republic, Russia

**Human Rights Concern:** Sixty percent of oil pipelines in areas of northern Russia have deteriorated and are leaking oil. However, due to lax government oversight and inadequate penalties, oil companies do not invest in quality infrastructure nor conduct comprehensive leak cleanups. Villagers complain that leaking oil pollutes drinking water, causes chronic health problems, and contaminates food sources.

**Environmental Rights Concern:** Oil leaks threaten fish species and local riparian ecosystems. Northern rivers also carry tons of leaked oil toward the Arctic Ocean every year. Spring thaws in contaminated tundra and marshland could trigger even more river pollution, poisoning salmon and other fish species. Leaks also threaten the sensitive plants and animals that live in the tundra, including domestic reindeer, lichen, and white whales.

### 109. Norilsk, Russia

**Human Rights Concern:** Norilsk is considered Russia's most polluted city. It is home to the world's largest producer of nickel and palladium, Norilsk Nickel, which emits more than four million tons of lead, nickel, arsenic, and other heavy metals into the atmosphere every year. Respiratory diseases result in 15.8 percent of local child deaths, and life expectancy is 10 years less for heavy metal mine workers than for average citizens.

**Environmental Rights Concern:** The Daldykan River has turned bright red since being polluted by Norilsk Nickel's activities. Their nickel and palladium production has also caused extensive acid rain and smog and is responsible for about one percent of global sulfur dioxide emissions. Nearby soil is so polluted that there are no living trees within thirty miles of the facility.

## 110. 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 Chusovaya River ecosystem has been contaminated by hexavalent chromium, which can be extremely toxic to wildlife.

## NORTH AMERICA

### 111. British Columbia, Canada

**Human Rights Concern:** Indigenous protests marked the two-year anniversary of the massive breach of the tailings pond at the Mount Polley Copper-Gold Mine that sent 24 million cubic feet of wastewater into Hazelton Creek and Quesnel Lake in central British Columbia. Tribes contend that the province had no jurisdiction to permit the mining operations said to be illegally operating on sovereign indigenous territories without the prior, informed consent of the native residents. Two years after the spill, little effort has been made to clean up the toxic waste at the site.

**Environmental Rights Concern:** The mining waste contaminated the pristine waters of Quesnel Lake, damaging the spawning grounds for nearly 60 percent of the province's sockeye salmon. The sheer violence of the spill scoured the creek banks, stripping the trees of their bark and branches and transforming the six-foot-wide creek bed into a 490-foot-wide fan of mud and nearly-dead trees.

### 112. Vancouver, British Columbia, Canada

**Human Rights Concern:** Protesting groups of indigenous people opposed to the New Prosperity copper-gold mine project are being sued by mining interests for defamation, despite their constitutional right to object to the mine during the permitting process. The proposed mine would open in the heart of the Tsilhqot'in and Secwepemc Nations' traditional territories, negatively impacting the tribes traditional and cultural uses of Fish Lake.

**Environmental Rights Concern:** The proposed mine would put native grizzly bears near Fish Lake at risk by threatening some of the "best grizzly bear habitat left in North America," according to the David Suzuki Foundation. Environmental assessments show numerous potential negative impacts to ecosystems, including toxic heavy metal pollution that could contaminate Fish Lake through mine water seepage and water recirculation.

### 113. 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.

#### 114. 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.

#### 115. 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.

**UPDATE:** Local communities and allies have created a movement to declare Loma Miranda a national park, forming a permanent camp on the mountain, in order to protect it from nickel mining.

#### 116. Marshall Islands

**Human Rights Concern:** Threats from sea level rise, increased storms, and flooding have prompted some Marshall Island residents to leave their home country. Salt water intrusions are contaminating the Islands' minimal freshwater drinking supplies. The island nation contributes a minute proportion of the greenhouse gases that are changing our atmosphere, yet its residents are feeling the brunt of climate change impacts.

**Environmental Rights Concern:** Most of the islands are less than six feet above sea level. With sea level expected to rise one to four feet by 2100, climate related changes are threatening this tiny nation and the wildlife and plant species that inhabit the land.

### 117. 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.

### 118. Wirikuta, San Luis Potosi, Mexico

**Human Rights Concern:** The Canadian company First Majestic Silver was granted mining concessions for an open-pit silver mine without the prior, informed consent of the indigenous Huichol/Wixarika people. The mine is to be placed within the sacred land of Wirikuta, declared as a Sacred Natural Site by UNESCO, where it will contaminate water and soil while also threatening the cultural and historic heritage of the tribe.

**Environmental Rights Concern:** Wirikuta contains a bird sanctuary and is one of the most “biologically rich and diverse deserts in the world.” The mine would negatively impact local watersheds through deforestation, acidification, pollution, and other harms.

### 119. Cananea, Sonora, Mexico

**Human Rights Concern:** In 2016, more than 600 residents near Cananea reported that they cannot use or sell their land and they have yet to receive any assistance for the long-term impacts of the 2014 toxic copper sulfate spill from the Buenavista del Cobre copper mine. Hundreds of people continue to suffer from spill-related ailments, including cancer; hypertension; and liver, kidney, pancreas, and nervous system diseases.

**Environmental Rights Concern:** Called “the worst environmental disaster by the mining industry in modern times,” some experts estimate that it will take between 15 to 20 years to decontaminate local rivers due to the remaining toxic chemical substances. Experts also worry that the chemical poisons will eventually enter the food chain, causing severe damage to fish, wildlife, and local ecosystems.

## 120. Shelby County, Alabama, United States

**Human Rights Concern:** One person was killed and five others were injured when the Colonial Pipeline in Shelby County exploded in 2016. High levels of hazardous benzene and gasoline vapors were released, leaving local communities worried about drinking water safety.

**Environmental Rights Concern:** The pipeline explosion resulted in wildfires that burnt over 37 acres of land. There have been 128 pipeline spills since 2010, releasing an estimated 450,000 gallons of oil into ecosystems. Negative impacts on the flora and fauna in area, including within the Cahaba River and its larger ecosystem, threaten an array of protected and endangered species.

## 121. Bristol Bay, Alaska, United States

**Human Rights Concern:** Gold mining at the proposed Pebble Mine in Bristol Bay, Alaska would threaten the livelihoods and welfare of Alaskan indigenous peoples. Mining projects are moving forward without the prior, informed consent of many local tribes in the area that stand in opposition. Mining production and waste will threaten wild sockeye salmon fishing that comprises an estimated 52 percent of native family diets and provides an estimated 14,000 jobs.

**Environmental Rights Concern:** The Pebble Mine complex would consume 20 square miles of habitat, displace 94 miles of salmon-supporting streams and up to 5,350 acres of wetlands and ponds, and generate 10 billion tons of waste, including cyanide. Due to its location in a seismically active region, this mine could also result in the failure of a mine tailings dam, threatening critical salmon habitat as well as the endangered Cook Inlet beluga whale.

## 122. Chuitna River, Alaska, United States

**Human Rights Concern:** The Tyonek tribe relies on the Chuitna River and nearby Cook Inlet for food and fishing income. Coal ash dust from the proposed Chuitna mine would result in significant air pollution, adversely affecting the health of tribe members. The first phase of mine construction alone would release 650 million metric tons of carbon dioxide, exacerbating climate change.

**Environmental Rights Concern:** The proposed Chuitna coal mine would stretch 300 feet deep and 30 square miles around wetlands and forest near Alaska's Chuitna River, to the detriment of local wildlife, fish, nearby ecosystems, and marine mammals. The Chuitna River is also home to a threatened salmon run and salmon spawning habitat.

## 123. 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.

#### 124. 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.

#### 125. Central Los Angeles, California, United States

**Human Rights Concern:** The Inglewood Oil Field is the nation's largest urban oil field, and over one million people live within a five-mile radius of the field. Local communities report bloody noses, rashes, fatigue, and migraine headaches (mainly in children), as well as cracked homes and driveways and displaced sidewalks due to the land shifting.

**Environmental Rights Concern:** A state report released in 2015 found that "significant and unavoidable" environmental damage would result from the huge, 1,000-acre oil field operation, including major greenhouse gas emissions from methane and sulphur dioxide. Fracking wastewater injections could disrupt the Newport-Inglewood earthquake fault line, and groundwater contamination from nearly 300 fracking related chemicals would harm local water-dependent natural ecosystems.

#### 126. Porter Ranch, California, United States

**Human Rights Concern:** For sixteen weeks, the Aliso Canyon Storage Facility, thirty miles northwest of Los Angeles, spewed 62 million standard cubic feet of methane-loaded natural gas into the environment. More than 6,000 families were forced to evacuate their homes, and residents reported health concerns including headaches, trouble breathing, nausea, dizziness, and nose bleeds.

**Environmental Rights Concern:** The Aliso Canyon leak has been called the largest environmental disaster since the BP oil spill, and may be the single biggest release of methane into the atmosphere ever recorded. Methane is a potent greenhouse gas that is 84 times more efficient at trapping heat than carbon dioxide. The 10,000-ton methane leak from Aliso Canyon will create climate change impacts equivalent to the emissions from seven million coal cars or eight to nine coal plants.

### 127. 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.

### 128. Sacramento- San Joaquin Delta, California, United States

**Human Rights Concern:** California's Bay Delta Conservation plan consists of the construction of two 35-mile long tunnels in the San Joaquin- Sacramento River Delta to carry water underground to Tracy, California. The project will further drain water from an already stressed Delta, threatening salmon populations and the way of life for indigenous people and local residents who rely upon the River Deltas for water, food, and tourist-related income.

**Environmental Rights Concern:** Current water exports already threaten the survival of Delta ecosystems and species. Total diversions upstream and in-Delta increased by a factor of sixteen between the 1970s and 1990s, leaving only three percent of the historic wetlands intact. Thirteen Delta fish species are listed as threatened or endangered and the proposed tunnels are expected to increase exports that will further drive species extinction.

### 129. Weed, California, United States

**Human Rights Concern:** Beaugan Spring supplies water to Weed, California, but the land where the spring is located is owned by Roseburg Forest Products. For 50 years, the company charged \$1 per year for city use of the water. However, Roseburg is now charging \$97,500 annually and telling the city to find water elsewhere. Roseburg is also the largest private employer in the area, leaving some community members unable to defend their right to water for fear of employment retribution.

**Environmental Rights Concern:** Water should not be commodity sold for profit. The spring water flow has decreased by 25 percent in recent years, and Roseburg operations have polluted the groundwater. Lower water flow levels and toxic pollution are damaging aquatic life and surrounding vegetation.

### 130. Silverton, Colorado, United States

**Human Rights Concern:** In August 2015, the abandoned Gold King Mine in Silverton Colorado released three million gallons of acid mine drainage into creeks and rivers connecting to the San Juan and Colorado Rivers. Local communities and indigenous tribes point to contaminated drinking water, damaged crops, forced relocation, and sacred practices interference as a result.

**Environmental Rights Concern:** The Animas River turned a bright orange due to 880,000 pounds of toxic arsenic, cadmium, lead, mercury, and sediment, severely damaging water, soil, vegetation, and aquatic life. Colorado contains 17,000 abandoned and un-remediated mines capable of contaminating ground water and thousands of kilometers of rivers.

### 131. Lake Okeechobee, Florida, United States

**Human Rights Concern:** Farming chemicals pouring into Lake Okeechobee have rendered the water unfit for swimming, as phosphorous and nitrates have caused toxic algae blooms. Florida declared a state of emergency to compensate businesses for their significant losses, including from tourism. Exposure to algae blooms causes significant short- and long-term human health problems.

**Environmental Rights Concern:** Lake Okeechobee is America's second largest freshwater lake, but its heavy pollution levels have caused the state to divert the toxic lake water into the Gulf of Mexico, the Atlantic Ocean, and the sensitive Everglades, creating even more environmental problems. The polluted water releases have threatened coral reefs and killed up to 40 percent of oyster beds in some areas.

### 132. 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.

### 133. Isle de Jean Charles, Louisiana, United States

**Human Rights Concern:** Due to rising waters associated primarily with climate change, the Biloxi-Chitimacha-Choctaw Native Americans became the first community of official climate refugees in the United States. Their ancestral homeland of Isle de Jean Charles has shrunk from 22,400 acres in the 1950s to a quarter mile-wide, 320-acre strip. With the shrinking land mass, the tribe lost their homeland, identity, and culture.

**Environmental Rights Concern:** The land in Southern Louisiana submerges into the Gulf of Mexico at the rate of thirty square miles of wetlands every year. These wetlands host some of the world's most productive and diverse ecosystems while also serving as breeding and spawning grounds for many species of wildlife and plants, including the threatened American alligator, ancient live oak trees, and endangered brown pelicans.

### 134. 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.

### 135. Detroit, Michigan, United States

**Human Rights Concern:** The largest municipal trash incinerator in the United States outside downtown Detroit emits persistent odor and air pollution, causing respiratory health problems, including asthma in children. Detroit communities pay more to dispose of their garbage than subsidized outlying communities while simultaneously shouldering the immediate impact of the incinerator's emissions.

**Environmental Rights Concern:** Since March 2015, illegal emissions of carbon monoxide, sulfur dioxide, nitrogen oxides, lead, and particulate matter from incineration have caused severe air pollution, negatively impacting the ozone and contributing to climate change concerns.

### 136. Flint, Michigan, United States

**Human Rights Concern:** Michigan switched Flint's water supply in April 2014 from Detroit's treated water to the Flint River, which contains toxic levels of lead and carcinogens as high as 13,200 ppb. The EPA defines water with 5,000 ppm of lead as "hazardous waste." Many citizens (especially children) are suffering from lead poisoning, causing neurological problems, hair loss, vomiting, developmental problems, and skin rashes. Further, an outbreak of Legionnaire's disease, caused by bacteria and trihalomethane in the Flint river, killed ten people in the city.

**Environmental Rights Concern:** The river's heavy metal pollution includes mercury, arsenic, lead, bacteria, toxic solvents, volatile organic compounds, and petroleum compounds that kill fish, surrounding plants, and other aquatic life. Rainwater has washed fertilizers and other chemicals from nearby farms into the Flint river, promoting toxic algae growth that reduces water oxygen levels that are critical to healthy river ecosystems.

### 137. Yadkin River, North Carolina, United States

**Human Rights Concern:** Duke Energy's Buck Steam Station coal plant and its unlined coal ash ponds pollute groundwater. 70,000 gallons of this groundwater is released into the Yadkin River every day. Contaminated drinking water has forced people in the surrounding communities to live off bottled water.

**Environmental Rights Concern:** The Yadkin River has become highly polluted with arsenic, cadmium and other heavy metals. Contamination is also threatening the downstream Pee Dee River, named one of America's most endangered rivers in 2016, along with habitat for wildlife and migratory fish, including shad and striped bass.

### 138. Fort Berthold, North Dakota, United States

**Human Rights Concern:** Work camps associated with fracking operations in North Dakota lead to an increase in human trafficking, sexual harassment, and violence against women and children, particularly Native American women. Oil and wastewater spills have also damaged agriculture and fishing opportunities, interfered with food supplies, and contaminated available drinking water for many indigenous and other local communities.

**Environmental Rights Concern:** Over 1,000 oil and wastewater spills were reported in this area in 2011 alone. Releases of brine (salty wastewater often mixed with carcinogenic chemicals and heavy metals) have wiped out aquatic life in streams and wetlands, contaminated groundwater, and damaged available land previously used for farming.

### 139. Standing Rock Reservation, North Dakota, United States

**Human Rights Concern:** The North Dakota Access Pipeline threatens public health, water supplies, and cultural resources, including sacred tribal areas. The Standing Rock Sioux tribe claims it was not properly consulted about the pipeline location. Hundreds of protesters have been arrested, including journalist Deia Schlosberg, who was originally charged with a felony for exercising her first amendment right to free speech and press.

**Environmental Rights Concern:** If completed, the pipeline would carry half a million gallons of crude oil per day to Illinois. Use of the oil would produce carbon emissions equivalent to 30 coal plants annually, further contributing to climate change and the destruction of ecosystems. Oil leaks pose serious threats to local water supplies and wildlife.

### 140. Oklahoma, United States

**Human Rights Concern:** Injection of wastewater into wells for fracking has allegedly led to an increase in earthquakes in Oklahoma that threaten the welfare of people and property. Earthquakes, numbering around five per year before fracking operations, now total almost five thousand annually, including eighty quakes in the first two weeks of 2016 alone. Fracking also leads to leaks of carcinogenic chemicals into public drinking water supplies.

**Environmental Rights Concern:** Fracking leaks poisonous chemicals into waterways. Also, the substantial carbon emissions from fracking contributes to climate change, making Oklahoma increasingly arid and damaging wetlands and other natural ecosystems critical to wildlife and plants.

### 141. 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. The tar sands are a major driver of global climate change.

#### 142. Salt Fork Arkansas River, Oklahoma, United States

**Human Rights Concern:** Over the last 5 years, spills and waste water dumping, allegedly caused by oil companies, have contaminated water resources and resulted in fish kills on the Salt Fork Arkansas River. Local residents have also complained of ulcers and infections purportedly linked to the pollution.

**Environmental Rights Concern:** Hundreds of thousands of catfish, carp, and other bottom-feeding fish have been killed in river waters that carry high salt, aluminum, iron, and manganese levels that negatively impact aquatic and surrounding wildlife.

#### 143. 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.

#### 144. Gillette, Wyoming, United States

**Human Rights Concern:** The coal-bed methane (CBM) boom in the Powder River Basin in the early 2000's has left thousands of abandoned wells that are leaking methane into the underground water reservoirs in the area. Dozens of families near Gillette, Wyoming have been evacuated and the remaining families have been forced to consume bottled water.

**Environmental Rights Concern:** CBM development depletes aquifers, contaminates surface water and groundwater with methane, and contributes to climate change. In Wyoming, thousands of CBM wells have been abandoned and left unplugged, risking further contamination of soil and water resources.

## SOUTH AND CENTRAL AMERICA

### 145. 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.

### 146. 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.

### 147. 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.

#### 148. Jachal, San Juan, Argentina

**Human Rights Concern:** Toronto-based mining giant Barrick Gold (BG) dumped cyanide into the Potrerillos, Jachal, Blanco, Palca, and Las Taguas Rivers in Argentina in August 2015 shortly after firing an engineer who blew the whistle on safety and environmental concerns. Death threats, physical violence, and arbitrarily-imposed government penalties have been used to curb advocacy against BG mining projects. Cyanide in drinking water is linked to mining spills that have also caused an increase in cancer and deaths in local communities.

**Environmental Rights Concern:** More than 280,000 gallons of cyanide solution contaminated five rivers in the province. Water tests show dangerously high levels of cyanide, salts, cobalt, manganese, boron, sulphates, aluminum, chloride, and arsenic. These substances have contaminated most surrounding waters, posing serious threats to biological diversity and preservation of aquatic life.

#### 149. Beni River, Bolivia

**Human Rights Concern:** A proposed hydro-electric dam on the Beni River in the Bala Gorge could displace and negatively impact seventeen indigenous communities and nearly 4,000 people. The local communities claim the government failed to consult them on the project.

**Environmental Rights Concern:** The dam would flood 2,000 square kilometers of land, including a large part of the Madidi National Park, which is possibly the world's most biodiverse place. It features 11 percent of the world's birds (more than 1,000), 200 mammals, 300 fish species, and over 12,000 plants. Two-thirds of park's flora and fauna has yet to be fully identified.

#### 150. Lake Poopó, La Paz, Bolivia

**Human Rights Concern:** Bolivia's second largest body of water has dried up due to climate change, El Nino-caused drought, and diversions for mining and agricultural . The indigenous Uru-Murato people have lost their homes and livelihoods through forced relocation, which has also eliminated the right of future generations to live and thrive in this area.

**Environmental Rights Concern:** Lake Poopó no longer exists. Tens of thousands of fish died not only due to the drying of Lake Poopó, but also because of high levels of lead and cadmium in its upstream tributaries from tin mining pollution. Seventy-five bird species have also disappeared from the area.

### 151. 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.

### 152. Mato Grosso do Sul, Brazil

**Human Rights Concern:** Ranch owners have taken over ancestral lands of indigenous communities in Brazil in order to raise cattle. In some cases, indigenous peoples have been killed while resisting relocation efforts, including a Terena Indian that was killed by police.

**Environmental Rights Concern:** Cattle raising is a significant source of carbon emissions, and illegal logging is a primary cause of deforestation in the Amazon and in Brazil. Both of these threats result in considerable environmental degradation and biodiversity loss while also causing the remaining forest to become more vulnerable to fire, drought, and related ecosystem damage.

### 153. São Francisco do Paraguçu, Brazil

**Human Rights Concern:** Alexsandro dos Santos Gomes, a protest leader against illegal logging with the Rural Resistance Movement (MRC), was shot to death in São Francisco do Paraguçu in May 2016. About 300 families in the area live on subsistence agriculture, fishing, shellfish collection, and extraction of palm fiber, all of which are threatened by the environmental impacts of illegal logging.

**Environmental Rights Concern:** Deforestation destroys local ecosystems and contributes to water pollution by stripping the regional ecosystem of its natural tree canopy, water filters, and sinks, resulting in a dry region that is hostile to wildlife, plants, and humans.

#### 154. 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.

#### 155. Madeira River, North West Brazil

**Human Rights Concern:** Human rights defender Nilce de Souza Magalhães was found drowned in the hydro-electric dam Usina Hidrelétrica Jirau (“Jirau Dam”). She was murdered by a man who claimed that he wanted to “silence” her. Her work had led to an investigation of Sustainable Energy of Brazil (ESRB) for failing to compensate displaced fisherman, and a criminal inquiry into apparent data manipulation obscuring the negative impact the dam will have on local areas.

**Environmental Rights Concern:** The International Rivers Network calls the Madeira River the most important and largest tributary in the Amazon. The Jirau Dam will significantly impact the river and those species that live within its watershed, including the giant catfish, spotted jaguar, giant otter, pink dolphin, and 750 fish species that spawn in the river’s upper reaches. Jirau’s reservoir is expected to cause flooding and also eliminate aquatic and terrestrial ecosystems in both Brazil and Bolivia.

#### 156. Mariana, Brazil

**Human Rights Concern:** In November 2015, the Samarco’s Fundão iron-ore mine tailings dam burst, wiping the town of Bento Rodrigues off the map while killing 19 people. Brazilian prosecutors recently charged 26 people in connection with the disaster, claiming they knew the dam could fail. The indigenous Krenak people have lost their homes, livelihoods, and culture.

**Environmental Rights Concern:** 50 million tons of iron ore, sediment, manganese and other heavy metals traveled 500 square kilometers, polluting the Rio Doce, killing aquatic and land species, and contaminating surface and groundwater. Eventually the toxic sludge reached the Atlantic Ocean. Experts estimate it could take 10 to 50 years for the Rio Doce to recover.

### 157. Mato Grosso do Sul, Brazil

**Human Rights Concern:** Many Brazilian officials are members of an anti-indigenous lobby group seeking to pass laws to reduce the size of indigenous territories and open up the land to extractive projects. Brazilian Indians fighting to stop ongoing land theft are confronted with death threats and violent attacks. Further, after the illegal taking of their lands, indigenous people are often forced to live in overcrowded camps with little food and water.

**Environmental Rights Concern:** The United Nations Special Rapporteur on Indigenous Peoples recently stated that indigenous peoples are the best conservationists and guardians of the natural world. By taking their land for mining, agribusiness, and other industrial operations, water, air and soil are polluted and destroyed in one of the most biodiverse places in the world. An estimated 8,300 square kilometers of forest face destruction, potentially releasing 110 million tons of carbon dioxide into the atmosphere.

### 158. 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.

### 159. Altamira, Pará, 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.

**UPDATE:** A judge suspended the license for the dam after finding the company failed to “provide required water and sewage services to local communities.” However, over 21,000 people have already been placed in resettlement communities and massive fish kills have occurred.

### 160. Altamira, Pará, Brazil

**Human Rights Concern:** The former head of the Altamira environmental department, Luiz Alberto Araújo, was killed by two gunmen in front of his family. He had investigated and opposed illegal logging and dam operations in the area. Nearby illegal logging operations imposed slavery-like conditions on laborers, according to police reports.

**Environmental Rights Concern:** Illegal logging in the Brazilian Amazon has led to massive deforestation, contributing to climate change and a severe loss of biodiversity. Araújo led a team that discovered 16.2 tons of dead fish buried near the Belo Monte dam, all of which were illegally killed during the flooding of the dam's reservoir. His department also shut down a gold mine whose operations released mercury and other pollutants in the Curuá River, poisoning fish and other aquatic life.

### 161. São Luiz do Tapajós, Para, Brazil

**Human Rights Concern:** In December 2015, Brazil's government announced the auction of the São Luiz do Tapajós River dam project without the prior and informed consent of the Monduruku indigenous people. The proposed dam, part of a complex to be built on the Tapajós River, will displace thousands of Monduruku people destroying their homes and livelihoods.

**Environmental Rights Concern:** The Tapajós River dam complex will flood vast areas of land and threaten fish and other wildlife. Experts predict the complex could lead to the deforestation of almost 1 million hectares of one of the most biodiverse regions of the world.

**UPDATE:** The government canceled the permits for the dam due to the failure of the companies to provide adequate environmental impact studies and the concerns raised over the dam's impact on indigenous communities and wildlife.

### 162. 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.

### 163. City of Jaru, Rondonia State, Brazil

**Human Rights Concern:** In January 2016, Enilson Ribeiro dos Santos and Valdiro Chagas de Moura – two leaders of a social movement fighting for indigenous peoples land rights (Liga dos Camponeses Pobres, or “Poor Peasant League”) – were executed by hired gunmen of the owners of the land they were allegedly “occupying.” The indigenous Surui people have also been harassed, intimidated, and bribed by land rights opponents.

**Environmental Rights Concern:** Rondônia is now suffering the consequences of massive deforestation as a result of commercial development and excessive industrialized agriculture. The area has become one of the most deforested places in the Amazon, with only 50 percent of its original area now remaining, resulting in a severe loss of tree canopy and significant damage to wildlife habitat.

### 164. Easter Island, Motu Motiro Hiva Marine Park, Chile

**Human Rights Concern:** The creation of the Motu Motiro Hiva Marine park violated the free, prior, informed consent rights of the indigenous Rapa Nui people while also co-opting indigenous land and water rights of local fishers. Further, illegal commercial fishing and unabated plastic pollution has led to the virtual depletion of the off-shore tuna relied upon by the indigenous communities for their livelihoods and sustenance.

**Environmental Rights Concern:** The Motu Motiro Hiva Marine Park, near Easter Island in the South Pacific, was created 400 kilometers (250 miles) off the coast of the island. Severe plastic pollution, left largely unregulated by the government, has killed thousands of birds and fish in the area. Illegal activities of commercial fishing boats have also decimated local fish populations. Further, over-harvesting of palm forests and unsustainable agricultural practices have caused the extinction of tree species, leading to dry streams and eroded topsoil.

### 165. 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.

### 166. 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.

**UPDATE:** Newmont Mining Corporation sent security forces to attack prominent community leader and Goldman Environmental Prize winner Máxima Acuña de Chaupe and her husband. Due to environmental concerns, opposition, and market conditions surrounding the mine, Newmont Mining has abandoned the project for the “foreseeable future.”

### 167. Trinidad, Department of Casanare, Colombia

**Human Rights Concern:** Daniel Abril Fuentes was murdered in the oil-rich department of Casanare in eastern Colombia. He was targeted for his work against illegal mines and other projects that harm the environment, violate human rights, and infringe on the land interests of indigenous peoples. High levels of chemical pollution from such projects are one reason why indigenous groups are being driven from their lands, according to the United Nations.

**Environmental Rights Concern:** Normal surface water flows have been significantly reduced in the Casanare department due to two decades of oil drilling and other water-depleting activities, resulting in excessively dry wetlands, estuaries, rivers, and streams. Additionally, oil drilling in the area, done through hydrological injection, contaminates about 15 barrels of water for each barrel of petroleum produced.

### 168. Cauca Department, Colombia

**Human Rights Concern:** In Colombia, three environmental activists organizing against illegal gold mining and excessive industrial water use – Joel Meneses, Nereo Meneses Guzmán, and Ariel Sotelo – were kidnapped and later assassinated by armed gunmen dressed as military officers. Indigenous activists seeking to defend their land rights are often targets of paramilitary violence left unregulated by the state.

**Environmental Rights Concern:** Colombia has one of the highest rates of mercury and cyanide contamination from gold mining in the Americas. Mining operations have resulted in deforestation; water, air, and soil pollution; excessive erosion; and loss of wildlife habitat. For every gram of gold illegally mined, one ton of soil is contaminated with cyanide, sulphuric acid, and mercury.

### 169. 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.

### 170. 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.

### 171. La Guajira, Colombia

**Human Rights Concern:** The opencast Cerrejón coal mine has led to attacks and murders of anti-mining activists, displacement of indigenous communities, contamination of drinking water, and related health problems. It was reported that nearly 5,000 indigenous Wayú children died from malnutrition when water privatization prevented their families from being able to grow adequate food. The switch from agriculture to mining also resulted in higher unemployment and lower wages for local communities.

**Environmental Rights Concern:** Seventy percent of the mining concessions to be sold are in the Rancheria River Basin, threatening to destroy the river and its ecosystem. The Cerrejón mine has already destroyed 12,000 hectares of forest. Half the region is at risk of becoming desert and 12 rivers have disappeared or are threatened.

## 172. 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.

## 173. Junin, Ecuador

**Human Rights Concern:** The Chilean-owned Codelco copper mining company occupies indigenous community-owned land in Junin. The mining project was granted without community input, violating the people’s constitutional right to “be consulted on any decision that could impact the environment.” The Ecuadorian government sent special police forces to overwhelm protesters, using arrests without due process to intimidate the opposition. The mine would relocate at least four communities while also impeding a local ecotourism project.

**Environmental Rights Concern:** Codelco has been drilling exploratory wells for nearly a year, threatening watersheds and the rare cloud forest. New species are found every year in Junin, including the only carnivore newly discovered in the Western Hemisphere in the last 335 years. As many as 100 animals and plant species could face extinction due to the mining. Deforestation of 4,025 hectares is anticipated, and water welling up from the exploration alone has contaminated nearby rivers and streams with lead, arsenic, cadmium, and chromium.

## 174. 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.

**UPDATE:** Chevron won the appeal for the \$9.5 billion fine, with court finding that the Ecuadorian judgment was gained fraudulently. Communities continue to seek justice.

### 175. Morona-Santiago Province, Ecuador

**Human Rights Concern:** The Tacuma-Taisha road, being constructed through the Kutukú-Shaimi Amazon rainforest, is causing far more damage than was contemplated in the application process. The Environment Ministry suspended the construction, but workers continued the project, leading to threats and kidnappings of federal government officials and park wardens. The construction has also led to conflicts with the Indigenous Shuar and Achuar peoples and provincial authorities.

**Environmental Rights Concern:** The road was made ten meters wide, instead of the agreed upon four, destroying biodiverse habitat and resulting in sixty environmental code infractions. The project failed to meet environmental standards, destroying vegetation and cutting off freshwater supplies to the forest. The Kutukú-Shaimi forest contains hundreds of wildlife species that are now threatened by the illegal construction activity.

### 176. San Pablo de Amali, Ecuador

**Human Rights Concern:** Local community members in San Pablo de Amali oppose the Hidrotambo hydroelectric plant, claiming lack of consultation in the planning process and a negative impact on their community's water rights. Protest leaders against the dam have allegedly been falsely arrested and accused of crimes related to their opposition activities. A 2015 flood, attributed to the dam's presence, destroyed twelve homes and thirty-three farms.

**Environmental Rights Concern:** The dam has obstructed the flow of the Dulcepampa River, leaving virtually no water in some stretches. The reduced flow has negatively impacted fish populations and contributed to major flooding and erosion. Locals say there were previously fourteen fish species in the river and now there are none.

### 177. 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.

**UPDATE:** Rights violations against indigenous peoples have escalated. This includes the murder of Anacleto Dahua Cuji and attempted assassination of Gloria Ushigua, both part of Sápara indigenous people. The first wells in Yasuni began pumping September 2016, with 23,000 barrels of oil being extracted per day.

### 178. Alta Verapaz, Guatemala

**Human Rights Concern:** The proposed Santa Rita hydroelectric dam has been linked to the killing of six indigenous people, and its construction would also involve the forced displacement of thousands of Mayans. Objections that the native tribes were not consulted over the mine have resulted in kidnappings, house burnings, attacks by armed men, and arrests of community leaders.

**Environmental Rights Concern:** The dam could result in floods that will destroy wetlands and other wildlife habitat. Impaired water flow reduces the flow of nutrients and biological activity downstream, threatening fish populations and other aquatic life.

### 179. El Estor, Guatemala

**Human Rights Concern:** The Fenix Project is a nickel mining operation owned by HudBay Minerals. Lawsuits have been filed against the company for allegedly being complicit in armed violence against community leaders and the sexual abuse of Mayan G'eqchi' women. The International Labour Organization has ruled that Guatemala violated international law by granting the mining concession without proper consultation of the Mayan communities.

**Environmental Rights Concern:** Hudbay mining operations have resulted in the contamination of surface water, groundwater, soil, and aquatic life with high levels of mercury, cadmium, lead, and aluminum. Nickel mining also releases sulphur dioxide, a chemical that is particularly damaging to forest and lakes and that contributes to the formation of acid rain.

### 180. Las Cruces, Petén, Guatemala

**Human Rights Concern:** In March 2016, environmental rights defender Méndez Barrios was killed after fighting to protect the Maya Biosphere Reserve ("Reserva de la Biósfera Maya"). Barrios had objected to the Boca del Rio Hydroelectric Dam and criticized the impact of palm oil production on the destruction of the Petén Rainforest. Reserve defenders like Barrios have experienced violence, threats, murders, and disappearances since the reserve was established in 1990.

**Environmental Rights Concern:** The Maya Biosphere Reserve covers 16,000 square kilometers of northern Petén, and it is the largest tropical forest reserve in Central America. Illegal logging stripped the reserve of 50 percent of its original protective habitat for "endangered and iconic wildlife species," including both the jaguar and Baird's tapir. Oil exploration in the area has been aided by the Guatemalan government, resulting in further deforestation and air, soil, and water pollution.

### 181. 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 Tzalá Rivers downstream of the mine.

### 182. 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 Cambalan River.

### 183. 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.

### 184. Bajo Aguán, Honduras

**Human Rights Concern:** Two members of the Unified Peasant Movement (UCA), Jose Angel Flores and Silmer Dionicio George, were killed after they worked to reclaim thousands of hectares of fertile Bajo Aguan land. Subsistence farmers in the region believe that the land was fraudulently transferred to agribusinesses for palm oil production after a new law was passed that stimulated large corporate land purchases.

**Environmental Rights Concern:** A single palm oil mill requires at least 10,000 hectares of land, resulting in massive deforestation and thereby also destroying important wildlife habitat. A food processing plant in the area has also been dumping toxins into local rivers for two decades.

### 185. Nuevo Esperanza and El Transito, Honduras

**Human Rights Concern:** Residents near closed mines in Nuevo Esperanza and El Transito are victims of para-militarization of their territories, including persecution, threats, and police and judicial harassment, according to investigative research organizations in Honduras. Despite the mine closures in 2014, threats of violence, harassment, discrimination, bribery, and physical abductions continue as private mining interests work to reopen the mines.

**Environmental Rights Concern:** Over five years ago, privately owned mining operations flattened the mountainous physical landscape around Nueva Esperanza, stripping away trees and wildlife habitat; destroying arable land; and dumping lead, arsenic, and other heavy metals into the rivers and other local water sources. Mining operations in the small town of El Transito, 500 miles to the south, had similar negative impacts.

### 186. 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.

**UPDATE:** 2015 Goldman Environmental Prize Winner Berta Cáceres was assassinated in her home. Cáceres led the indigenous Lenca community in Honduras in opposition to hundreds of dam projects, including the Agua Zarca Dam. There has been a countrywide wave of violence against environmental and human rights defenders in Honduras.

### 187. 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.

### 188. 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.

### 189. 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.

### 190. Curuguay, Paraguay

**Human Rights Concern:** In June 2012, 300 police officers violently evicted 60 landless campesinos from rural Curuguay. 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 agribusinesses in Paraguay has displaced thousands of families (including indigenous peoples) 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.

### 191. Bagua, Peru

**Human Rights Concern:** While clearing a peaceful blockade of primarily indigenous Awajúns and Wampis peoples, police shot at protestors. The resulting clashes led 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.

## 192. Rio Marañón, Balsas District, Peru

**Human Rights Concern:** Chadin II is part of a 20-dam project on the Marañon River, south of Balsas, Peru. An opponent of Chadin II, Hitler Rojas Gonzales, was killed by one of the dam's supporters. Police have used aggressive and physically intimidating tactics against opponents of the dam to squelch objections to the project. The dam would displace thousands of indigenous people and destroy the livelihoods of those that rely on the river for employment and sustenance.

**Environmental Rights Concern:** The Marañon River Basin is the main source for the Amazon River and home to many endangered and endemic flora and fauna. The Chadin II dam will result in the deforestation of thousands of hectares and severe alteration of the river-based ecosystem.

## 193. Cajamarca, Peru

**Human Rights Concern:** Clashes between police and indigenous and other 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.

## 194. Cajamarca, Peru

**Human Rights Concern:** High up in the Andes of Peru, the Yanacocha open-pit mine spreads across 60 square miles. It is reportedly the second largest gold mine in the world. Villagers objecting to its operation endure threats, violent eviction attempts, physical assaults, and police brutality. Activists have also faced fabricated criminal charges as retaliation for their protests.

**Environmental Rights Concern:** Sprawling open-pit mine operations pollute rivers and irrigation canals with nitrates, contaminating water resources and soil used for farming. According to the government, acid mine runoff resulted in 21,000 dead trout in two rivers near the mine. Mining consumes massive amounts of water and strips soil of vegetation that helps replenish underground aquifers. As a result, the region has experienced frequent water shortages and ecosystem damage.

## 195. 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.

**UPDATE:** Nine pipeline spills in 2016 have turned the Marañón River a coffee color. Peru's main oil pipeline, Petroperu, was ruptured in January 2016, spilling over 3,000 barrels of crude oil and polluting two rivers that native Achuar communities rely upon for water. The livelihoods of over thirty indigenous communities are threatened.

## 196. 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.

## 197. Iquitos, Peru

**Human Rights Concern:** A proposed electricity line from Iquitos, Peru to Ecuador would cross through eight indigenous territories, including Achuar and Kichwa territory. The Energy Ministry believes the right of prior consultation to be inapplicable since the line is a "public service" and would arguably benefit the indigenous populations. The line would directly impact the way of life and cultural identity of these native tribes.

**Environmental Rights Concern:** The transmission line would run 586 kilometers through the Amazon and impact the Abanico del Rio Pastaza, which is the eighth largest Ramsar Site (or "wetland of International Importance"). The result will be massive biodiversity loss, as 8.5 million tons of trees could potentially be destroyed, releasing 4.2 million tons of carbon dioxide into the atmosphere.

### 198. Sierra del Divisor, Peru

**Human Rights Concern:** The Peruvian government recently drafted a Master Plan for a national park in an area known as the Sierra del Divisor, with 40 percent of the park resting on top of oil and gas concessions. The current plan states that it will not recognize the existence of several indigenous tribes that live there. The plan would open the region to oil exploration, violating the indigenous peoples' right to notice and consent while also threatening their homes and livelihoods.

**Environmental Rights Concern:** This area is considered one of the most intact native ecosystems in the Amazon. Oil exploration would result in substantial deforestation and river pollution. Oil exploration would also destroy the rich biodiversity of the region, threatening rare, endemic, and recently discovered wildlife species.

### 199. 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 tropical 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.

### 200. Amazon region, Venezuela

**Human Rights Concern:** Indigenous Yarabana were violently attacked by armed gold miners working illegally on their land. Other tribes have also been assaulted, murdered, and exploited into slavery, including the Yanomami, Hoti, and Arekuna. The infiltration of gangs into the mining area has led to prostitution, alcoholism, and human trafficking. A 2016 study found that 92 percent of certain indigenous tribe members suffered from mercury poisoning.

**Environmental Rights Concern:** Mining for gold and diamonds has polluted rivers with metals, mercury, petroleum byproducts, and acids, damaging aquatic life. Operations have also resulted in impaired river flow and deforestation, degradation, and fragmentation of the Amazon.

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