

# Restoring our Relationship with the Natural World

## A Statement from the 2018 Muskoka Summit on Environment

### Preamble

In 2018, humanity faces environmental challenges of epic proportion. Through our success in building an enormous global population and a similarly large and dynamic economy, we have created a complex web of interacting problems that threaten the continued reliability of this planet as a place in which humans can live their lives. Our actions have made us a major driver of the substantial environmental changes now taking place: changes to the climate, the landscape, the structure and dynamics of natural ecosystems, the availability of essential nutrients and that of numerous pollutants, and both the abundance and the genetic and biological diversity of life itself. Ironically, we mostly understand what we are doing, and how we might correct our behavior. Yet we are failing to mobilize sufficient will to act to make the changes that are necessary. Telling people about the problems and asking for corrective action simply is not working.

*The goal of this Summit was to examine our relationship with the natural world, and ask whether, and how, we might change it to build a greater commitment to act to bring the human enterprise into harmony with the biosphere. Each of our speakers brought a particular perspective; this statement sets out the problem, and possible solutions.*

Our prevailing attitude to nature – that we own it, have dominion over it, or are entitled to use it – both objectifies nature, and sets us clearly outside it. With nature objectified, environmental problems become minor ones, even irrelevant when compared to political, economic or other societal problems. The reality is that humanity is one of many living parts of a complex, interconnected system that sustains life on this, the only planet known to support life. We are inside nature, not outside. We must do a much better job of informing people of the many ways in which environmental problems impinge on human well-being. In this way we can better convey the urgency with which the environmental crisis must be addressed – ignoring it directly impacts our own lives and those of our children. We must also do a better job of reporting environmental successes and describing solutions to present problems. In other words, we have a major communication problem, rather than a science problem before us. We can solve that problem using a coalition that draws from a broad range of expertise and experience to convey the reality of humanity in the 21<sup>st</sup> century -- that we are a part of the biosphere, and that pragmatic self-interest, rather than tree-hugging naiveté, drives calls to alter attitudes and behavior. Taking this approach, we should find far more success in reaching out to other people for whom the natural world is still a set of things available for our use.

### Our perspective on the world

When we are asked to visualize a map of the world, most of us see some approximation of a Mercator projection, north pole at the top, with the familiar shapes of the land masses neatly subdivided into an irregular checkerboard of small and large patches in various primary colors. For many of us, Canada is a cheerful red! The real world does not look a bit like this; it is a mainly blue sphere with land masses colored in greens and browns, and any patchwork evident bears no relationship to the patterns we imagine. Our image of the world has been shaped by our education, traditions, and cultural identity; it is an image which emphasizes ownership. We imagine the land masses, and increasingly the coastal oceans, to all be owned by individual humans, by corporations or other socioeconomic constructs, or by one of a series of nation states.

Legal systems are societal constructs that exist to facilitate the interactions among humans, providing a framework of rules that helps us conduct our individual lives in ways that minimize conflicts with each other for space, for mates, and for food and other resources. Two thousand years ago, legal systems were designed to sustain strongly hierarchical social structures with a sovereign individual at the top of the pyramid. Over time, legal systems have evolved to lessen the differences in rights among individuals.

When the Continental Congress, meeting in Philadelphia, voted to approve the final text of its Declaration of Independence on July 4<sup>th</sup> 1776, it included the now well-known phrase, "*We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness*". That phrase, novel in its time, referred to white men with property. Only in subsequent years did the US legal system extend these 'unalienable rights' to less wealthy men, to women, or to people of color. Legal systems in Canada and other nations have undergone similar patterns of change<sup>1</sup> as humans, worldwide, broadened our conception of the entities deserving life, liberty and the pursuit of happiness.

Non-human lifeforms and the forests, watersheds, or other ecosystems they comprise have until very recently been granted no such rights. Instead, they have been objectified and treated (if treated at all) as property, things to be owned and used. Meanwhile, non-living human constructs such as corporations, states or nations have been declared to be persons with most or all of the same rights as other people.<sup>2</sup>

It does not have to be this way. In some societies that have developed outside the western tradition, recognition of rights has extended beyond humanity and its constructs. This may also have been the case in our earliest social groups prior to the development of written law and the rigorously-structured legal systems mostly familiar to us. It is worth reflecting on why legal systems which narrowly circumscribe those entities entitled to rights and privileges have come to predominate in the modern world. It is worth asking whether this needs to be the case, and whether this is a good thing.

### Our impacts on the environment

At present, humanity consumes natural resources at about one and a half times the rate at which they can be produced by our planet<sup>3</sup>. The waste products of our economies and our individual lives place nearly impossible burdens on natural systems, polluting water, soil and atmosphere. Our impacts are now so large that human activities are a major driver in the planetary-scale changes taking place. Many of these changes, such as those in climate, are now far more rapid than at any time in the history of civilization from the earliest dawn of agriculture. The difference between this human-influenced world, and the world of the Holocene (which commenced 11,500 years ago at the end of the Pleistocene), is so great that the world geological community has proposed naming the present age the Anthropocene (the start date is currently under discussion). Our impacts on the planet are expected to increase substantially as our population grows from today's 7.6 billion to about 10 billion by 2050, and as our average standards of living increase across the world. Our growing impacts have severe consequences for the biosphere, for many individual species and ecosystems, and for our own lives.<sup>4</sup> While the ideal of environmentally sustainable human development has long been aspired to, and was formalized in the 1987

Brundtland Report<sup>5</sup>, and in the 1992 Rio Declaration<sup>6</sup>, the trend in subsequent years has been for continued degradation of environmental quality when viewed at a global scale. We now face challenges of existential proportion.

In 2018, the UN IPBES<sup>7</sup> released a series of reports on impacts of land degradation. They reported that less than 25% of the global land surface remains free of substantial negative human impacts. This fraction is projected to become less than 10% by 2050, mostly in desert, high altitude, tundra or polar regions largely incapable of supporting human societies. This degradation contributes significantly to biodiversity loss and loss of ecosystem services such as water purification, food security and energy provisioning. It compromises the lives of 3.2 billion people and reduces global economic output by 10%. The largest driver of land degradation is the expansion and poor management of croplands and grazing land which now comprise more than one third of all land on the planet. Some ecosystems have been hit harder than others: globally we have lost 54% of wetlands since 1900 (an 87% reduction in the last 300 years). All of Muskoka's forests have been clear-cut at least once in the last 200 years.

In the oceans, the extent of human impacts began later, but is now catching up to that on land. No part of the oceans remains unfished, and we have reduced the standing stock of fishery species by 90% over the last 100 years. Bottom trawling, which resuspends 22 gigatonnes of sediment per year, has substantially degraded benthic habitat over 20 million km<sup>2</sup> or 75% of all continental shelves, significantly reducing the productive capacity of these environments.<sup>8</sup> Chronic pollution has generated over 400 dead zones in coastal waters<sup>9</sup>, and the Great Pacific Garbage Patch, three times the size of France contains about 80,000 tonnes of floating plastic debris<sup>10</sup>. Our atmospheric releases of CO<sub>2</sub> have not only warmed the oceans, but the dissolved CO<sub>2</sub> is reducing ocean pH at a rate more than 10 times faster than at any time in the last 66 million years, threatening the existence of many marine species.<sup>11</sup> Our warming of the planet has likely already shifted the equilibria of the immense Greenland and Antarctic ice masses sufficiently to ensure sea level will continue to rise for the next several hundred years, submerging all of our coastal cities in the process.

There is now a real risk that human activities could push the Earth system outside that state in which it has existed throughout the Holocene, likely destabilizing it in the process. A Holocene planet is the only planet civilized humans have known, and it is not clear that we could easily adapt our agriculture or our economies to a radically different world. A precautionary approach suggests we'd be wise to rein in our environmentally destructive behavior and learn to live within the parameters set by the planet, as governed by the laws of physics, chemistry, and biology.<sup>12</sup>

### Our need for a new perspective

Our impacts on our planet, as witnessed during the last couple of decades, were anticipated by scientists working in the mid-20<sup>th</sup> century. Science is now providing clear projections of what the next few decades will be like, depending on whether, and how we modify our activities. News about the environmental crisis is widely available, especially news of ongoing climate change.

There are substantial changes being made within our societies: Our care of environment is much more effective than it used to be, at least in those places where a serious effort to manage is made. Most nations are now transitioning towards a carbon-free economy that uses energy more efficiently and chooses non-polluting energy sources where possible. And yet we do not seem to be able to move quickly enough.<sup>13</sup> The global rate of greenhouse gas emissions has not yet begun to fall. Most national commitments under the Paris Agreement are insufficient (often woefully insufficient) to achieve the objective of no more than a 2°C increase (from preindustrial levels) in average global temperature by 2100.<sup>14</sup> Land degradation, biodiversity loss, and many other measures of our destructive impacts all continue to worsen, sometimes at increasing rates.<sup>15</sup> Obvious problems, such as massive plastic, pharmaceutical, and other chemical pollution, grow worse day by day in the face of too feeble efforts to correct them. Short-term personal, corporate, or political interests continue to be put ahead of longer-term communal or global interests whenever they clash.

Providing people with the facts of the environmental crisis, as understood by scientists, has failed to be a strongly motivating factor getting most people to change the ways in which we interact with nature. Indeed, in some countries the topic has become heavily politicized and the science is either 'believed' or 'denied' depending on one's political affiliation. We need more effective ways of raising awareness of the need to change.

It seems very likely that our prevailing perspective on environment is a large part of our problem. Our conventional societal attitudes and legal systems can blind us to the need to manage environment for the long term rather than for today. Our objectification of nature is blinding us to the fact that nature has needs that must be fulfilled; that it cannot continue to provide for our needs, no matter how we treat it; that in the final analysis, the physical, chemical, and biological laws of nature trump any laws crafted by humans.

### Conclusions

Several of the Summit speakers, from different perspectives, talked of the need to approach the natural world with respect, and the ethical responsibility we share to care for it. While such ideas resonated with Summit participants, these are not widely accepted ideas among those of us raised in a modern consumer society. We must find ways to bring such ideas to the broader community, to help all of us understand that we are a part of the biosphere rather than its owners, and especially to appreciate that the environmental crisis directly threatens our own lives, not just the well-being of natural systems.

Bringing about such a fundamental philosophical shift within society is a major educational challenge; one that cannot be met solely by asking scientists to make the results of their research accessible to the public. To achieve it will require a multifaceted effort that draws upon cultural, spiritual, esthetic, economic and political, as well as scientific traditions. Achieving this change in perspective will also require modifications to conventional legal and economic thinking, although the argument that this more inclusive perspective is incompatible with a democratic, capitalist society is almost certainly overstated.

Acknowledging the need for this fundamental philosophical shift does not obviate the need to continue efforts to address specific aspects of the environmental crisis, but it does help reinforce the idea that each specific issue is part of an overarching problem – the problem of how we moderate our footprint on this planet. Individuals adopting a more inclusive perspective on the world are likely to be more sympathetic to the need to act quickly and responsibly to address environmental ills.

Discussions at the Summit revealed a number of strategies for more effective engagement.

- We have much to learn from other societies, and from other genders, ethnicities or cultural groups within our own.
- Disciplines outside the sciences, including indigenous knowledge and faith traditions, have valuable messages to enrich our understanding of this world we inhabit and share, but while seeking to speak beyond the choir, we must learn to really listen to one another when we offer differing ideas.
- Participants recognized that effective communication is a learnable skill, one that should be mastered by all those interested in a more ethical relationship with the rest of the biosphere.
- We must become better story-tellers, using available data to tell engaging stories and to paint clear pictures of the consequences of NOT acting to correct environmental wrongs.
- We must make even greater efforts to truly engage the political community, getting beyond the photo op in a political world of short timelines, and constant campaigning.
- We should focus on involving our children in the natural world, since you only take care of what you love, and love of nature is readily accepted by the young.
- We might also search for new ways to recognize the rights of wildlife, trees, or nature itself, and the obligations those rights impose upon us; ways that resonate in a fast-paced world of gadgets and media that isolate us from environment. Would we not benefit from giving Muskoka the respect and care it deserves by striving to turn it into the greenest region of Ontario?

While there is clearly much work to be done, there are reasons to be optimistic. We have solved complex environmental problems in the past, and we largely understand the problems that currently confront us. There are feasible solutions, using current technology, for the environmental challenges we face. Indeed, the global environmental crisis could become the impetus we need to create a world where people live in genuine harmony with nature, and there are encouraging signs that we may be starting to move in that direction. Achieving that world is a worthy though challenging goal for every individual who values life. Continuing down that path requires only that each of us takes another step. And then another, preferably while holding hands in a forward-thinking coalition.

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<sup>1</sup> See Boyd, David R., 2017, **The Rights of Nature: a legal revolution that could save the world**, ECW Press, Toronto.

<sup>2</sup> Ibid. Boyd's book provides an accessible account of the evolution of legal thought and legislation on rights

<sup>3</sup> 'our planet' is used to refer to the planet on which humanity exists, not to suggest that we own it. It is our home in this universe.

<sup>4</sup> Data on the current extent of human impacts on our planet are available in Steffan, W., et al., 2015, **Science** 347 (622), 1259855; Rockström, J., and M. Klum, 2015, **Big World Small Planet**, Yale University Press, New Haven; and many other articles and books.

<sup>5</sup> The **Brundtland Report**, also known as **Our Common Future** was the final, and primary product of the **World Commission on Environment and Development**, or **Brundtland Commission**, established as an independent entity in 1984 by the UN General Assembly, and chaired by Gro Harlem Brundtland, the Prime Minister of Norway.

<sup>6</sup> The **Rio Declaration on Environment and Development** was the primary agreement of the **UN Conference on Environment and Development**, held in Rio de Janeiro, Brazil, from 3 to 14 June, 1992. The Rio Declaration included 27 principles intended to guide sustainable development by the 170 signatory countries, including (#15) the precautionary principle, and (#16) the polluter pays principle.

<sup>7</sup> IPBES, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, a UN organization, released the Summary for Policy-Makers for its thematic assessment of land degradation and restoration in March 2018. It can be downloaded at <https://www.ipbes.net/event/ipbes-6-plenary>

<sup>8</sup> Oberle, FKJ, et al. 2016, What a drag: Quantifying the global impact of chronic bottom trawling on continental shelf sediment, **Journal of Marine Systems** 159: 109-119.

<sup>9</sup> Diaz, RJ, & R Rosenberg, 2008, Spreading Dead Zones and Consequences for Marine Ecosystems, **Science** 321: 926-929

<sup>10</sup> LeBreton, L, et al., 2018, Evidence that the Great Pacific Garbage Patch is rapidly accumulating plastic, **Scientific Reports** 8: 4666

<sup>11</sup> Jewett, L & A. Romanou, 2017, Ocean acidification and other ocean changes. Chapter 13 in: **Climate Science Special Report: Fourth National Climate Assessment**, Volume I (DJ Wuebbles, et al. Eds.), U.S. Global Change Research Program, Washington, pp. 364-392.

<sup>12</sup> Rockström, J, & M Klum, 2015, **Big World Small Planet**, Yale University Press.

<sup>13</sup> Boyd, DR, 2017, **The Rights of Nature**, ECW Press, Toronto

<sup>14</sup> Hill, JS, reports on emissions commitments on 4<sup>th</sup> May 2018, at Clean Technica: **The "Paris Tango" — Some Countries Step Forward On Climate Action, Others Step Back**. <https://cleantechnica.com/2018/05/04/the-paris-tango-some-countries-step-forward-on-climate-action-others-step-back/>

<sup>15</sup> IPBES, 2018, **Thematic Assessment of Land Degradation and Restoration, Summary for Policy-Makers**. <https://www.ipbes.net/event/ipbes-6-plenary>