



Plenary Session of the 4<sup>th</sup> International Scientific Congress in Moscow, Russia  
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## **Ecological Challenges in a Global Context**

**Michael Charles Tobias**

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Dancing Star Foundation President Michael Charles Tobias' Keynote Address at the Plenary Session of the 4<sup>th</sup> International Scientific Congress in Moscow, Russia, October 26<sup>th</sup> – “Globalistics – 2015” – held during the week of the 70<sup>th</sup> Anniversary of the United Nations.

**Abstract:** With “treaty congestion,” compassion fatigue, 35 biological hotspots, and oceanic dead-zones, increasing economic disparities amongst humans, and demographic calculations suggesting a future of ten billion human consumers, what are the remaining options for ecological sanity and stabilization? What are those tenable globalizing forces that can rapidly de-accelerate the biological fall-out from an unprecedented ecological crisis known as the Anthropocene, the Sixth Extinction Spasm in the annals of biology? Dr. Tobias’ essay/presentation examines positive trends, optimistic extrapolations, and a new ethical renaissance at work throughout the world –from Bhutan and Suriname to Russia –that makes the outright rejection and systematic amelioration of this deafening roar of problems indeed a plausible scenario, and one that should provide additional policy guidance at COP 21.

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## The Conundrum

I want to address, fundamentally how non-governmental individuals who want to be optimistic about the state of the earth – rejecting ecocide in every guise - can best cope with globalization processes too often condemned to the sluggish mechanics of global politics and the seemingly intractable nature of economic injustice; when peace accords can take decades; when old human rivalries drag on, but when species extinctions, human violence, loss of robust genetic populations and destruction of habitat are all escalating out of control. We have absolutely not a minute to waste in figuring this out and combating the tired rhetoric of an ego-driven *H. sapiens*. Our species seems largely removed experientially from that ancient Jain doctrine that decrees, "Parasparopagraho jivanam," all life forms are interdependent and must care for each other.

Such pantheistic wisdom is hard-pressed against a syndrome now widely known as "treaty congestion,"<sup>1</sup> well over 500 international environmental treaties agreed to by nations since the formation of the UN, but without requisite or realistic incentives for compliance. In Harvard Professor Lawrence Susskind's groundbreaking 2008 essay, "Strengthening the Global Environmental Treaty System" he made it clear that "Despite the huge media attention environmental treaties receive, the system of making and implementing them is barely functioning." Susskind concluded his essay by declaring, "Today, there is no official body with responsibility for improving the global environmental treaty-making system."<sup>2</sup> As The Guardian's environment editor, John Vidal, has written, "The trouble is, it's not in the interests of most governments to change the status quo."<sup>3</sup>

It is a conundrum to reach beyond fatuous political correctness; to posit a new human nature that both avows and can freely demonstrate unconditional tolerance, love and non-violence in a manner that comports with solutions, but also with ideals.

## Challenging Deep Contexts

Since October 1945, when the UN was founded, the human population has soared over 300 percent, from approximately 2.5 billion to nearly 7.4 billion. During that same period the Green Revolution came of age, spawning great faith in technology to feed humanity through more genetic hybrid innovation, more sustainable land tenure and agricultural reforms that all promise greater parity, empowerment of women, environmental justice and sustainable land use. But much of that work has yet to be

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<sup>1</sup> Donald K. Anton, "'Treaty Congestion' in International Environmental Law," International Law Reporter, January 24, 2012, <http://ilreports.blogspot.com/2012/01/anton-treaty-congestion-in.html>

<sup>2</sup> Lawrence Susskind, "Strengthening the Global Environmental Treaty System," Issues in Science and Technology, Volume XXV, Issue 1, Fall 2008, <http://issues.org/25-1/susskind/>

<sup>3</sup> John Vidal, "Many treaties to save the earth, but where's the will to implement them?" <http://www.theguardian.com/environment/blog/2012/jun/07/earth-treaties-environmental-agreements>, The Guardian, Thursday, June 7, 2012

accomplished, with diminishing returns from increasingly exhausted landscapes, and serious concerns over the extent of human genetic engineering and human rights. Not surprisingly, the gains that were won in the Green Revolution produced as unexpected by-products unprecedented surges, ironically, in human hunger, civil wars throughout the world, the emergence of 35 biological terrestrial hotspots with their concomitant losses of biodiversity, dead zones pock-marking the oceans, the vast collapse of most global fisheries and a rash of endangered species heading towards extinction. At the same time, we can envision a human population of 10 billion or more ungainly largely carnivorous, increasingly nutritionally deficient, water-starved individuals.

Since the mid-1980s, our species has exceeded the appropriation of 40% of all the products of photosynthesis on the planet, or NPP, Net Primary Production.<sup>4</sup> No species has ever so trespassed, throwing into confusion the very nature of globalization, given our one species' surreal sense of superiority and accompanying dominion by force over every continent.

If we factor in two ecological divining rods of human behavior, namely, the Ehrlich/Holdren IPAT equation (human impact on the environment is the sum total of our population, times our levels of affluence and levels of technology) and the "Tragedy of the Commons" scenario, first fully articulated in 1968 by the late Professor Garrett Hardin, and later elaborated upon by the Club of Rome computer forecasts, the **Limits to Growth**<sup>5</sup>; followed by the three-volume **Global 2000 Report** in 1980<sup>6</sup>, we see that our situation now is truly tenuous, what I have long termed World War III.<sup>7</sup> If a globalizing force that encompasses human politics is to gain the ethical traction in a lasting sense we are all searching for –one that can actually engage in the urgently required components of a human rapprochement with nature - it will have to recover the dignity assigned to all those Others. By *others* I refer to the 10 to 100 million other species on earth. That includes single celled organisms and viruses like the 3.5-million-year-old bacterium called *Bacillus F* found in the deep permafrost of Siberia in 2009, potentially an immortality strain currently being studied by Dr. Anatoli Brouchkov, head of Moscow State University's geocryology Department.<sup>8</sup> Entomologist Terry Erwin and colleagues

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<sup>4</sup> "Human Appropriation of the Productions of Photosynthesis," by Peter Vitousek, Paul R. Ehrlich, Anne H. Ehrlich and Pamela Matson, [mahb.stanford.edu/wp-content/uploads/2012/02/1986\\_Vitousek.pdf](http://mahb.stanford.edu/wp-content/uploads/2012/02/1986_Vitousek.pdf) 1986. See also: [http://earthobservatory.nasa.gov/GlobalMaps/view.php?d1=MOD17A2\\_M\\_PSN](http://earthobservatory.nasa.gov/GlobalMaps/view.php?d1=MOD17A2_M_PSN)

<sup>5</sup> Donella H. Meadows, Gary. Meadows, Jorgen Randers, and William W. Behrens III, New York: Universe Books, 1977

<sup>6</sup> Directed by Gerald O. Barney, U.S. Government Printing Office, Later edition: [http://www.geraldbarney.com/Global\\_2000\\_Report/G2000-Eng-7Locks/G2000\\_Vol\\_One\\_7Locks.pdf](http://www.geraldbarney.com/Global_2000_Report/G2000-Eng-7Locks/G2000_Vol_One_7Locks.pdf)

<sup>7</sup> See World War III –Population and the Biosphere at the End of the Millennium, by Michael Charles Tobias, Preface by Jane Goodall, Second Edition, Continuum Books, New York, 1998.

<sup>8</sup> 'Eternal Life': Russian Scientist Anatoli Brouchkov Injects Himself With 3.5-Million-Year-Old Bacteria To Boost Longevity, Immune System Sep 28, 2015, By Lizette Borreli, <http://www.medicaldaily.com/eternal-life-russian-scientist-anatoli-brouchkov-injects-himself-35-million-year-old-354756>

from the Smithsonian Institution greatly increased this knowledge base of species numbers at Yasuní National Park in northeastern Ecuador in the early 1990s by extrapolating some 40 to 80 thousand invertebrate species per hectare of rain forest. Two German expeditions in the Weddell Sea of Antarctica in 2002 and 2005 found thousands of other new species under the sea ice.<sup>9</sup>

Despite this exponential increase in the numbers of deciphered life forms cohabiting this planet with humanity, we also recognize the losses our extractive hegemonies have inflicted: more than 50% of life on the planet, including 75% of all large, and 50% of smaller known vertebrates.

### The Others

The late Juri Lotman, in his famed 1984 essay "On the Semiosphere"<sup>10</sup> paved the way for recognizing a biosphere teeming with abundant signals *between species* – the basis of interspecies communications. By that insight all our notions of globalization and politics, of law and self-expression, have been deeply challenged to account for a symbiotic biosphere of individuals with looming legal standing. The challenge, the excitement is very real. But the moral onus of its implications lies directly upon our shoulders.

The opportunities to merge global thinking with ecological actions that can and must save life, is acutely pressing, and totally within our grasp.

Consider the decision recently by John Key, Prime Minister of New Zealand, to create a Marine Reserve in New Zealand's Northern waters the size of France.<sup>11</sup> It can happen just like that. The five largest marine reserves in the world, covering millions of square kilometers, consecrated into law within the last 7 years, in France, Britain, Australia and the United States, each mirror these rapid protective mechanisms. These global statements on behalf of Others date back to the oldest passion in human nature: protection, both metaphysical and evolutionary, from a 65,000 year old tiara of dried flowers placed on a human skull at the burial site of Shanidar 4 in the Zagros Mountains, to all mammalian nurturance, even that proclivity in the eusociality of insects.

In London's Epping Forest, 6,118 acres<sup>12</sup> were preserved by Henry the 2nd during the 12th century. In 1872, Yellowstone, the world's first National Park came into being.

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<sup>9</sup>—"Polarstern Expedition –Hundreds of New Species Found in Antarctic Ocean Depths," May 24, 2007. The Zoological Museum in Hamburg conducted a series of three expeditions aboard the ship, Polarstern, over the course of the summers 2002 and 2005. "Each liter of water/mud extracted from the ocean floor contained up to 40,000 animals, many of which were new species."

<sup>10</sup> <https://www.ut.ee/SOSE/ssss/Lotman331.pdf>

<sup>11</sup> <http://www.bbc.com/news/world-asia-34387945>

<sup>12</sup> [www.visitewingforest.org/](http://www.visitewingforest.org/)

In the early 1900s, President Teddy Roosevelt put into place the preconditions for what today amounts to over 600 million protected acres, nearly 2.5 million square kilometers.<sup>13</sup> By 2008, there were some 120,000 sanctuaries. Today, there are over 208,000 such reserves. It should also be pointed out that just three years after the creation of the United Nations, in 1948 the IUCN was initiated by UNESCO Director General, Julian Huxley.<sup>14</sup> Today, the IUCN, best known, unfortunately, for its Red List of Threatened Species, works with 11,000 scientists, and a membership of over 1,200 governmental and non-governmental organizations.

### **Ecological Non-Violence**

We focus on charismatic megafauna at risk of extinction but ignore chickens, cows, turkeys and pigs, among others. And we know that every cheeseburger represents at least two endangered, indeed, doomed individuals—one who became meat, the other whose life was singularly exploited for the cheese.

Nearly 95% of the human species is still consuming other animals, which means that most people encounter the Other on their dinner plate. Those vast killing fields for which the most prominent weapon is the fork and knife (unlike the dinner plate), are diametrically opposed to our higher intentions, and core values which declare an honest hope of making sure our peace treaties with earth's other species are lasting ones. If we are sincere, then we must ensure that good science and legislation and the most noble intentions do not, in fact, reflect collective failure through the sheer multiplier effect of individual consumptive laziness ultimately undercutting our chances of being good stewards or passing down an honest message of authenticity to our children, all those accrued values of comprehensive loyalty to the biosphere.

We know, for example, that there are countless global interconnections that link meat production with climate change, methane emissions, and fresh water abstraction. Those ecological stressors are manifest in ways not obviously connected but implicitly so since climate change notoriously responds to no one culture or political etiquette but traverses its own biochemical pathways, enacting fates linked directly to our own.

Hence, those recent images of 250,000 dead antelope-like Saiga on the steppes of Kazakhstan<sup>15</sup>, colony collapses amongst plastic-engorged sea birds, turtles with no nesting sites; infected frogs, bats and bees; or of polar bears starving to death.<sup>16</sup> These are the new iconic emblems and mentors of radical change and globalistic enterprise.

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<sup>13</sup> <http://www.amnh.org/exhibitions/permanent-exhibitions/theodore-roosevelt-memorial/theodore-roosevelt-memorial-hall/tr-timeline-iframes/theodore-roosevelt-timeline-conservation-legacy>

<sup>14</sup> <http://www.iucn.org/about/>

<sup>15</sup> <http://www.nature.com/news/mysterious-die-off-sparks-race-to-save-saiga-antelope-1.17675>

<sup>16</sup> <http://www.washingtonpost.com/news/energy-environment/wp/2015/09/21/what-one-starving-polar-bear-picture-does-and-doesnt-say-about-climate-change/>

Rich and poor alike, we are all the agents of destruction. The time has come to recognize that; to own up to our collective fumbles in order to engender – as the philosopher and systems scientist, Dr. Ervin László characterizes it – not global breakdown but breakthrough.

### The Legacy of Hugo Grotius

It was the UN vision to transcend the stubbornness of political thinking with unconstrained global ameliorations. Its organization was meant to foster humanity's best collective impulses so as to comport with basic ecological truths. For those 70 years the United Nations has truly modeled itself upon the broadest evolutionary principles of non-violence, non-friction, and of perpetual peace, as Immanuel Kant enshrined the phrase in the late 1790s, in the tradition of lawmaker Hugo Grotius (1583-1645) the father of the first international peace treaty in the world. That was, of course, the 1648 Peace of Westphalia ending the Eighty as well as the Thirty Years Wars and based upon his brilliant vision of *natural law*. Grotius, or Huig de Groot, was a neighbor of two of the greatest Dutch naturalists: the painter Vermeer – whose "View of Delft" has long been prized as the most perfect rendering of a resilient, urban landscape, and the microscopist Antonie Van Leeuwenhoek, whose astonishing optic epiphanies paved the way for the application of outstanding earth science to the notion of a biosphere and noosphere, by Vladimir Vernadsky and Eduard Suess.

Westphalia engendered European self-determination and the first notion of balance of power. It also guaranteed Dutch independence. Nineteen years later, the Netherlands acquired Suriname in the Treaty of Breda, with Britain, in turn, obtaining Manhattan. It took more than three hundred years for Suriname to gain her independence from Holland. I'll tell you why I mention Suriname later on. But what this should tell us is that politics takes time, but global ecological crisis works by a very different and far more urgent series of timings and metrics. We need to understand that. What is particularly prescient and profound about Grotius and Westphalia, is Grotius' insistence on non-violence, a true precursor of John Ruskin's book, **Unto This Last** (1860) and Gandhi's consequential reading of those four political economic essays. In his seminal work, **De jure belli ac pacis (On the Law of War and Peace, 1625)** Grotius envisioned what today we call the Geneva Convention, and the rule of law, amongst all nations.

### Hope amid Political Tumult

So how do *7.4 billion human natures* resolve the essential travails of their presence in a fragile constellation of biomes known as earth?

Anthropologist Margaret Mead said that a few good people can make all the difference. Let me turn to George Kennan's somewhat legendary "A Modest Proposal," (1981) which commenced, "Adequate words are lacking to express the full seriousness

of our present situation.”<sup>17</sup> Applied ecologically, this is no longer the case. We have words and we have the data. What we continue to lack, however, is a complete philosophical and global method of peace-making – in the manner of a Hugo Grotius – that is sufficiently comprehensive to impede the biological unraveling in this epoch, now known as the Anthropocene,<sup>18</sup> the human induced sixth extinction spasm in the annals of biology. In 1976, the one time American Ambassador to the Soviet Union, Kennan described what he believed to be a basic flaw of U.S. foreign policy – and by implication, foreign policies from nation to nation; namely, public opinion, “a force,” as he enumerated it, “that is inevitably unstable, unserious, subjective, emotional and simplistic.”<sup>19</sup>

If such public opinion becomes policy, as Kennan imagined, then, truly, we have no hope. But, if anything public opinion has revealed enormous currents and undercurrents that are actually altruistic, compassionate, and focused upon sound ecological conflict resolution. There are now tens-of-thousands of NGOs committed to saving the planet. It’s on everyone’s mind.

### **New Strategies**

One of the most telling examples of this can be read into the decades-long attempts by many world leaders collaborating on the Sustainable Development Goals, taken up at the 70th UN General Assembly.<sup>20</sup> The key 17 goals all come down to ending poverty sustainably.<sup>21</sup> In the last 25 years the number of individuals living on less than US\$1.25/day has gone from approximately 2 billion individuals to 1 billion, while child mortality – kids perishing before the age of one – has been reduced in many countries, including Ethiopia, Bangladesh and Cambodia, by two/thirds. Overall, the surviving numbers of children during that 25-year generation have increased by 7 million. Another goal of the Sustainable Development Goals encompasses the making of resilient cities; of protecting the oceans, all within the next 15 years. It is more than possible: it will happen.

Here are two key solutions towards that end. 1) C4 photosynthesis pathways using LED blue/red spectrum aeroponic vertical agricultural cities; and 2) Artificial fish, dairy and meat – the latter, in part, having been funded at an experimental stage by Google co-founder Sergey Brin, in the Netherlands. These two initiatives, globally

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<sup>17</sup> <http://www.nybooks.com/articles/archives/1981/jul/16/a-modest-proposal/>

<sup>18</sup> <http://www.nature.com/news/anthropocene-the-human-age-1.17085>

<sup>19</sup> George Urban, September 1976, "From Containment to Self-Containment: A conversation with George Kennan", Encounter, p.17.

<sup>20</sup> <https://sustainabledevelopment.un.org/sdgsproposal>

<sup>21</sup> “World leaders set sights on sustainable development,” by Noam N. Levey, Los Angeles Times, Wed., Sep. 23, p.A3.

manifested, could save the Arctic, Antarctic, and genetically-rich neo-tropics and fast dwindling coral reefs whose third global blanching event was recently documented by NASA. International compassion fatigue and "reality resignation" are not responsible options.

In the past, most international environmental treaties have dragged on for decades. We must accelerate a reversal of that syndrome. We'll all debate the results of the UN COP21 meetings in Paris. But it is clear that this generation is different from any other because we know that we are all in it together. The earth has never been smaller.

So what is our new and unprecedented generation looking at? Soon, 80% of all people will live in cities, where every new innovation in math, science, engineering and technology will be consolidated in order to moderate urban humanity's impact on the biosphere, whilst encouraging market trends in ways that also reshape human ethics to be more fully in tune with leisure time, healthful diets, and the enjoyment of nature. Last year in the United States, there were over 700 million visits to national parks, to take but one example.

Eco-tourism is now a three trillion dollar international industry. New cap-and-trade agreements, and the revolutionary changes towards a hydrogen fuel cell global economy, in concert with other soft energy multi-gigawatt level projects, bode well for sound, stable, robust market engagement, as well as venture philanthropy that adheres to quadruple bottom line asset allocations, encouraging all of us to volunteer, to give back.

But again, I urge you to realize that we have to accelerate these ethics and innovations because the biological clock is ticking. Already, humanity weighs 300 million tons, whereas the weight of all remaining wildlife is under 100 million tons. That is one way – and a compelling one – of realizing how fast we are losing giraffes and elephants, bears and hippos, whales and other primates. At the same time, the animals we are domesticating and slaughtering now weigh over 700 million tons. That production is utterly devastating our health and that of the planet, not to mention those animals themselves, each and everyone of them. But we can change all this on a kopek, like a kid doing a 180 on a skateboard.<sup>22</sup> We are consuming some 2 trillion vertebrates each year, including FAO-documented fish. All those sentient beings' pain constitutes that largest aggregate of suffering in the last 65 million years, what the ecologist Jane Gray Morrison and I have termed "the pain points," referring to the geography of industrial slaughterhouses, on land and at sea; and of outright poaching; as well as the more subtle but equally cumulative "soft" exploitative forms of human manipulation of other populations, species and individuals.<sup>23</sup> Add to that the centuries-old crime against

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<sup>22</sup> Yuval Novay Harai, The Guardian, <http://www.theguardian.com/books/2015/sep/25/industrial-farming-one-worst-crimes-history-ethical-question>

<sup>23</sup> See Tobias and Morrison, God's Country: The New Zealand Factor, A Dancing Star Foundation Book, Zorba Press, Los Angeles CA and Ithaca, NY, 2010.

forests. Humanity in all her guises has cut down 50% of all known trees on the planet, or roughly 3.4 trillion individuals since the origin of all human civilizations.<sup>24</sup> That, too, must change abruptly.

We can reflect on what it will take for everyone to embrace the route recommended by Leonardo da Vinci, or the Chairman of the Intergovernmental Panel on Climate Change, Rajendra Pachauri, a few years ago, namely, vegetarianism.<sup>25</sup> As referenced earlier, that would be both behaviorally and pragmatically the single most effective ecological paradigm shift in behavior everyone could easily embrace; one that would decouple the continuing crippling of the non-renewable biodiversity resources, the escalating animal holocausts meted out by humans every hour and one of the largest sectors of Greenhouse Gas contributors, from the supply chain of human consumption, in a single stroke. Such a transformation requires no World Trade Organization or other cumbersome international treaty negotiations. It happens instantly in the privacy of our hearts and homes. You can wake up tomorrow and begin. You can be assured your children will be watching and learning and – in some cases impatiently waiting for you to set just such an example. They are looking to us to be the change they have always believed in. That is the nature and magic of childhood.

There are countless other charismatic examples. Consider the Gross National Happiness reality in Bhutan.<sup>26</sup> A country that has already, for two months each year, made vegetarianism the law, while keeping more than 60% of her forests in tact, the decision taken many years ago by a 16-year old King. Never underestimate the potent genius of teenagers.

Or consider another extraordinary act of globalization in favor of protecting the planet, namely, the recently achieved 17.8 million acres of the Southern Suriname Conservation Corridor, now in the hands of 3,000 indigenous Trio and Wayana Indians. An area of essentially 100 percent forest-cover 4 times the size of New Jersey, second only in expanse to the Kayapo indigenous reserve in Brazil. Such conservation achievements translate into Suriname's unambiguous carbon credits under the UN REDD+ program -Reducing Emissions from Deforestation and Forest Degradation<sup>27</sup> for the value of carbon sequestration on the world cap and trade markets. The European Natura 2000 Network Danube Delta program, widespread European Re-Wilding

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<sup>24</sup> <https://www.inside.com/science/u6o7m/Researchers-estimate-there-are-3-4-trillion-trees>

<sup>25</sup> [http://www.science20.com/new\\_releases/get\\_back\\_in\\_the\\_car\\_vegetarian\\_ipcc\\_chairman\\_rajendra\\_pachauri\\_says\\_less\\_meat\\_will\\_slow\\_global\\_warming\\_more](http://www.science20.com/new_releases/get_back_in_the_car_vegetarian_ipcc_chairman_rajendra_pachauri_says_less_meat_will_slow_global_warming_more)

<sup>26</sup> <http://www.nsb.gov.bt/publication/files/pub0ha5269tp.pdf>; See also <http://www.forbes.com/sites/michaeltobias/2011/10/26/the-last-shangri-la-a-conversation-with-bhutans-secretary-of-the-national-environment-commission-dr-ugyen-tshewang/>

<sup>27</sup> [www.un-redd.org/aboutredd](http://www.un-redd.org/aboutredd)

endeavors and the Y2Y -Yellowstone to Yukon Conservation Initiative in the United States - have been following a similar model.<sup>28</sup>

As Russell Mittermeier of Conservation International has described,<sup>29</sup> Suriname is now in a very strong position to sell the best drinking water in the world to countries throughout the Caribbean that are dependent on expensive and problematic desalination. With a modest population of approximately 530,000 people, Suriname has blazed a remarkable trail. Vanuatu, Andorra, San Marino and others are following. Indeed, the ecological template Suriname has enshrined is now being employed by at least 12% of the world's nations. The percentages must methodically rise. And remember, the 35 terrestrial biological hotspots I referenced earlier comprise less than 2.7% of the planet. Between them, they hold the genetic future of the world and it would not take that much political and legal hair-splitting or direct financing to safeguard them.

### A Russian Ecological Renaissance

Russia's 4th National Report by the Federation under the signatory auspices of the UN Convention on Biological Diversity has had a mixed review by scientists throughout the world. While significant steps have been embraced in Russia in every sector of the prevailing extractive economy – from her fisheries and forest estates to transport and energy – “sustainability” remains elusive for many of the species imperiled.<sup>30</sup> The critical gaps have been outlined by critics and ultimately come down to resolvable problems: legislative controls, more transparency and policing. The science is there.<sup>31</sup> Science which has intimated some “1513 species of vertebrates” and more than “100,000 species” of invertebrates, many at risk.<sup>32</sup> Moreover, numerous new protected

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<sup>28</sup> <http://www.rewildeurope.com/areas/>

<sup>29</sup> <http://blog.conservation.org/2015/04/new-conservation-corridor-latest-environmental-triumph-for-suriname/>

<sup>30</sup> <https://www.cbd.int/doc/world/ru/ru-nr-05-en.pdf>

<sup>31</sup> I quote from the CBD, “A large number of pending legislative issues and obstacles to the implementation of measures to protect the environment and biodiversity; Insufficient state control in the field of conservation and use of biological resources and forests; Insufficient transparency of state authorities' work, lack of access to the documents adopted as well as broad public participation in discussing issues related to environmental protection and biodiversity conservation; Problems in the system of biodiversity conservation and protected areas governance; Poor development of educational activities in the community to raise awareness of biodiversity(s) role and the need for careful attitude to it.”

<sup>32</sup> This number encompasses “320 species of mammals, 732 species of birds, 80 species of reptiles, 29 species of amphibians, 343 species of freshwater fish...1,500 species of sea fish” and “invertebrate fauna” in excess of “100,000 species.” We know from national environmental health reports in Russia dating back to 2012, that at least “5% of plants, 7% of fish...17% of birds, 20% of mammals, 28% of reptiles (and) 30% of amphibians” are threatened. ibid, p.8.

areas have been created across Russia including 740 areas of special conservation importance and 1,100 Important Bird Areas, while "more than 30 million hectares of Russian forest"<sup>33</sup> are in the process of being duly certified within the Forest Stewardship Council standards, or 25% of all commercial forests in the nation. There's much work ahead to save Amur tigers and leopards, Asian black bears and Siberian mountain sheep, but some 50 Russian taxons are now off the Red List.

President Putin's high popularity ratings across Russia may be due, in part, to his apparent long-standing personal love of wildlife,<sup>34</sup> something shared by Russian history, art, and culture.

Yes, Russian environmental politics still has much work to do.<sup>35</sup> Past critics of the country's environmental record – from Greenpeace to the Wall Street Journal – have pointed to a degradation of several of the Special Protected Areas, and UNESCO-recognized nature sites,<sup>36</sup> as well as the pollution versus local human community employment challenges of the world's largest, by volume, fresh water lake in the world, that of Lake Baikal.<sup>37</sup>

Every nation has its environmental critics and inherently difficult trade-offs. But few nations have the advantage of such an extraordinary history of love of nature as Russia. From the great 19th century landscapes of an Isaac Levitan, the rural lore, mountains, Central Steppes, and swan lakes that figure in such artists as Ivan Shishkin's ponderous forests, Turgenev's "Notes of a Hunter," Fedor Vasil'ev's "Wet Meadow," the Kafkaz in Mikhail Lermontov's **Geroy nashevo vremeni**, to the more modern **Jamila**, by Chinghiz Aitmatov (1958). And of course, one cannot forget the nostalgic visions evoked in Vladimir Arsenyev's iconic figure of "Dersu Uzala" (1923). I can easily read into Russia's love affair with the outdoors a universal enthrallment that is transfixing and infectious.

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<sup>33</sup> Forest data, ibid. These newly protected areas include the "Utrish strict nature reserve, and other PAs including the Arctic, Sayludemsky, Land of the Leopard, Onezhskoe Pomorie, Beringia, the Shantary Islands, Gazelle Valley and Pozarym." <https://www.cbd.int/doc/world/ru/ru-nr-05-en.pdf>, p.1.

<sup>34</sup> <http://vladimirputinwithanimals.tumblr.com/>; <https://news.vice.com/article/vladimir-putin-really-loves-tigers-and-its-actually-making-a-difference-in-the-world>

<sup>35</sup> National Strategy of Biodiversity Conservation in Russia, Russian Academy of Sciences, Ministry of Natural Resources of the Russian Federation, Moscow, 2001; <https://www.cbd.int/doc/world/ru/rubnsap-01-p1-en.pdf>

<sup>36</sup> osobo okhranyaemye prirodnye territorii, zapovedniki and zakazniki

<sup>37</sup> See <http://russialist.org/russia-gamekeeper-has-turned-poached/>; See also <http://www.wsj.com/articles/SB10001424052748703837004575013151050816556>

## **In Conclusion**

For that reason, and all the others I have been referencing, I remain extraordinarily optimistic, both for Russia and the world. I want to believe that I am standing today in a city among colleagues where it is no reach to suggest that a true renaissance in the globalization of ethics-based politics, the sciences and the arts is well underway. Not glib lip service to big statistics, both positive and negative, but a true window on a hopeful future for all life on earth, including those of us here, our loved ones, our friends, our fellow human beings.



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