


IN PREPARATION FOR PLANNING

*Reconciling Ways of Knowing:  
Indigenous Knowledge and Science Forum*



**Feeding the Sacred Fire:  
Highlights from the Spiritual and  
Ceremonial Gathering at the Turtle Lodge**



**RECONCILING  
WAYS OF KNOWING**

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## Introduction

For four days (September 9-12, 2017), Indigenous knowledge keepers and scientists<sup>1</sup> Sagkeeng First Nation, Manitoba, for ceremony and knowledge exchange, sharing diverse ways of knowing on a range of contemporary stewardship issues and challenges where Indigenous knowledge and science converge (the Turtle Lodge Gathering of Indigenous Knowledge Keepers and Scientists).<sup>2</sup> The gathering was co-facilitated by Anishinaabe knowledge keeper Elder Dr. Dave Courchene, Jr., as Indigenous Knowledge Chair, and renowned biologist Dr. David Suzuki as Scientist Chair, along with Haida leader Miles Richardson, O.C., Chair of the Reconciling Ways of Knowing: Indigenous Knowledge and Science Forum (RWoK Forum).<sup>3</sup> In the process of planning Reconciling Ways of Knowing, the need for a foundational spiritual and ceremonial gathering of Indigenous knowledge keepers and scientists was identified to ensure the RWoK Forum would be designed and delivered in a good way.

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<sup>1</sup> See Appendix B for the full list of roundtable participants.

<sup>2</sup> For an additional account of the gathering, see “A Journey From the Mind to the Heart: Indigenous Knowledge Keepers and Scientists Build an Alliance at Turtle Lodge,” *Cultural Survival*, 26 September 2017 (<https://www.culturalsurvival.org/news/journey-mind-heart-indigenous-knowledge-keepers-and-scientists-build-alliance-turtle-lodge>)

<sup>3</sup> Planned for May 25-27, 2020, but now postponed due to COVID-19. See <https://www.waysofknowingforum.ca/>.



Reconciling Ways of Knowing was first conceived to address two interconnected problems: limitations of Western science in preventing and solving growing environmental problems and lack of recognition of and ability to draw upon Indigenous knowledge to foster a harmonious balance between humanity and the world. David Suzuki shared a story of his own realizations of the limitations of science and the strengths of Indigenous knowledge:

*Years ago, the Innu people were fighting against low-level NATO training flights over their territory in Labrador. At a meeting in Goose Bay I heard the Elders describe how, when they are harvesting caribou, first they give thanks, then look at the heart, lungs, and liver. They could see the impact on the animals in their organs. A scientist was sent up from Montreal to find "real" evidence, because the Elders' evidence was considered anecdotal. But he couldn't even find the herd to put radio collars on them. I've seen this over and over again, with salmon farms, herring, and the boreal forest: scientists directing strategy over people who have lived in the area for generations. It doesn't work. Indigenous knowledge is the only proven blueprint for living sustainably in this world.*

The Turtle Lodge Gathering of Indigenous Knowledge Keepers and Scientists and the RWoK Forum provide the opportunity to broaden recognition of the inseparability of humans from the world, an understanding integral to Indigenous knowledge systems. As Indigenous knowledge keeper Ed Sackenay (James Bay Cree Nation) shared, while science has created a number of biomedical ways to address modern health problems,

*Indigenous knowledge keepers take a wider approach to healing, recognizing that when someone has a disease, it assaults the whole person – physically, mentally, emotionally, and spiritually – and healing needs to help the whole person.*

Indigenous Peoples apply a similarly holistic lens to assessing the health of the natural world. As Miles Richardson (Haida Nation), noted,

*Scientists can demonstrate that the Haida have lived in Haida Gwaii for 15,000 years. We know we have been in Haida Gwaii since our creation. Is it a coincidence we've survived that long? No! Our people had the knowledge to survive and prosper over these millennia.*

Indigenous Peoples have managed their prosperity in harmony with the health of their communities, other species, and the ecosystems in which they are embedded.

Support for reconciliation with Indigenous Peoples is at an all-time high amongst Canadians. This makes it an opportune time to expand recognition of how Indigenous knowledge and science can come together to address the environmental and social problems resulting from the growing disconnect between humanity and the world today. The Turtle Lodge Gathering of Indigenous Knowledge Keepers and Scientists provided an opportunity to build relationships and understanding across Indigenous and scientific ways of knowing and a ceremonial foundation for the RWoK Forum. Building upon this foundation, the RWoK Forum seeks to address the growing contemporary problems, such as climate change and biodiversity loss we are facing in Canada and worldwide through recognizing the vast insights of Indigenous knowledge and fostering harmony between humanity and the world.

## Ceremonial Context

The spiritual and ceremonial gathering at the Turtle Lodge commenced with a sacred fire. Following the protocols of the territory, Elder Courchene welcomed the speakers and observers and shared about the importance of setting a ceremonial context to be able to truly receive the fullness of Indigenous knowledge. Sage was lit for smudging to offer a spiritual, emotional, and mental cleansing to participants. The gathering was then opened with a pipe ceremony, representing an ancient ceremony practised for thousands of years – a foundational expression of Indigenous sovereignty and nationhood in the invocation of the Great Spirit,



and in recognition that the true leadership of the gathering would be provided through the guidance of the higher intelligence offered by the spirit world. The pipe ceremony was supported by sacred songs sung around the traditional drum by local Anishinaabe drummers and singers.

Each person was invited to offer their own gratitude and appeals for blessing, sanction and direction from the spiritual realm, and given the opportunity to smoke from the Sacred Unity Pipe, a very special pipe, which was commissioned in 2016 by Indigenous Elders from Nations across the country. Elder Courchene explained to the participants that this pipe was intended to represent and spiritually invoke all the sacred items that had been stolen from Indigenous Peoples during colonization and to unite the people in a common vision toward taking care of the land and each other on the homelands of the First Peoples. The participants were then invited to take part in the grandmothers' water ceremony, led by Anishinaabe Elder Florence Paynter. Indigenous grandmothers and women sang a water song and shared teachings on the significance of water and our individual responsibilities in taking care of this element of life. Inka Antaurko, an Inka Amauta (Knowledge Keeper) from Tawantinsuyo (Peru) was invited by the Anishinaabe hosts to offer his contribution to the sacred ceremony. In full regalia, Inka Antaurko conducted the Baille de Condor – or Dance of the Condor – circling the speakers and observers, while offering sacred songs to the spirit with his flute.

A traditional feast was prepared for all attendees and a prayer of appreciation, including offerings of food and tobacco to the sacred fire, was given. The singers and dancers were thanked for helping open the door in the hearts of those who gathered for the spirits and ancestors to come through. It was acknowledged that songs help us to express our love for one another and for the land. Chief Darrell Bob (St'at'imc Nation) thanked the cooks, telling them that the amount of love that goes into the food determines how good the gathering will be:

*This is just like our medicine – it doesn't start when we pick it, but when we start to think about it. It's the love we put into our medicine that helps it to heal us. Today we're talking about what medicine we are going to put into society.*

After the feast, Indigenous Elders and knowledge keepers came together to offer a ceremonial gift of adoption to the participating scientists. It was the most powerful act of the four days. As the drums sounded, a young bear dancer, raised traditionally in the mountains of his Xaxl'ip First Nation, led a procession of scientists to stand on buffalo robes in the center of the Turtle Lodge, where each was given a handful of earth to hold in their hands while four traditional elders addressed them. The ceremony acknowledged the scientists gathered as members of their Indigenous families, brothers and sisters, citizens of their nations, and citizens of the land itself. With the adoption, the Elders explained, came duties and responsibilities to learn and follow natural and spiritual laws of the land, and to be kind to one another and to the Earth. The adoption did not impart authority on the adoptees to speak on behalf of Indigenous Peoples, but spiritually and ceremonially endowed upon them permission to raise their families, live on this land, advocate for and support the well-being of the whole nation and all life on and around Turtle Island. As Cree Indigenous knowledge keeper AJ Felix said:

*Now, because of this ceremony, you will come to feel how we feel about the land. How we feel when the wind blows and when the water crests. You will even feel what it has been like for us, in trauma and poverty, and what we have gone through as a people. You will understand what we feel as Indigenous people, because you are now one of us, part of us.*

Being adopted means committing to taking care of the Earth and upholding the Great Binding Law that connects us all, and the spiritual and natural laws of the land. It means recognizing the earth is the real place of learning. We each have a role in truth and reconciliation: Indigenous Peoples to welcome their settler-scientist brothers and sisters and the scientists to help strengthen the voices of Indigenous Peoples.

After this adoption ceremony, Chief Darrell Bob led the Indigenous knowledge keepers and their newly adopted scientist brothers and sisters in a special bear dance

ceremony with sacred bear dancers. Before the guests retired for the evening, all were invited to return to the sacred fire to make offerings of gratitude.

In the three days that followed, discussions amongst the Indigenous knowledge keepers and scientists took place at a special round table carved with seven animals representing the Seven Sacred Laws of respect, love, courage, honesty, wisdom, humility and truth.<sup>4</sup>

Indigenous spirituality is at the core of understanding Indigenous knowledge, the foundation of which is based on relationships with nature. The spiritual nature of the relationship is in acknowledgement that nature is composed of living entities that have a spirit and that we as human beings can enter into relationship with.

This simple yet profound wisdom was noted by Elder Courchene, and carried through in the remarks from all the Indigenous knowledge keepers:

The earth is alive.



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<sup>4</sup> "What are the 7 Sacred Laws?," *Turtle Lodge: International Centre for Indigenous Education and Wellness* (<http://www.turtlelodge.org/what-are-the-7-sacred-laws/>).



## Key Themes from the Roundtable

Through their discussions over the course of the gathering, the speakers at the roundtable – Indigenous knowledge keepers, scientists, and academics – identified several core themes and priorities to be addressed through a new relationship between Indigenous knowledge and science.

### **FOR INDIGENOUS PEOPLES' RELATIONSHIP WITH THEIR OWN KNOWLEDGE; COMING BACK TO WHAT WE'VE ALWAYS KNOWN / RE-LEARNING HOW TO LISTEN**

Colonization, particularly through the removal of Indigenous children from their families and peoples over several consecutive generations and through an extended period in which science has been presumed to be the only valid form of knowledge, has disconnected many Indigenous people from the knowledge of their peoples. Several Indigenous



knowledge keepers spoke about their processes of awakening and reconnecting with the knowledge of their peoples in their younger years and what they learned from Elders, emphasizing that the knowledge has not gone anywhere, but remains available for Indigenous Peoples to reconnect with. Miles Richardson described attending the Fourth World Wilderness Congress in 1987 and how, when he was feeling depressed about how much Indigenous Peoples have lost, an Elder present said:

*Everything we need to know is in our teachings. All those stories, songs, ceremonies and language you're talking about losing, they haven't gone anywhere. They're in the same places your ancestors found them: they're in the forests, in the trees, in the winged ones, in the oceans, in the swimmers, and in the four-legs. You've just forgotten how to listen. I have one piece of advice for you: before you take another step forward, take a step back and remember how to listen.*

## **FOR THE YOUTH**

Elder Morris Little Wolf (Blackfoot Nation) affirmed how animals and the land hold teachings, but emphasized how the disconnect has deepened for Indigenous youth:

*We need to bring ourselves back to who we really are, especially with the animals. The gifts we have today that are the most powerful are the animals. They have never changed their way of life for millions of years. We changed. We took on another way of life. They never have. They were our teachers. Today they are still our teachers. The first man that was here said to the animals, 'I have the image of a woman and a man – I want you animals to help me.' The animals agreed to help and sat in a big circle with the couple in the centre. First, the mice gave them a song. Then the rat. On and on, in a beautiful circle, they gave gifts to this couple. Today, when you go home, look at your pipe, your spiritual things, your rattles. Where did they come from? The animals put them there. After I was born, I knew what I wanted from my mom. I knew her name. The next thing I knew was my mouth, then my nose, then eyes, and then maybe in three to four months, I knew all about my body. Today, when you ask young people to tell you about themselves, they cannot, because that great gift from the Creator isn't being used. We are living in an imitation world and it is getting worse and worse.*

After generations of colonization and the growth of consumer culture, many young people are further removed from their gifts and live in what Elder Morris Little Wolf describes as an imitation world, out of which many are unable to see their way. This has caused many Indigenous youth to feel lost and has increased suicide rates amongst Indigenous youth across the country.

Yet many spoke of a growing appetite amongst Indigenous youth to reconnect to their knowledge, languages and cultures. Cole Abou, a young Kaska Dena University of Northern British Columbia student, described how important retaining Indigenous knowledge and language are to protecting the land:

*I know how to be on the land, skin moose and feed my family. This connection to the land is an important thing that a lot of people my age are missing. Once we start to use the land as our ancestors did, we'll be able to properly take care of it. Language is also important. When we say 'water' in our own language it will mean a lot more to us than saying it in someone else's.*

## **FOR THE WOMEN**

With the introduction of patriarchy into Turtle Island, Indigenous women have been particularly impacted, seen most starkly today in the astonishing numbers of missing and murdered Indigenous women and girls, described by the National Inquiry on Missing and Murdered Indigenous Women and Girls as part of a genocide. For generations, through the Indian Act, Indigenous women have lost status in the communities and lost access to wealth and security in the process. When Europeans brought their governments and culture, the knowledge and standing of women became disregarded. At the same time, patriarchy within Western societies has shaped and been shaped by modern science to the historical effect of excluding women from significant knowledge stewardship and production roles. Moving forward, a reconciled science needs to make space for the unique voices and knowledge of women and two-spirit people. As Elder Dave Courchene emphasized, respect for women and their knowledge is essential:

*We learn from our mothers. More than ever, I encourage that our grandmothers are put back in their rightful place of influence to keep us grounded so that we never lose who we are.*



## FOR THE RELATIONSHIP BETWEEN INDIGENOUS KNOWLEDGE AND SCIENCE MOVING FROM DENIAL TO RESPECT FOR INDIGENOUS KNOWLEDGE WITHIN SCIENCE

For many years, science has been posited as the sole authoritative source of knowledge and the validity of Indigenous knowledge has been denied, deemed as mere anecdote. Yet the modern Western scientific approach has a short history compared to Indigenous knowledge, which has been honed by Indigenous Peoples over thousands of years within their homelands. Aside from denying Indigenous Peoples a legitimate voice through invalidating their knowledge, science has also been used to separate Indigenous Peoples from their territories.



Our moment of reconciliation requires jettisoning the assumed supremacy of science relative to Indigenous knowledge. As Dr. Ian Mauro described:

*In scientific meetings I attended, some people would say to me that I was betraying my own discipline by siding with Indigenous Peoples. It's interesting to think about the colonial nature of science itself. The Inuit would compare me and my team to squirrels who would come in the summer, collect and take things, and then leave. We need our own truth and reconciliation process in science.*



A process of reflection, reform and transformation are needed within science, to enable better relationships with Indigenous Peoples impacted by the work of scientists. This process can help ensure Indigenous Peoples are playing a meaningful role in scientific decision making that impacts them and can make space for Indigenous Peoples to become scientists, thus enabling Indigenous methodologies to help shape science itself.

The importance of Indigenous knowledge has been officially acknowledged for several decades now, but the disciplines of science have been reluctant to take it seriously. As Dr. Nancy Turner stated in a blog post about the gathering,

*As far back as 1987, the importance of Indigenous environmental knowledge ... was highlighted in the United Nations Commission on Environment and Development report.... Indigenous knowledge systems have since been recognized in a number of other international documents, such as the UN Convention on Biodiversity and the UN Declaration on the Rights of Indigenous Peoples. However, many scientists and academics around the world have been slow to recognize the value of Indigenous knowledge, beyond its cultural roles within particular communities and locales.<sup>5</sup>*

As Dr. Gleb Raygorodetsky noted,

*Scientists can be reluctant to give up the assumed superiority of the scientific worldview. Creating space to engage with multiple approaches to evidence is critical to our future on this earth.*

Creating this space involves recognizing the unique strengths of Indigenous knowledge and can enable both ways of knowing to come together, leveraging their respective strengths to address the global climate and biodiversity crises.

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<sup>5</sup> Nancy Turner, "Turtle Lodge: A Special Meeting in a Boreal Forest Setting in Defense of the Earth," Boreal Songbird Initiative, 11 September 2017 (<https://www.borealbirds.org/blog/turtle-lodge-special-meeting-boreal-forest-setting-defense-earth>).

## A MORE HOLISTIC UNDERSTANDING AND WISDOM

Another related theme is how the scientific approach focuses on understanding the parts and fails to see the whole, thus often failing to anticipate problems that later emerge. David Suzuki shared his experience and observations as a scientist:

*As a scientist, I started to see that science was failing to see the big picture. As a geneticist, I didn't care about the fruit flies, just the chromosomes. Scientists get so focused on a particular, we often miss what's most important. Science looks at a small piece of the puzzle, while Indigenous knowledge is a way of looking at the whole picture.*



Other scientists described how in their education and experience they came to see that science fails to know, understand or describe the whole. Continuing the blog post referenced above, Nancy Turner describes how science has promised and delivered great gains, but often with serious unforeseen consequences:

*Scientific knowledge in so many fields – from medicine to engineering, from electronic and digital technologies to genetic manipulation – has been widely seen as the only way to inform and promote large-scale industrial, economic and technological “progress” in the world. Yet for all the knowledge and truly amazing technologies that science has provided, we have failed so far to prevent serious damage to our environment; we humans have been unable to govern ourselves in the use of our science-based technologies without incurring unintended negative consequences. We need more wisdom and more careful judgment. We need better approaches to planning and decision-making – for the long term. We need more effective, transformational education, and we need to be able to link our actions together with outcomes through more holistic, critical thinking.*

While science focuses on understanding component parts, Indigenous ways of knowing involve a broader and deeper understanding of interrelationships. Turner provides another example, describing the myriad aspects of knowledge learned, refined, and passed down in the process of making birch bark baskets, a story she was given permission to tell from the family of her friend, the late Mary Thomas:

*Many years ago, I was able to spend time with my dear friend Mary Thomas teaching her daughter how to make a birch basket. She taught that not just any birch tree will make a good birch bark basket. To pick the tree that is just right, you need to understand the whole ecology. You need the spiritual preparation. You would not go to harvest the birch bark without the tobacco and medicine you need in that process. You have to watch the weather and how cold it is. You cannot cut too deep or you will damage the tree. Someone who has acquired the knowledge knows peeling off the bark you need is like peeling off a jacket. It makes a particular sound as you are peeling it like the tree is generously giving itself to you for this process. Understanding the ecology of the birch tree involved understanding all the birds and insects who come to feed from the tree and the role the tree plays in bringing up moisture other plants can draw from. It helps those who know understand the fungus that grows on the tree that can be used as a tinder or coals to start a fire. This kind of knowledge also helps understand how to get and use cedar bark to make baskets. Those who make them know you do not have time to make the baskets in the spring or summer, even though that's the best time to get the bark. You have to know how to fold the bark just right and then how to soak it in the winter.*

This web of relations and connections represents more than just observing a slice of the biological processes involved. It involves the interplay of multiple areas of knowledge, including humans' ethical relations and responsibilities within these processes. Elder Courchene shared how his heart was moved, learning how an advanced Western knowledge keeper like Dr. Turner had been able to embrace and capture the teachings of the grandmothers and how committed she is to continuing and sharing her respect for their teachings in her work.

## HOLISTIC EMBEDDEDNESS OF HUMANS WITHIN A WEB OF NATURAL INTERRELATIONSHIPS

As we saw from Elder Morris Little Wolf above (on page 8), nature and the animals continue to have a key role as teachers – while humans have changed in modern times, animals have not and we can continue to learn from them. We remain embedded within the relationships of life itself, as Little Wolf describes:

*We all come from that nature. We've been here for millions of years. We came from the tradition of life itself. We share it with all the beautiful plants and animals. The way the animals move, we move with them, through the four seasons. When they came back into our territory [on their seasonal migrations], we moved with them and they gave us their food. The first things that grow are the grass berries [strawberries]. They thin your blood for summer. Then come the Saskatoons, which are used for ceremonies. Then the cherries. Then blueberries. The last is the red one, which readies your blood for winter. We have so many teachers. Our grandparents, the plants, the animals. The greatest thing is looking after one another, respecting one another, loving one another.*





Elder Courchene emphasized how this wisdom of our elders, which they received from their Elders and from nature, “takes us to the heart of ourselves and shows us how to have a more sacred relationship with nature and each other.” He described the role of giving tobacco in this context:

*We have offered tobacco to the participants to feed the sacred fire outside, as a way of showing appreciation to each of you. The gift of tobacco is a reflection of giving. When we stop giving, we lose sight of how to share. One of the biggest secrets of life is to be able to give and share. You are invited to feed the sacred fire and participate in this relationship of giving.*

Elder Courchene’s reflections speak to the ways that human life and the natural world are interrelated, but also to the ways in which all beings can work together in cooperation, respect, and reciprocity.

## **MOVING FROM HEAD TO HEART – APPRECIATING THE SPIRITUAL GROUNDING OF INDIGENOUS KNOWLEDGE**

While scientific knowledge is characterized by categorization and specialization, Indigenous knowledge is holistic. An essential element of this holistic knowledge is its embeddedness in a spiritual understanding of and relationship with the world. To understand Indigenous knowledge on its own terms is to understand it in the context of the ways of being and relations that sustain it, including



spiritual relationships to the land, the waters, and other species. Ian Mauro describes bridging science and Indigenous knowledge as moving “from head to heart,” reiterating a phrase used by many Indigenous knowledge keepers, and contextualizing the world of

knowledge within a larger spiritual context. This involves recognizing the centrality of relation in Indigenous ways of being and knowing. It is not merely that, for example, the Haida have a relationship with the cedar because they rely on it economically. Rather, the cedar are part of who the Haida are, as part of the place from whence they emerged. To know the cedar trees is much more than being able to calculate their maximum yield – it involves knowing the appropriate relationship with the entire system of which the cedar and Haida themselves are a part, the process by which this knowledge is passed down and taken up, and its embeddedness in ways of being and doing in the world.

## HEALING SPIRIT AND RELATIONS

Spiritual interconnection has supported sophisticated and evolving knowledge that enabled Indigenous People to thrive in their homelands for millennia. Colonization, particularly through the systematic removal of Indigenous children from their families to attend residential schools, and through banning of spiritual and governance practices such as the potlatch and sundance, sought to disconnect Indigenous Peoples from their lands, knowledge, and stewardship.



Blackfoot Elder Betty Little Wolf shared a memory from when she was a young girl of having to hide her nation's spiritual and ceremonial practices:

*In the evening, my parents would start covering the windows and wait until late at night, when people would start coming in. My mother would send us to the back of the house and then the Elders came. I didn't understand until my grandmother explained to me how we had to take our spirituality underground. We had to be quiet while the ceremonies were going on. There were riders positioned outside, just in case the Indian Agent or RCMP came. If any of them were coming, these young men would knock on the doors or walls, and in the flash of an eye everything was gone and hidden, and sure enough, someone would come in and we would just be having tea, telling stories, and the grannies would just be putting the children to sleep.*

A few years later she was taken from her family and her people and forced to attend residential school, another way in which Canada and its knowledge system attempted to invalidate, disrupt and destroy Indigenous knowledge and spirituality:

*I didn't have a teenage life. Being raised in a boarding school, you have so many things taken from you. Our young lives were taken from us. We couldn't sing our own songs. We couldn't dance. I loved dancing. I couldn't dance our dances until I went back home.*

Indigenous Peoples have taken great risks in keeping their ceremonies and knowledge alive in the face of such efforts. These colonial policies have left some feeling as if they have forgotten such knowledge and are disconnected from their old ways and culture. Many have felt lost as a result. As Elder Morris Little Wolf said,

*We need to be able to reach the way our ancestors lived when everyone had a place in our communities.*

Much remains to be overcome in order to address the deep trauma within Indigenous nations. As Elder AJ Felix stated,

*I want us to be heard. We're tired of what's going on. We're tired of being sick, insecure, and living in fear. We want to wake up and be able to say Hai-Hai to the morning!*

Part of this is a process for Indigenous Peoples, to continue renewing their knowledge, governance and ceremonies; to heal their people, communities and nations, emerging from the shadows colonialism imposed on them. But, part of this is a process for those implicated in the legacy and ongoing operation of colonialism to reckon with the truth of the harm that has been caused as part of the modernizing project of science and technological management, and to disavow, in their thinking, actions, and systems, the dehumanizing nature of these efforts to invalidate and extinguish Indigenous ways of knowing. This process of reckoning and disavowal is necessary for healing relations amongst settlers, seen as brothers and sisters in the human family, and Indigenous Peoples, healing relations between humans and the natural world, and healing within science and the Western knowledge system of which it is a part.

### **A NEW RELATIONSHIP FOR A NEW MOMENT**

We are facing unprecedented challenges affecting all of humanity and our planet, including runaway climate change and biodiversity loss and now the COVID-19 pandemic. The era we are living in has been widely described as the Anthropocene, because of the increasingly massive impacts humanity has had on the planet. This term is an attempt to call attention to the mass destruction this human-centric way of being has caused.





The Anthropocene, undergirded by the Western system of knowledge and technology, is putting life as we know it – human life, animal and plant life – at risk of irreparable harm or extinction. As David Suzuki reminded us, if we do not change our ways, quickly, “Mother Nature will use the forces necessary to take us out of this insanity we've created – hurricanes, wind, fires, etc.” He stressed the need to disabuse ourselves of the notion that we have control over her or that we should need to. The quest for control and dominion at the heart of the Western knowledge and technological project is what has been driving us to this precipice to begin with. Miles Richardson emphasized the resilience of nature and its ability to care for itself, with or without human collaboration:

*If we can't figure out how to work together, the world will be fine. It will continue and adapt without us. But if we want to be here in 15,000 years from now, we need to act now. I know we're all committed to that. Hāw'aa [thank you] to all of you for being here and participating.*

A new relationship between Indigenous knowledge and science can help turn humanity away from this dangerous precipice toward a safer future together. Hanne Strong shared a story from the past that shows a model of coming together for our common humanity and shared home. In the 1990s, she and Dave Courchene travelled to the Dead Sea area of Israel, Japan, the Philippines and Rio de Janeiro for the 1992 Earth Summit, on a journey of lighting sacred fires around the world. They felt the power of this spiritual work, as world leaders came in recognition of the work of igniting the fires in the hearts of people around the world. They drummed with people at all of the fires, including in the West Bank, where the people were so happy that Indigenous people from North America had come to visit and that they had the chance to drum and dance for the first time in twenty years. As Elder Courchene noted,

*Throughout their experience at the sacred fires, there were discussions and agreement that, internationally, what was missing was that spirit of respect for each other that we, as native people, have for our Creator.*

Scientists at the gathering affirmed their belief that Indigenous knowledge has a vital role to play in the transformation we need to live in harmony with our ecological limits. Pauline Gerrard, Deputy Director of the International Institute for Sustainable Development (IISD) described four things she and the team of scientists she works with have learned from Indigenous knowledge keepers since they took over managing the Experimental Lakes Area (ELA) after former Prime Minister Harper ended funding to support the ELA: First, field-based research is a real opportunity to engage Indigenous youth in learning from Indigenous knowledge keepers and scientists. Second, Indigenous Elders and knowledge keepers are acute observers of change in their territories from whom scientists can learn a great deal they would not otherwise see for themselves. Looking at the whole ecological and human-ecological system reveals more than a primary focus on just one element such as zooplankton. Fourth, everything must be guided by ceremony. The IISD now has a ceremonial fire at the ELA that guides the direction of their work.

Chief Darrel Bob advised the youth to trust their instincts and their Elders and emphasized that in times of change, ceremony would be their guide. He told them to be proud of who they are, as science is only just catching up, "proving everything our elders have talked about for generations," and Indigenous teachings are coming back in new ways, rejuvenated by a moment and wider recognition and respect.

## Concluding Reflections, Ceremony and Declaration

### MOVING FORWARD IN ACTION

As the gathering drew to a close, participants in the roundtable reflected on the sharing and knowledge exchange that took place over the past few days and where the work should go next. As Elder Courchene noted,

*We've all heard each other – now it's time to put this into defined action. We can't leave here without creating the momentum needed to carry our message further than this room.*

As Miles Richardson noted,

*We've heard the rationales. Now we need to focus on what to do.*



A series of areas of focus emerged that would guide the future of this work, including:

- Always begin in ceremony
- Teach scientists and scholars to acknowledge the importance of spirituality and incorporate it into their work
- Train scientists and academics to learn and follow Indigenous protocols and be prepared to work with Indigenous Peoples in a way that is meaningful, beneficial and accountable to them
- Share teachings and culturally appropriate education with youth, connecting them with their Elders and nations' knowledge
- Engage youth – many of whom may feel without purpose – in restoration and stewardship projects founded on and led by Indigenous knowledge, natural laws and protocols

- Centre respect for women and their knowledge as life-givers, to halt colonial patriarchal violence against them
- Balance respect for our diversity with understanding of our relatedness and unity
- Develop a wider umbrella of guardianship of the earth, without limiting the focus of this work and conversation to science
- Shift the language with which we talk about climate change to create more room for hope, rather than despair
- Give legal rights to rivers, mountains and other sacred spaces, as has been done in Bolivia and New Zealand
- Prioritize access to clean drinking water for all
- Develop the green economy

An overarching message was for the work in addressing climate change, biodiversity loss and resetting the relationship between Indigenous Peoples and Canada to focus on coming together for the greatest transformative impact. As Dr. Mauro noted:

*At a time where both scientists and Indigenous Peoples are saying the same thing, our message is strongest.*

As Elder Gordon Walker (Norway House Cree Nation) declared:

*We're calling for the healing of all humankind.*

The RWoK Forum, which had been planned for May 25-27, 2020 at the Turtle Lodge and in Winnipeg,<sup>6</sup> has been planned as the next key step in the conversation and the healing work, across nations and ways of knowing, to be done. The four-day gathering describe here focused on spirit and ceremony and laid the foundation for the RWoK Forum. Building on this spiritual and ceremonial foundation, the RWoK Forum has been as a three-day dialogue amongst approximately 300 participants, focused on building understanding and relationships amongst knowledge keepers and ways of knowing. It begins with the first day dedicated to bringing participants

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<sup>6</sup> Now postponed as a result of COVID-19 until such time as it is appropriate to reschedule such an in-person dialogue event.



together in ceremony, and then moves to a second day where the calls to action above and issues that arise in building understanding and relationships across ways of knowing will be addressed through a series of applied topics. On the final day all participants will come together and share insights and actions for the future identified in the topical discussion groups from the second day, to creatively and collaboratively identify strategies for addressing the crises of climate change and biodiversity loss and heal the relationship between Indigenous Peoples and Canada.

## THE TURTLE LODGE DECLARATION



Toward the end of the third day of the gathering at the Turtle Lodge, Dr. Suzuki pulled together the threads of a declaration summing up key commitments from the gathering, which he presented in draft document form to the roundtable participants and observers on the fourth and final day of the gathering, for everyone to sign. He explained that signing the declaration came with a commitment for participants to do everything they can to ensure the aims of the declaration are achieved. All roundtable participants and observers pledged to:

- Honour the legacy of our ancestors;
- Acknowledge our responsibility for generations yet to come;
- Care for all our fellow human beings;
- Love and respect the other species with which we share this planet, our nonhuman relatives;
- Support all our youth in learning natural laws and becoming stewards of the Earth.<sup>7</sup>

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<sup>7</sup> See Appendix A: Turtle Lodge Declaration.

Elder Courchene then led speakers and observers to Manitou Api, a very important ancient and sacred petroform site located at the center of Turtle Island, from which the province of Manitoba derives its name. The markings and petroforms left by ancient Indigenous Peoples represent a profound knowledge of the alignment of the stars, planets, sun, and moon – they correspond with the equinoxes and serve as a centre for healing and connection to land and culture.<sup>8</sup> At this site, Elder Courchene led participants to ratify the Declaration and the commitments to each other made over the past four days through a special ceremony outside, in harmony with nature.



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<sup>8</sup> "Manitou Api: Where the Creator Sat," *Turtle Lodge: International Centre for Indigenous Education and Wellness* (<http://www.turtlelodge.org/cause-view/sacred-site-visits/>).

## Appendix A: Turtle Lodge Declaration

*Human beings and the natural world are on a collision course. Human activities inflict harsh and often irreversible damage on the environment...A great change in our stewardship of the earth and life on it is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated.*

~ World Scientists' Warning to Humanity, 1992  
[Signed by more than half of all Nobel Prize winners]

*Natural laws are teachings of the Earth. Nature operates on the principle of balance. For the First People, following Natural Laws has always helped us to live in balance and harmony.*

~ Dave Courchene Jr., Anishinaabe Knowledge Keeper

Planet Earth is home to all known life forms in the universe, enveloped within the thin layer of air, water and land that cloaks the globe.

We are embedded in our surroundings, inflated by air and water, energized by the Sun's rays and sculpted by the animals and plants we feed upon.

Our green relatives, plants, capture bountiful sunlight, transform it into molecules whose energy we liberate by burning them in our bodies or fuels.

The biosphere is finite so there are limits and nothing can grow within it indefinitely.

Humanity's global footprint has grown explosively through the confluence of a rapid rise in population, technology, consumption and the global economy.

This is the Anthropocene Epoch, when human beings have become the dominant force altering the physical, chemical and biological properties of the planet on a geological scale.

For all of human existence, we have survived through our wits and Nature's abundance.



Spreading across the world, our observations, trial-and-error, mistakes, insights, failures and successes became the accumulated experience and knowledge that are the core of Indigenous perspectives.

Around the globe, traditional knowledge and wisdom embedded in place has enabled people and cultures to flourish for millennia.

In ceremony, songs, dances, stories and prayers, Indigenous People celebrate and thank Mother Earth for her abundance and generosity and promise in return, to care for her and respect her needs and limits.

And always, suffused throughout the rituals and teachings, is acknowledgement that there are spirits and forces beyond human understanding and control.

Today, our technologies are powerful but our knowledge too limited to avoid unintended degradation of the support systems for all life – air, water, soil and diverse species.

Now, our Mother cries out in pain and warns that human greed, ignorance and thoughtlessness are tearing at her ability to support life.

Distracted by electronic gadgets and estranged from nature in our cities, we forget to give thanks and acknowledge our responsibilities as self-indulgence blinds us to Nature's services on which we depend.

Modern science's great strength, its ability to focus on a part of nature and apply analytical tools and techniques, is also its fatal weakness.

By being focused, science routinely shatters and fragments, thereby obliterating context, connections and interactions that make a piece of nature interesting in the first place.

And the recognition that “emergent properties” of the whole cannot be anticipated by the sum of the properties of its parts, makes it imperative to guide scientific application within a broader perspective of Indigenous knowledge.

Knowledge without spirit is soulless, lacking in love, humility and responsibility that must guide and constrain its application.

Knowledge embedded in Indigenous languages and cultures, will never be duplicated by science, so like endangered plants and animals, must be protected and encouraged to flourish.

We, the undersigned, hereby pledge:

- to honour the legacy of our ancestors.
- to acknowledge our responsibility to generations yet to come.
- to care for all our fellow human beings.
- to love and respect the other species with which we share this planet – our nonhuman relatives.
- To support all our youth in learning natural laws and becoming stewards of the Earth.

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Signatories included all roundtable participants and observers in attendance. See Appendix B for list of roundtable participants.<sup>9</sup>

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<sup>9</sup> “Turtle Lodge Declaration,” *Turtle Lodge: International Centre for Indigenous Education and Wellness*, 12 September 2017 (<http://www.turtlelodge.org/2017/09/turtle-lodge-declaration-ratified-at-gathering-of-indigenous-knowledge-keepers-and-scientists-september-2017/>).

## Appendix B: Roundtable Participants

### INDIGENOUS KNOWLEDGE KEEPERS

Dave Courchene, Jr., Indigenous Knowledge Keeper Chair	Anishinaabe Elder, Sagkeeng First Nation
Miles Richardson, O.C., RVoK Forum Chair	Former President, Council of the Haida Nation
Inka Antaurko Baille de Condor Dancer	Amauta of the Tawantinsuyo, Peru
Morris Little Wolf	Piikani, Blackfoot Nation
Betty Ann Little Wolf	Piikani, Blackfoot Nation
Gordon Walker	Norway House Cree Nation
AJ Felix	Sturgeon Lake Cree Nation
Ed Sackaney	Fort Albany First Nation, O'Mushkegowuk (James Bay Cree)
Florence Paynter	Sandy Bay First Nation
Harry Bone	Keeseekoowenin First Nation
Chief Darrell Bob	Xaxli'p Community, St'at'imc Nation
Chief Jack Caesar	Ross River Dena Council
Stephen Kakfwi	Former President of the Dene Nation and Former Premier of the Northwest Territories
Ovide Mercredi	Former Chief of the Misipawistik Cree Nation, Former National Chief of the Assembly of First Nations, and Spokesperson for Treaties 1-11
Roy Redhead	Former Chief, York Factory First Nation
Local Anishinaabe singers and drummers	Sagkeeng First Nation and surrounding region

### Scientists and Academics

Dr. David Suzuki, Scientist Chair	Professor Emeritus, Zoology, University of British Columbia
Dr. Nancy Turner	Professor Emeritus, Environmental Studies, University of Victoria
Ian Mauro	Principal, Richardson College of the Environment and Co-Director, Prairie Climate Centre, University of Winnipeg
Dr. Heidi Swanson	University Research Chair, Associate Professor, Biology, University of Waterloo
Hanne Strong	President, Manitou Foundation and Manitou Institute

Dr. Gleb Raygorodetsky	Executive Director, Indigenous Knowledge, Community Monitoring and Citizen Science, Government of Alberta
Dr. Vince Palace	Head Research Scientist, International Institute for Sustainable Development-Experimental Lakes Area
Pauline Gerrard	Deputy Director, International Institute for Sustainable Development- Experimental Lakes Area
Dr. Vivian Delgado	Assistant Professor, Indigenous Studies, Bemidji State University
Dr. Megan Bailey	Canada Research Chair in Integrated Ocean and Coastal Governance, Assistant Professor, Marine Affairs Program, Dalhousie University
John Miller	Executive Director, Water First



## Appendix C: Acknowledgements

Firstly, I would like to thank Elder Dr. Dave Courchene, the Indigenous knowledge keepers, and scientists and academics for allowing me to witness the ceremonies and discussions at the Turtle Lodge on Sept 7-12, 2017, which have enabled me to prepare this report. Thank you also to the Turtle Lodge for allowing me to take the photos that have been integrated into this report and help infuse it with the Spirit of the gathering.

I would also like to thank the Reconciling Ways of Knowing: Indigenous Knowledge and Science Forum Planning Committee for their helpful feedback and advice on the report. In particular, Sabina Ijaz, Dr. Nancy Turner, Shaunna Morgan Siegers, Eden Toth, and Kristine Lawson provided significant and invaluable advice and support. This report is truly a reflection of the work and thoughts of a wonderful team.

I am honoured to have had the opportunity to play a coordinating role in telling the story of this event and to be able to carry forward the knowledge and understanding I have gained from it and the process involved in preparing this report in organizing the Reconciling Ways of Knowing: Indigenous Knowledge and Science Forum project, including its online components as the project has adapted to COVID-19.

All my relations,  
Jacquelyn Miller



Photo credit: Dr. Nancy Turner  
(if you look closely, you can see me standing up in the back of the room)