

Keynote Address

Creating a Culture of Sustainability: What Could it Mean for You?

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Introduction

Candace Matelic

It is an honor and pleasure to introduce my colleague and friend Douglas Worts to you today. Douglas is a culture and sustainability specialist, living in Toronto. He has been in the museum world for 45 years. Working at the Art Gallery of Ontario (AGO) for over 25 years, Douglas helped to weave together the fields of exhibit development, interpretive planning and audience research—publishing and speaking frequently on related topics. He was also a founding member of the Visitor Studies Association in the early 1990s. 1997 was a watershed moment for him—when he was invited to join the Rockefeller Foundation initiative called Leadership for Environment and Development (or LEAD International)—a global, cross-disciplinary network of professionals who shared a commitment to fostering sustainability. In 2008, he left the AGO to pursue his interest in how museums could help become catalysts of cultural adaptation and change.

*In recent years he was the first Research Fellow in Museum Studies at the Georgia O’Keeffe Research Center in Santa Fe, New Mexico. He has also worked with the AASLH (American Association for State and Local History) as they develop their approach to sustainability. For almost a decade, Douglas been an active member of the Strongly Sustainable Business Model Group (at Ontario College of Art and Design in Toronto)—a global research think-tank on designing organizations to generate net-positive value (socially, environmentally and economically). He was a contributor to the recent book entitled *Systems Thinking in Museums* and has published many articles and chapters on topics of culture and sustainability. Douglas is also one of the coaches that will support museums that engage in the new sustainability networking and training program, called *Ki Futures*, being launched this fall across Europe, the USA and Canada, by the Amsterdam-based organization *Ki Culture*.*

A couple of years ago I had the pleasure of working with Douglas as we did two sessions on the United Nations Sustainable Development Goals (SDGs), at the

joint conference of the Alberta Museums Association and the Western Museums Association and at the Rotary International Conference in Toronto. We’ve had many great conversations about how his passion for sustainability connects to my passion for community engagement, and I cannot think of a better person to frame today’s sessions about sustainability. I know Douglas will inspire us and fire us up for the day with his Keynote Address about why ALHFAM should care about sustainability. So please join me in welcoming Douglas Worts.¹

It is an honour to have been invited to deliver a Keynote Address to the 2021 ALHFAM Conference, to share some thoughts on the concept of ‘sustainability’ and what it could mean for each of you individually, your organizations and the ALHFAM network as a whole. Specifically, I will be talking about how the holistic thinking that underpins the idea of ‘sustainability’ can help ALHFAM members pause and consider how to become catalysts of cultural adaptation, within our ever-changing world.

My two main goals for today are that you will:

1. reflect on your personal relationship to our currently unsustainable world, and
2. consider how ‘sustainability’ thinking can help your museum empower our living culture to transform itself into a dynamic and mindful balance with the realities of Nature.

First, a land acknowledgement: I wish to acknowledge the land on which I live in Toronto has, for thousands of years, been the traditional land of the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat. Today, this meeting place is still home to many Indigenous people from across Turtle Island and I am grateful to have the opportunity to live and work on this land.

I also wanted to acknowledge the depth of the systemic racism that has plagued our society for a very long time. In early June, the discovery of an unmarked mass grave at a ‘residential school’ in Kamloops, British Columbia, Canada, is a reminder of how systemic oppression and inequality within the culture of Canada have cast a long shadow. While Canada is proceeding through a ‘truth and reconciliation’ process, it is vital that all Canadians understand the realities that have led to the country as we know it. The processes of shining a light on the truth of our history, and then working through the reconciliation with an intent of building trust and respect, are vital parts of building a culture of cohesion that is inclusive and equitable.²

In this spirit of reflecting on the relationship of Indigenous people with settler cultures, I want to share a short story about my encounter with Bessie Walters—a Maori elder whom I met in 1993, at the Te Papa Museum in Wellington, New Zealand (Fig. 1). I had travelled to Australia and New Zealand to deliver workshops and lectures related to my work on ‘visitor-based creativity’ in museums. Two Maori elders partici-



Fig. 1. Bessie Walters and Douglas Worts – Bessie was a Maori elder I met in 1993, at the Te Papa Museum, in Wellington, New Zealand.

pated in my workshop, and at the end, Bessie invited me to spend the next morning with her in the Maori Galleries.

The Treaty of Waitangi,³ created by Maori and British peoples in New Zealand in the mid-nineteenth century, provided for a fully bicultural coexistence. Like so many treaties with Indigenous peoples and settlers around the world, this one was ignored for a century or so. But, later in the twentieth century, it was revived and put into operation. One impact was that the state museums were to be made fully bicultural. This meant that Maori were in charge of collections of Maori material culture in museums. So, when I went to meet Bessie, I entered into a large, central hall with awe-inspiring, ocean-going vessels, decorated houses (that could be entered), sculptures and much more. Bessie waved me over to her and I was warmly greeted. She turned to a figurative sculpture beside her—and then introduced me to one of her ancestors. I was instantly unsure what to do—I had not been introduced to an ancestor like this before. She smiled and continued that I shouldn’t just stand there. . . I should touch him! I became even more confused. As a museum professional, I have been well-trained not to touch artifacts (at least without gloves). That smile appeared again on Bessie’s face and she said, “You can’t just stand there, you need to caress him”—and she grabbed my hands and planted them on the figure. At that moment, I knew I had embarked on a cultural experience that was entirely new to me.

I learned that the figures in the room were not simply representations of the ancestors, but they contained the living energy of the ancestors. I also learned that Maori believe that it is essential that people have direct and living connections to the past—and that means touching the ancestors. When I asked about potential damage to the sculptures, she laughed and pointed to another figure that had been knocked off its pedestal and damaged by an overly enthusiastic visitor. But, she added, this was something that could be fixed “good as new” by the skilled conservators!

Next, she asked me if I knew that Maori were not the first peoples of the island, to which I answered “yes,” having read that in preparation for my trip. Bessie went on to say that, “It’s true.

...when my people came to this island, they killed the previous inhabitants.” What she said next has stayed with me in the most profound way for almost 30 years. She continued, “. . . and there isn’t a day that goes by when I don’t think about how the responsibility for that now rests on my shoulders.” In a flash, I could see that Bessie was completely linked to her ancestors—part of the cultural arc that extends across time. It was clear that Bessie’s identity is largely made up of what she inherited from the ancestors—and that identity needs to be acknowledged quite publicly. It was such a different approach than the Western approach that seems to promote the idea that identity is almost entirely about the individual—a tendency which drives the continuum of culture largely into the forgotten mists of time.

My time with Bessie Walters definitely caused me to rethink my assumptions about my own identity and culture. It also prompted me to rethink the ways in which museums do and don’t act as catalysts of identity-building, for individuals and groups. I further reflected on how museums can help ensure that the living culture carries with it the essential foundations that are passed on by ancestors, as it addresses the issues and forces of the present, then envisions and plans for the needs of the future.

Although museums may well collect and recount stories, especially related to material culture and the histories of places, their ability to truly address the cultural needs of the living culture is quite limited. The ways in which museums operate in the leisure-time economy, often spending a lot of their resources addressing tourism and occasional visits by locals, make it difficult to truly weave the cultural work of relationship-building into the living culture. It is within this framework of nurturing relationships—both within individuals and between people, linking past/present and future—that museums can develop new potentials for creating cultural impact.

The term ‘sustainability’ is frequently misunderstood. Many people associate the word with environmental efforts to make human activities less damaging. This is certainly one part of sustainability work. However, the term is actually a holistic concept that describes the multidimensional and dynamic balances between humans, Nature and economics. The notion was defined

by the United Nations World Commission on Environment and Development, “Our Common Future” (a.k.a. the Brundtland Report), as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁴

Sustainability is often pictured as three embedded spheres, with economics as a subset of human society, and human society as one element of a complex natural environment (Fig. 2). Sustainability, from the perspective of the planet, is achieved when the Earth’s natural systems are self-perpetuating. The reality is that the Earth can and will go on, but it may not include humanity. The bottom line is that the Earth can take care of itself—as it has for billions of years. So, the goal of sustainability, at least the version that continues to include humanity, is to ensure that human/planetary relationships operate in ways that enable people to meet their needs. To get to this point, where humanity is part of the Earth’s story, then it is human cultures that must shift significantly.

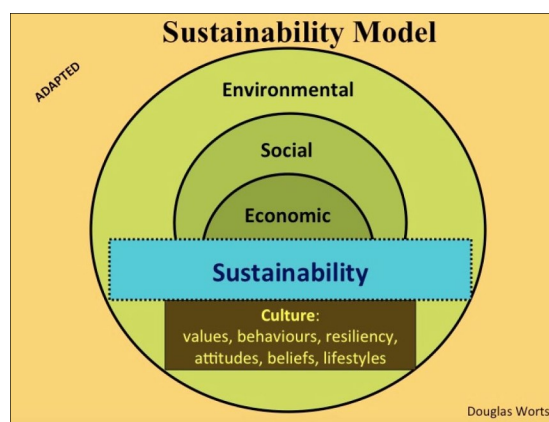


Fig. 2. Sustainability Model, with human culture as the foundation that underpins how people interact with each other, and the world around them.

Culture can be understood as the set of values, beliefs, attitudes, behaviours, systems and structures that guide the relationships between people and the larger world, over time. With this in mind, it is easy to see how vital cultural change is, as humanity strives to be ‘sustainable’ on Earth, especially when our culture has evolved to systematically destroy natural planetary systems.

The word ‘museum’ refers to the ‘muses’—creative forces that bring inspiration, insight,

connection and transformation to human situations. The muses will indeed be necessary in order to help humanity redefine its relationship with the world. About 50 years ago, NASA began to provide an incredible flow of images of the Earth from space. This enabled people to see our world from a vantage point never before seen. The “Blue Marble” was one of those images.



Fig. 3. "The Blue Marble" is a famous photograph of the Earth taken on December 7, 1972, by the crew of the Apollo 17 spacecraft enroute to the Moon.
Wikimedia Creative Commons.

The question is, how will museums set their sights on activating the muses in the living culture in ways that create meaningful, positive, cultural change and adaptation? Another way of asking this question is:

What if museums . . . helped citizens, organizations, communities, cities, states and societal systems adapt in this ever-changing world? What would museums need to do in order to embark on such a path?

To explore these questions, it is important to fill in some contextual information.

Since culture involves human relationships with each other, and with Nature, it is worth examining the geological record. There, we find that humans have been part of the Earth's story for at least 300,000 years. Given that Earth has been in existence for over 4.6 billion years, humans are relatively new kids on the block! Geology enables us to study the Earth's history and

learn that, with humans nowhere in sight, there have been numerous mass extinctions, caused by a range of natural processes. For the purpose of this discussion about sustainability, perhaps the most significant insight from geology is that in recent decades, humanity has become the single-most influential force affecting the Earth's systems. There is a name that is emerging for this epoch—the Anthropocene!⁵ This is significant because it is clear that many of the troubling trends that are emerging—including the climate crisis, the loss of biodiversity, desertification, ocean acidification and more—are unintended consequences of human activity. Given that humans never set out to warm the oceans, pollute the atmosphere, or obliterate the natural habitats of enormous numbers of other species, it is as though we are largely unconscious of the damage we are doing to the planet.

Of course it is possible to live on the planet in ways other than how we live here now. Given that humanity has witnessed exponential growth in population to almost eight billion inhabitants, as well as the crippling load our existence places on planetary systems, many aspects of human systems must change (Fig. 4). Essentially, the processes of such a change are called ‘adaptation’—which has been happening on Earth as long as there has been life here. However, humans have never had to collaborate globally on solving a world-wide puzzle of this magnitude. As the world changes around us, human

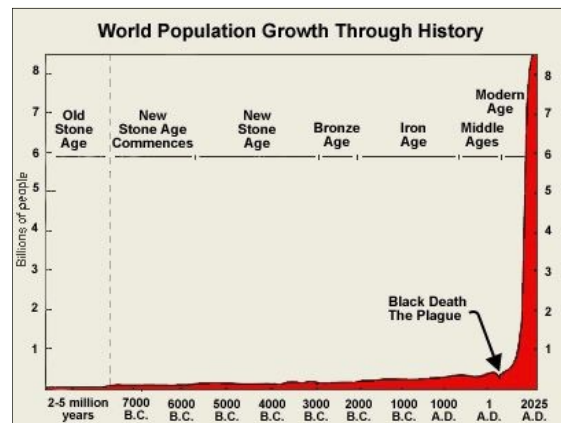


Fig. 4. World Population Growth Through History, a classic example of exponential growth. Humanity clocked a population of a billion about 1800. Our most recent billion took about 15 years to create.
Creative Commons.

culture must either create ways to fit within the ever-dynamic trends that are constantly reshaping the world, or humanity will become an artifact of the Earth's history. Whatever lifeform adapts to our changing world will persist. Whatever fails to adapt will become a casualty in the ongoing evolution that is the very essence of life on our planet.

Let's now look a bit closer at the trends that are defining our current era. Culture is many things, but an essential part of a healthy culture is its ability to continually adapt to the ever-changing world that contains it. Sometimes the adaptations are slow, other times fast. A culture's ability to survive and flourish depends on its ability to read the trends that surround it, and actively remain in-sync with the larger systems of Nature.

Some of the trends that are most significant to humanity's wellbeing are:

- a. Species Loss: Since 1970, the number of vertebrate species in the world has been reduced by approximately 65%, according to data provided by the World Wildlife Fund and the Zoological Society of London.⁶
- b. Chemical pollution: Some chemicals are found naturally in both the atmosphere and the ocean. However, pollution that is generated by both human consumption and industrial production is altering the chemistry of the atmosphere, the oceans, soil and more. For example, there has been exponential growth in the amount of carbon dioxide, nitrous oxide, methane and stratospheric ozone in the atmosphere. Similarly, excess carbon from the atmosphere is absorbed by oceans, which leads to increases in the acidity of oceans—affecting both plant and animal life in ocean systems.⁷
- c. Warming: Temperature rises are occurring in both the atmosphere and in the oceans—with potential for devastating impacts as temperature levels rise beyond tipping points that disrupt balances within natural systems.
- d. Growth-Based Economy: There is a global assumption that the only good economy is one that is continuously growing the amount of money that changes hands. However, nothing grows forever. Rather, throughout nature, wellbeing is characterized by naturally occurring stages of growth, development, stability, decline/death and renewal. Any economy that sets its sights on continuous growth is embracing a process akin to a cancer—which will eventually kill its host. Since the economy has become the driver of the majority of human trends, most taking humanity towards very troubled futures, it would be prudent to rethink how to transform current economic thinking into a form that supports resiliency and wellbeing for humans, and for the planet (e.g., see Kate Raworth's book about her progressive economic model, *Doughnut Economics*).⁸
- e. Earth Overshoot Day: The people behind the Global Footprint Network have been providing vital insights into humanity's relationship with Nature for decades.⁹ They tally the total amount of natural materials harvested/consumed by humanity in a given year, plus the amount of waste generated that Nature must reprocess so it is useful biomass for the planet. In approximately 1970, humanity's load that it placed on the biosphere began to exceed the planet's ability to service the human enterprise. As humanity's demands continued to grow, the Earth yielded its 'natural capital.' So, whereas until 1970, the Earth met humanity's needs for 'ecosystem services' relatively easily, after that point, the resilience of the planet has been eroded. It manifests in a range of symptoms, including climate change, species loss, deforestation, extreme weather and much more. In 2021, the Global Footprint Network estimates the Earth Overshoot Day—which is the day in which the planet's ability to process human consumption and waste without drawing on its natural capital—is July 29th, 2021! After that date, everything we consume and toss out as waste is actually damaging the planet's natural capital and reducing the amount of natural resources the Earth can generate.¹⁰
- f. Inequity: In addition to all of the environmental considerations in the sustain-

ability crisis that haunts our era, there is no shortage of data that illustrate how societal inequality, prejudice and systemic racism continue to be forces that make today's bad situation much worse! The concentration of wealth in the hands of very few individuals, and the growing gap between rich and poor, is a powerful indication of the failure of the market economy to create wellbeing for humanity on the planet.¹¹

It should be made clear that Earth will be 'sustainable' as a life-supporting environment, for a very long time. However, the same fate is not so certain for humanity. Over the billions of years that the Earth has existed, many species have emerged, evolved and disappeared. Notably, the planet has looked and felt very different depending on what species made up the web of life at any given time. There have been long periods in which life has flourished, as well as periods of great extinctions, where lifeforms were much more limited. But throughout these stages, life has persisted—even as it continued to change. Humans (*Homo sapiens*), as a relatively recent species to emerge on the planet, are unique because of their extraordinary ability for creativity, knowledge-building, invention and transforming the natural world. These skills, however, have resulted in both positive and destructive impacts.

Around the world, countless human cultures emerged over thousands of years. Most were shaped by the regional realities of geography and climate. Today, cultures and communities across the planet are knitted together by an economic system that is dedicated to wealth accumulation. While our globalized economy does have some benefits, it also has enormous costs. It is our economy's obsession with generating continuous, inequitable financial growth (most commonly, Gross Domestic Product, or GDP) that has our economies moving forward on autopilot. Even when too much growth and consumption occur—sending the planet into ecological overshoot and climate collapse—our economy has few feedback mechanisms to direct our culture of consumption and waste production towards a stable future. Because of this, the economy is perhaps the principal influencer of how humans

interact with the natural world, and with each other.

As mentioned before there are alternative economic models that offer humanity ways to alter the many trends that are sending humanity into peril. Kate Raworth's Doughnut Economic Model is of special note because it is specifically designed around the goal of generating wellbeing for both humanity and for the biosphere—as opposed to standard GDP economic models. Interestingly, the word 'economics' was derived from the Greek, which was originally defined as 'care of the household.' It was not a system designed around the concept of growing stocks and flows of money, but rather of how best to manage a household in order to promote wellbeing. In its original context, the idea of 'economy' was a holistic approach to managing all the things that are part of a household and its inhabitants. Over the course of many centuries humanity now makes up a global village. With the world having shrunk with the massive expansion of humanity, the idea of 'care of the household' may be best understood today as containing all levels of human connectivity, within the planetary biosphere. The challenge for humanity today is to manage the complex interdependencies of humans, other species and the myriad systems that make up local ecosystems and bio-regions.

Thus far, I have been building the case that the unsustainability of humanity's current condition is a characteristic of contemporary culture—which means that our unsustainability is fundamentally a cultural problem. Sadly, our economic and industrial systems are producing intractable, global, wicked problems—and few of us have meaningful ways of influencing those systems. For some, there is a belief that there are, or will be, technological solutions. There is no question that technology can help to address some of our challenges—for example, shifting from fossil fuels to renewable sources of producing energy. However, oil companies, lobbyists and many governments continue to squeeze every drop of oil they can from deposits deep underground. Old habits die hard. It is extremely discouraging that our cultures have empowered companies, governments and influential individuals to steer countries not towards a sustainable future, but rather away from it. Our cultures also seem to pit one group against another, further frustrating the

ability to create a common vision of a viable, generous, accepting, compassionate culture for all humanity within the world. In light of this reality, there are important questions to be asked about the relationship between museums and the living culture(s).

Given this, how can museums help the living culture to take heed of the forces and issues that are shaping and threatening our world? How can museums help cultures act, both co-creatively and ethically, to steer humanity towards a stable relationship with the planet and the future? Such approaches are not the traditional roles for museums. Accordingly, if museums are to develop new capacities, then museum staffs will need to fully assess their core assumptions about how best to empower and retool these organizations so they can generate net positive value that serves the health and wellbeing of communities within the biosphere.

Historically, museums have striven to preserve the past. They do this largely by:

- a. collecting tangible and (more recently) intangible culture.
- b. researching and generating understanding (usually through collection-based research).
- c. educating the public by sharing expertise and collections, usually through exhibits and on-site programs.

While many people have had memorable experiences in museums, there remain disconnects between: a) what museums do; b) the forces/issues/trends that are shaping contemporary culture; and c) how populations are engaged in dealing with the maladaptive ways that governments, business and our societal engines have responded to the emergent threats and opportunities of our era. Because museums have become increasingly corporate in their structures and operations, cultural organizations have frequently turned to tourism for necessary institutional revenue—long considered the institutional ‘bottom line.’ It has always puzzled me that museums have essentially no cultural measures of success and impact—only corporate ones. If museums want to leverage insights from the past to help today’s living culture make the best possible decisions about how we collectively adapt in a fast-changing world, catering to tourists will not help much. The principal feedback loops which

museums use to understand their impacts remain focused on attendance, revenue and collection-building. Sadly, these are not cultural indicators of anything.

Can museums agree that their principal goal is to foster a culture of wellbeing that serves both people and planet? If so, then many mechanisms will emerge to help engage the public in ways that create meaningful impacts, at a range of levels. Since human wellbeing is entirely dependent on the health of the biosphere, this seems like a pretty basic goal—although not an easy one to achieve, especially now that we have entered the Anthropocene, and that humanity has already done significant damage to planetary and societal wellbeing.

In my work as a museum interpretive planner and audience researcher, I’ve come to believe that there are three core functions involved when people engage fully with the world around them. These are:

1. Deep Reflection (important for individuals, groups and organizations).
2. Dialogue and Relationship-Building (building empathy, compassion, cohesion and shared vision amongst people).
3. Creative and Co-Creative Action (adaptive action to our ever-changing contexts/realities).

These three functions are needed to process the scope, complexity and specificity of our world. This illustration (Fig. 5) maps, in very simple terms, how museums can become catalysts of cultural adaptation. It underscores that culture is constantly evolving in the present, but is dependent on having a strong relationship with the past, and must anticipate and provide for the future. Museums, as they have evolved, do not function this way. However, it may be useful to explore the potential for existing museums to transform themselves in this direction. What seems clear is that, for museums specifically and culture generally, holding onto the status quo will only lead to humanity digging the hole we find ourselves in much deeper.

Throughout the Earth’s history, adaptation is something that all living things have had to contend with. The world constantly changes around us over time. If species don’t adapt, then

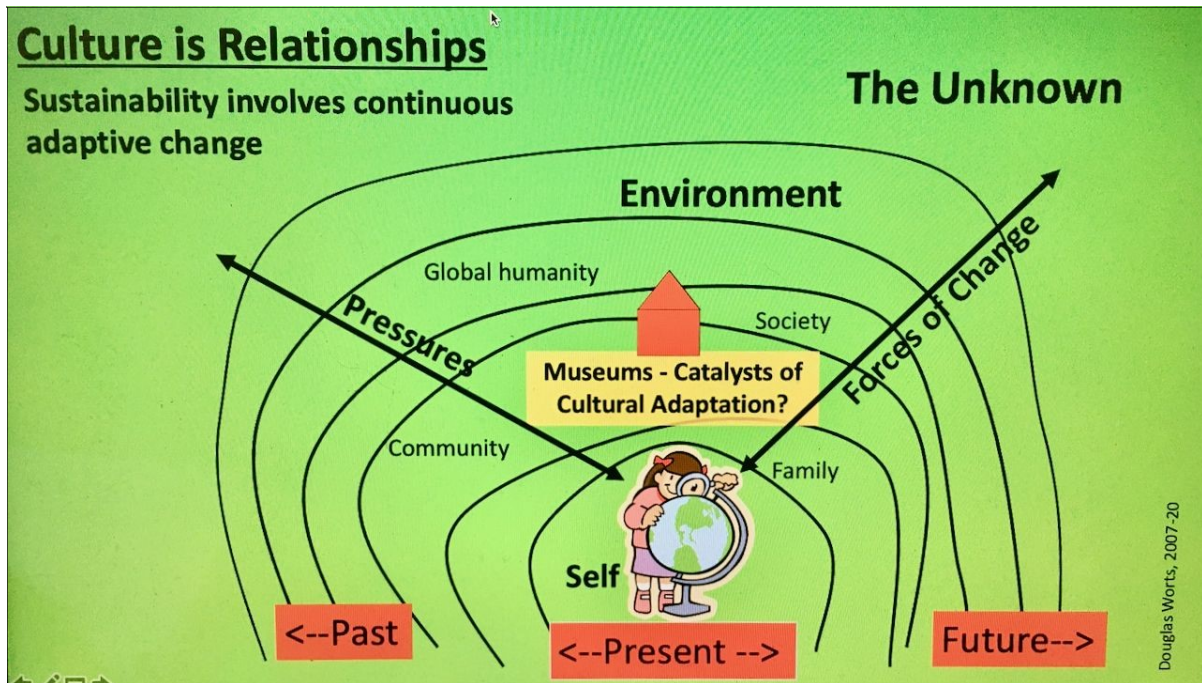


Fig. 5. “Culture is Relationships” – understanding museums as playing a catalytic role of building relationships across the web of life. By Douglas Worts, 2007-2021.

they fall out of sync with the dynamic nature of life itself—and disappear. However, adaptation is not always a ‘life and death’ situation. Most people are well familiar with the processes of adaptation—individually, collectively, institutionally and more. Let’s explore a few examples.

At the individual level, it is common to encounter shifts in our personal relationships (marriage, divorce, loss, education, employment, etc.). These can be variously wonderful and/or extremely hard transitions. Throughout life, our understanding and relationships with elements in our world change and evolve. Sometimes this occurs as an internal, psychological process. We might develop an interest or a passion that we want to pursue. It could involve building a new relationship or embarking on a new educational or career path. Alternatively, it could involve ending one path, in order to start a new one—through divorce, quitting a job, etc. Sometimes illness forces us to change how we see ourselves in the world and that can lead to fundamental behavioural change. If one can rise to the challenge, new opportunities will come into view as one grieves the loss of the old ‘normal.’

At a collective level, new technologies can fundamentally change how we live our lives. The

advent of radio, television and the internet were all life-changing societal adaptations that had huge implications. So, too, was the harnessing of fossil fuels as an energy source. Different types of ‘successes,’ such as the advent of automobiles and the use of gasoline engines, have led to massive scaling of trends, which can lead to a crashing halt if the trends are not kept in balance. Similarly, global travel has led to easy movement of people—creating pluralist cultures all around the world. There are massive benefits from the cultural diversity that now flourishes in almost every corner of the planet. Through the sharing of experiences, knowledge, insights and creativity comes a wellspring of positive possibilities. However, underlying fear and mistrust can emerge in the processes when cultures come together. These have the potential to become toxic and destructive by-products of such situations. Fear, mistrust and even hatred are some of the unintended consequences of our evolving and adapting human reality on Earth. Together, we all need to understand what it means to live in a culture of pluralism, especially one that must be equitable, compassionate and just, if it is to be healthy.

At the level of institutions, adaptation can be very hard. Corporations have legally binding mis-

sions and fairly fixed operational systems. They also experience constant pressure for continuous growth (largely from investors and those seeking power). So, as the world changes around institutions, they often will hold firm to elements of their identity—sometimes, with a death grip. It seems clear that this is the case with the fossil fuel industry. The fact that corporate culture is built around short-term thinking, that is designed to avoid projecting far into the future, makes corporations particularly inclined to upset societal balances.

For many decades the oil sector enjoyed much success and was pivotal in helping humanity achieve many new and creative heights with automation, transportation, wealth creation and so much more. But as the continuous growth of both producers and consumers, the sector's positive side has become overshadowed by its negative and destructive side. The unintended consequences of the fossil fuel industry (e.g., carbon emissions, environmental destruction, addiction to wealth/power accumulation, etc.), have cast a long and dark shadow over civilization. In situations like this, organizations must have the ability, and the inclination, to reinvent themselves in ways that make sense for the greater good, in the evolving present. To achieve such adaptation, corporations must be prepared to take stock of, and responsibility for, both their positive value generation as well as the negative value they generate (especially through the unintended and unconscious consequences of their activity).

'Sustainability' is the ability of a holistic, complex, dynamic system to remain in a relatively stable balance. It requires continuous adaptation, based on a robust set of feedback loops that can guide adaptive changes. At a basic human level, when a person moves close to danger, for example an open flame, there are visual (e.g., seeing a flame) and sensory signals (e.g., smelling smoke, feeling heat, etc.) that provide a warning that caution is needed. Feedback loops take many forms, but some of them are not easy to detect. A good example is CO₂, which is a by-product of burning fossil fuels that is invisible and has no smell. CO₂ has been dumped into the atmosphere with impunity by corporations and consumers alike, for a very long time. While the 'industrial revolution' is well known for burning large amounts of coal and poisoning many peo-

ple, especially in urban settings, it posed no real threat to planetary climate balances. This was because the Earth's systems are so large in relationship to human population during those times. But as the population over the past 250 years skyrocketed from less than a billion to almost eight billion, all of whom generate carbon emissions, we are now witnessing feedback loops and systems impacts in the form of radically shifting climate trends, and a host of other signals.

While early industrialists may not always have had scientific insights into the shadowy side of their work, it is a good bet that they understood that many people, and environments, were damaged or killed by this kind of 'progress.' Modern oil companies are a different story. The oil industry conducted plenty of research into the science of fossil fuels—most of which was suppressed because it was seen as a threat to profitability. Luckily, scientists, both inside and outside corporate contexts, have developed the ability to measure many kinds of feedback that humans can't pick up with their five senses—such as CO₂. Beyond this, designers and artists created ways to visualize otherwise invisible phenomena. A good example is the image (Fig. 6) of what one day worth of CO₂ emissions looks like in New York City.

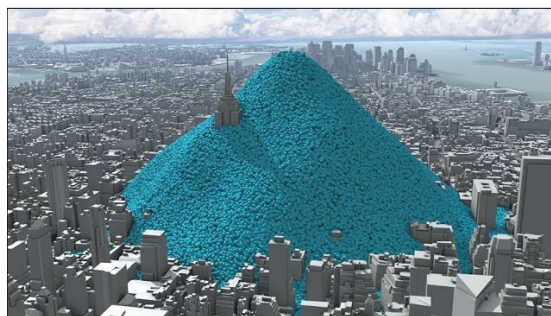


Fig. 6. One Day of Carbon Emissions in New York City. Image by Real World Visuals, Creative Commons.

Understanding and being able to visualize relevant feedback loops related to sustainability is vital if humans are to adapt in ways that create a viable, or maybe even a flourishing, future. And because sustainability is ultimately a condition that must apply to global systems realities, humans will often have to look far beyond the local

to understand the forces at play. As the planet warms—even by a degree or two—it causes distant lands to transform.

Climate scientists are especially watchful of the Earth's polar regions. 'Warming' is occurring faster at the poles than most other places. This is significant because polar regions are filled with massive quantities of ice, as well as permafrost. Permafrost is a layer in the soil that remains permanently frozen. It occurs mostly in the Earth's polar regions. When temperatures warm, permafrost melts, thus releasing large amounts of methane into the atmosphere from the decomposing organic matter that has been locked in the frozen land. Methane is a 'greenhouse gas' that is some 30 times more powerful than carbon dioxide. So, by heating the atmosphere by some two degrees, there is a tipping point that is hit, that ultimately releases massive amounts of methane into the global atmosphere, which quickly accelerates atmospheric heat retention (a.k.a. global warming). Similarly, the warming of the polar ice caps leads to the melting of massive ice sheets. When this happens, enormous volumes of water are released into the oceans, which is then distributed around the world. Rising sea levels then threaten coastal communities in every corner of the planet. This is why we, in non-polar regions, can't simply look to marginally reduce the 'bad' side-effects of what has become our business-as-usual lifestyles (e.g., striving to reduce our carbon footprint by some fraction). Rather, we must understand how to transform our status quo, so that we stop contributing to planetary destruction. This means working beyond our traditional institutional boundaries. And that isn't even quite enough. We then must go further, to actually regenerate the robust health of the biosphere that humanity has been destroying for centuries.

As museums embark on a path of becoming catalysts of cultural adaptation aimed at addressing the issues and forces that are already changing the world, there are many tools that will help. One central tool to be picked up is 'systems thinking' (Fig. 7). At the core of this approach is understanding that all things are connected. The implication is that we consider the myriad forces at play in a complex system in order to understand where there are leverage points. Leverage points are places in a system where, if we inter-

vene in effective ways, it is possible to create cascading change across the system.

Historically, museums tend to think of themselves as public educators and collection experts, within the leisure-time economy. From history to science to children's play, museums have striven to offer individuals and small groups experiences that are memorable and informative, or even insightful and inspirational. And this usually happens within the physical spaces of museums and with museum collections. This approach can provide compelling experiences for visitors. Having said that, it should be noted that audience research is poorly woven into the fabric of museum work. The result is that museums often have only a vague understanding of how visitors 'make meaning' within their spaces. And if the cultural needs of our era are for cultural adaptation and transformation (at individual, group, community, organizational and regional levels—all in relationship to the natural environment), then one-person-at-a-time strategies, located in-

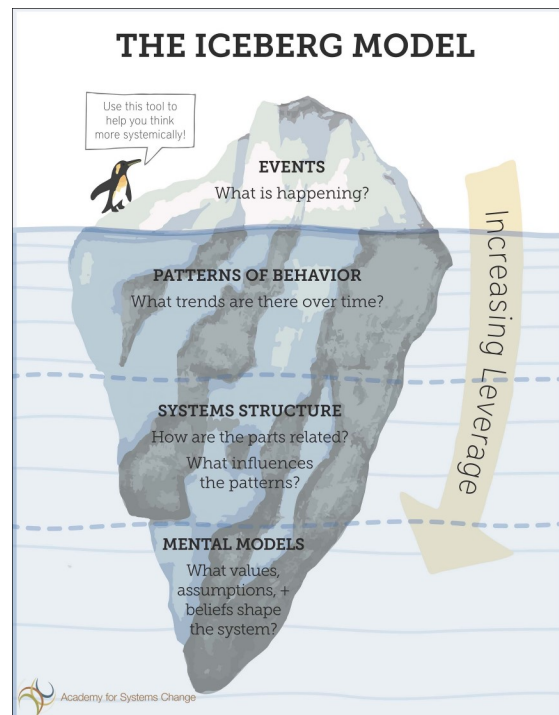


Fig. 7. Iceberg Model, developed by Donella Meadows, illustrates how a systems-thinking approach delves deeply into the unseen roots of the events that we see in daily life. If museums are to become cultural catalysts, then they will need to be orienting their work to the full systems nature of our global reality. Creative Commons.

side museum spaces designed for public engagement, is an inadequate strategy to meet humanity's cultural needs. To sort out this situation, it would help if museums began to develop a 'theory of change' capable of guiding them towards cultural adaptation impacts (more on that below).

Another useful tool has been provided by the United Nations, through its Sustainable Development Goals, or SDGs (Fig. 8). In 2015, the SDGs were approved as a framework for tackling the many intractable problems that plague the world. Signed by virtually every country in the world, this framework is based on 17 overarching goals—all of which are relevant in every country, but manifest uniquely in each of those countries. The SDGs have been designed so that the goals are universal, interdependent and transformative. Based in science, ethics and wisdoms, the SDGs embrace the reality that people, money and goods, not to mention planetary resources (water, air, atmosphere, weather and so on), are constantly moving around the globe. Ultimately, everything is part of one massive, interdependent set of interacting systems. This reality means that poverty, hunger, wealth, equity, urban life, rural

life, ocean health, land and more are all interconnected. As museums look to create new ways to become catalysts of cultural change, the SDGs provide a way to open up discussions and generate brainstorming on how to experiment with new ways of engaging with the public, but in ways that address the issues of our time in tangible and meaningful ways.

The prospect of foundational change within a well-established field, like museums, can be intimidating, scary and destabilizing. This is a fundamental part of humanity continuing to be players in the Epoch of the Anthropocene. By changing how humans live on the planet, we can embrace the potential for us to redirect currently destructive trends in new and more constructive directions. It is worth noting that some museums have already risen to the challenge.

Interestingly, the COVID-19 pandemic has provided an opportunity for museums to try new ways of engaging the public. When regular operations came to a grinding halt for an extended period, numerous ALHFAM museums stretched out to seize the opportunities involved in new goals, strategies and measures of success. One



Fig. 8. The UN Sustainable Development Goals provide a framework for individuals, organizations and countries to work together towards a sustainable, even flourishing, future. Photo by Douglas Worts, adapted from UN, Creative Commons.

such museum was Howell Living History Farm. When faced with the pandemic, Director Pete Watson asked himself and the staff/volunteers, 'How can we continue to serve the public?' The answer was to transform their on-site programs into intensified growing of crops on the farm, which were then donated to local soup kitchens and other organizations that helped feed locals badly hit by the pandemic. This pivoting of purpose and practice from on-site education programs to meeting the needs of the larger community enabled the Farm to feel more comfortable working outside the 'business as usual' model. I wonder how this pandemic-induced surge in creativity will impact the Farm's approach to future planning?

For museums that are ready to explore how best to leverage their skills, assets, partnerships and potential to foster necessary cultural adaptation, it is worth remembering a few things:

- Sustainability is a change-oriented challenge for all sectors.
- It is vital to revisit, scrutinize and possibly adjust both personal and organizational first principles—are the old ways holding you back?
- It is essential to develop new skills, priorities and partnerships to achieve meaningful goals for our changing times.
- The trends that are shaping local, regional and global realities are vital forces that must be taken into account as you plan to address local and global issues.
- Experimentation enables you to be creative about how you connect with communities creatively and cooperatively, while testing cultural impacts.

While local progressive museum organizations will inspire and offer support within a region, there are also progressive organizations globally that are only too happy to lend a hand. The Happy Museum Project (HMP), which has been operating in the UK for almost a decade, has many wonderful resources that they share freely at www.happymuseumproject.org. The case studies and reference sections are full of great materials. Of particular note, from my perspective, are the Principles of the HMP, as well as their use of a 'story of change' methodology (which is a variation on the Theory of Change that is used in many sustainability-oriented initia-

tives). By writing a story of change, a museum is taken through the process of analyzing a situation, understanding the forces at play, and collaboratively imagining initiatives that meet community needs and generate meaningful impacts. One of their core principles is 'measure what matters'!

In terms of tools that might be helpful, I want to share something called The Critical Assessment Framework, which was developed by the Canadian Working Group on Museums and Sustainable Communities, which operated from 1999 to 2006 (Fig. 9). I was one of the founders of the group. This early sustainability tool was designed to encourage museum program development teams in museums to discuss how well a proposed program would generate different types of cultural impacts, at a range of levels—specifically, individuals, communities, organizations (especially the museum, but also partner organizations), as well as regions and global systems. As museum programming teams use the tool, it can help them to think outside-the-box about program ideas, and how well they may generate cultural impacts that contribute to sustainability. The tool has a rating function that encourages team members involved in a particular project to reflect individually how well they think the initiative will generate positive impacts. This is not a tool for assessing impacts, but rather to bring all members of a team into a common understanding of what success might look like at various levels of the proposed project. All this is helpful for generating understanding of the complexity of this work and especially how public participants can function as co-creators of meaning and impacts.

The most recent tool I will share with you today is something called the *Inside-Outside Model: Museums Planning for Cultural Impacts* (see Fig. 10). As part of my work with the Sustainability Task Force for the American Association for State and Local History (AASLH), I could see that many museum professionals who have a growing interest in sustainability were gravitating towards one aspect of what is required to foster a culture of sustainability. By this I am referring to the many people who prioritize the 'greening' of existing museum operations over the larger, holistic approach of fostering a culture of sustainability. 'Greening' is a generic term for reducing carbon

Critical Assessment Framework

Douglas Worts - WorldViews Consulting – May 27, 2018 (updated)

Generating criteria for assessing initiatives aimed at 4+ levels of adaptation

(Rating performance without indicators is subjective. Discussions will help generate criteria.)

When considering public program initiatives at a museum (e.g. on-site, off-site, collaborative, online, etc.) ask how well each member of the planning team thinks the proposed program:	Poorly	1	2	3	4	Well	5	N/A
Personal Level (members of community)								
Contributes to and/or generates new insights (specify nature of insights)								
Encourages personal reflection								
Stimulates curiosity								
Stimulates imagination and creativity								
Enhances ability to think critically and creatively								
Leads to examination and clarification of personal & collective values								
Generates understanding re: relevance and makes connections to daily life								
Affirms, as well as challenges and deepens personal identity								
Generates an enhanced sense of place for individuals and groups								
Helps individuals to be better able to deal with complexity and uncertainty								
Enhances individual sense of and motivation for responsible action								
Increases intrinsic motivation of individuals to reflect, discuss and act								
Community Level								
Addresses vital & relevant needs/issues/opportunities in community								
Generates information and connection at the personal, community, provincial/territorial, national and global level								
Engages a diverse public in generating a common vision for the future								
Supports the voice(s) of diverse groups – effective forum for discussion								
Creates social interactions, dialogue and debate								
Acts as an effective catalyst for action that affects the community								
Stimulates intergenerational interactions								
Links existing community groups to one another								
Creates or enhances long term collaborative relationships								
Leads to empowered community groups								
Enhances the credibility of all involved (the group/community)								
Results in products & processes that have tangible impact in the community								
Organizational Level (museum and other organizations)								
Is grounded in the evolving cultural needs/opportunities of community								
Challenges personal and institutional assumptions (NB-but with support)								
Is guided by clearly articulated goals, objectives & outcomes (feedback)								
Uses the most effective vehicles for achieving goals & new org learning								
Creates a community of learning within staff, volunteers and public								
Integrates regional/global scientific, local and traditional knowledge (relevant links)								
Acts as catalyst for partnering community organizations								
Contributes to fiscally and socially responsible operations								
Helps clarify the skills/resources needed to achieve goals								
Provides useful data and insights for ongoing strategic planning								
Regional/Global Level								
Addresses issues of global significance – with links to local realities								
Fosters global ecosystem health (SDGs) – climate, water, soil, air, etc.								
Reduces global ecological footprint (SDGs) – insights into human activity								
Enhances regional/global social/economic justice & equity (SDGs) -innovate								
Fosters public consciousness of global impacts of local choices								

© The Working Group on Museums and Sustainable Communities - June 2006 (adapted May 2018)

For elaboration, see: Worts, Douglas, "Measuring Museum Meanings: A Critical Assessment Framework", *Journal of Museum Education*, vol 31, #1, Spring 2006, Walnut Creek, California: Left Coast Press, pp. 41-49.

More info on the Working Group at www.WorldViewsConsulting.ca

Fig. 9. Critical Assessment Framework, a tool for museum planners of public engagement initiatives. Developed by the Canadian Working Group on Museums and Sustainable Communities, 2004-6, and further developed by Douglas Worts since then. For more info, see <http://worldviewsconsulting.ca/welcome/working-group/>.

emissions and waste, eliminating single-use plastics, increasing energy efficiency, buying local and so on—all of which are extremely worthy activities. However, I was aware that such focuses on corporate operations and day-to-day functions of museums were not helping museums to see that the main challenges of climate change and our overall culture-of-unsustainability are rooted in the living culture, far beyond the scope of a museum's corporate operations. Let me be clear: this is not an either/or situation—it is an 'and' situation. But the danger of looking inward at corporate operations, can lead to a belief that a museum must first make itself 'sustainable' before it tries to export these ideas into the community. From my perspective, the core challenge of museums involves a shift from producing *outputs* (like exhibits, programs, publications, etc.) to fostering and co-creating *outcomes*, or impacts, within the living culture. These are two very different processes. In the best sense, they should work together. It is worth noting that making status quo museum operations 'less bad' will take both time and money—and there are opportunity costs to spending time focused on only one aspect of a complex, systems-based problem. While we collectively face the need for cultural transformation

that can pre-empt the terrifying impacts of climate change, retrofitting the old exhibit- and program-driven museum may take time and money that may not be available again. It may be that some of our assumptions about what makes a museum what it is, need to be fundamentally re-thought. Which means that sustainability work should be planned holistically, with systems-level, cultural change in mind. Corporate efficiency is important, especially when it is an integrated part of the larger process of planning for cultural change and adaptation.

For decades, I've found myself regularly discussing with my colleagues the need to encourage museum professionals to think about the big picture, and how museums can help to transform the living culture. But people want to solve concrete problems, not necessarily facilitate creative, cultural adaptation. The result of all this was my creation of the Inside-Outside Model. It places both museums and the living culture within the expansive context of the environment. At the center is the museum, which has at its disposal staff, collections, buildings, partners, visitors, members and so on. It is in the Inside area where 'greening' activities take place. From a corporate perspective, the impact of making the museum

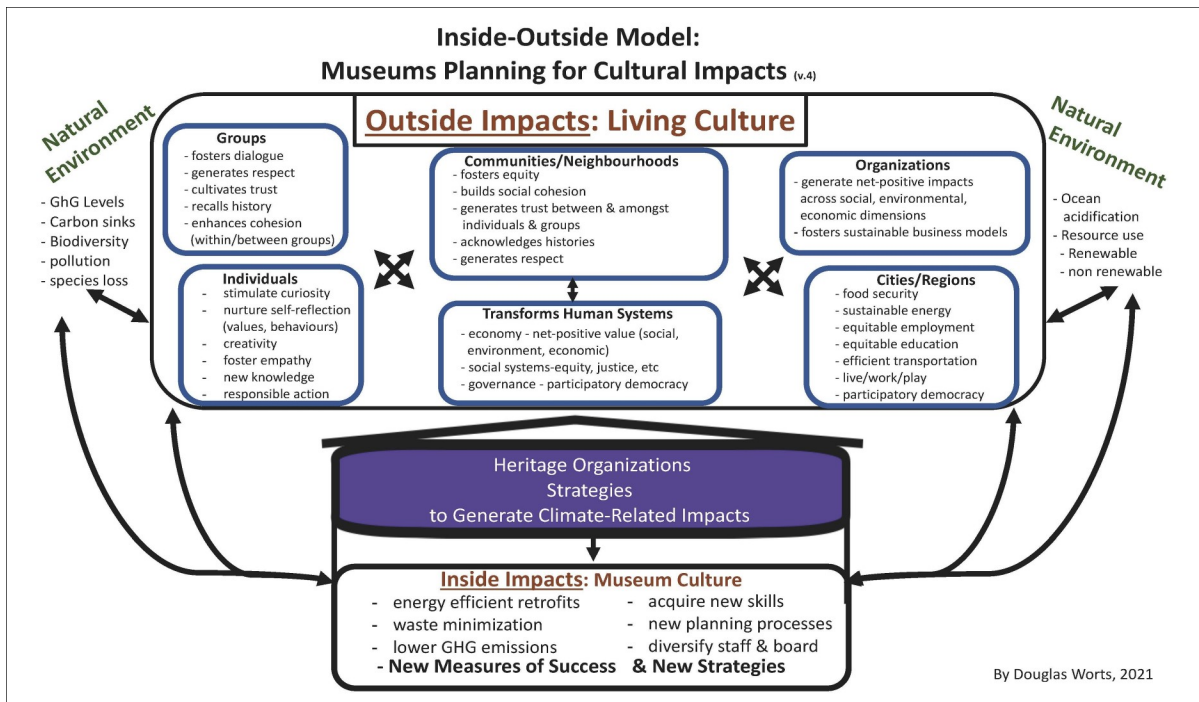


Fig. 10. Inside-Outside Model: Museum Planning for Cultural Impacts, developed by Douglas Worts (2018-21).

run more efficiently and effectively, with fewer unintended outcomes (like carbon emissions, waste, racial inequity and more), makes total sense. However, when one looks at where the big cultural challenges of our day are located—specifically, across communities, organizations, governance systems and throughout the planet’s natural systems—it is very hard to see what the ‘theory of change’ is that results from corporate ‘greening.’ The Inside/Outside model invites museum professionals to imagine how they can generate experiments that are designed to operate at cultural/societal leverage points, using innovative projects and partnerships that are capable of triggering cascading change across the culture. When museum professionals embrace both the inside and the outside dimensions of the model, then the potential to become catalytic agents of cultural change and adaptation emerges. Designing efficient operations that do not cast long and unconscious shadows is important. The heaviest lifting, however, is to be found in the work of being an agent of cultural transformation.

I hope that this presentation has been helpful in clarifying some of the many issues related to how museums can become catalysts of cultural adaptation in our fast-changing world.

As you proceed through the rest of the conference I would encourage you to think about

how sessions are addressing the cultural needs of our times through both ‘inside’ and ‘outside’ lenses. The links between Inside and Outside lenses are foundational. When inside and outside aspects of the model work together, museums have the potential to make their impacts more meaningful and impactful. As you actively engage in the conference sessions, watch for ways in which systems-thinking and the Sustainable Development Goals are making a difference. Share your thoughts with colleagues about how museums can seize their untapped potential as cultural catalysts. Now that humanity has arrived at the Anthropocene, the muses have never been more necessary for humanity. We have created the messes that surround us—and we also have the ability to create new pathways into a flourishing future. In a spirit of generosity and collaboration, museum professionals have the opportunity to become facilitators of human creativity. Drawing on the wisdom and insights of the ages, the knowledge of experts, and the imagination of artists, museums can help ignite the human impulse to transform our present and future as we strive, with humility and conviction, to foster a ‘culture of sustainability.’

Thank you!

Notes

1. For more information on Douglas Worts, see www.worldviewsconsulting.ca.
2. For more information on the recent discovery of unmarked graves near a ‘Residential School’ for Indigenous Children, see <https://www.cbc.ca/news/canada/british-columbia/kamloops-residential-school-findings-1.6084185>.
3. Treaty of Waitangi – A glimpse into how the Te Papa Museum approaches the idea and the vision of biculturalism, <https://www.tepapa.govt.nz/sites/default/files/22-bicultural-governance.pdf>.
4. *Our Common Future: Report of the World Commission on Environment and Development*, United Nations, 1987, https://en.wikipedia.org/wiki/Our_Common_Future.
5. Anthropocene – see <https://en.wikipedia.org/wiki/Anthropocene>.
6. See <https://livingplanet.panda.org/en-us/>.
7. Nancy Bradgate, *The Great Acceleration*, <https://futureearth.org/2015/01/16/the-great-acceleration/>.
8. Kate Raworth, *Doughnut Economics: 7 Ways to Think Like a 21st Century Economist*

(www.kateraworth.com).

9. For more information on Ecological Footprint and the Global Footprint Network, see <https://www.footprintnetwork.org>.

10. For more information on Earth Overshoot Day, Move the Date and 100 Days of Possibility, see <https://www.overshootday.org/>.

11. For more information on wealth inequality, see <https://www.oxfam.org/en/press-releases/worlds-billionaires-have-more-wealth-46-billion-people>.