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# Who should read this

This six-part series is for prospective and current CPAs who want to better understand sustainability and prospective roles – as individuals and professionals they play – in taking action, showing courage and providing clarity and oversight of financial and non-financial information as Canada transitions to a low-carbon economy. The series is a summary of the [2021 MMPA Conference on Sustainability: A Call to Action](#). Its six parts and resources are relevant for CPAs exploring the challenges and opportunities of sustainability for their organizations and clients.

Download and read the following free papers to help lead sustainability efforts as a CPA.

## **[Part 1: Sustainability: Imperatives](#)**

Learn about the drivers of sustainability and why you should act now.

## **[Part 2: Sustainability: Definitions and perspectives](#)**

Explore the definitional divide when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

## **[Part 3: Sustainability metrics: Can accountants save the world?](#)**

Understand the metrics that hurt sustainability and others that should be considered. This section looks at valuation beyond monetization and warns against oversimplification.

## **[Part 4: Sustainability reporting and assurance: Accountants take the lead](#)**

Study the powerful trend to consolidate and standardize sustainability metrics and reporting – a trend backed by capital markets and international business. Can accountants, through the new International Sustainability Standards Board (ISSB), convince regulators to change the rules of the game?

## **[Part 5: Canada's global commitment: Getting to net zero](#)**

Examine Canada's global sustainability commitments, Chartered Professional Accountants of Canada's (CPA Canada's) role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

## **[Part 6: Calls to action for future-ready CPAs](#)**

Learn what we can do as professionals and individuals to move toward more sustainable living. The new pre-certification qualifications for the Canadian CPA designation point the way toward more sustainable economies.

# Introduction

In a six-part series of 10-minute reads, **Sustainability: A Call to Action** presents highlights from the [2021 MMPA conference](#)<sup>1</sup> hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\)](#), [University of Toronto at Mississauga \(UTM\)](#). The series summarizes presentations from nine leading academics, practitioners and thought leaders exploring opportunities, challenges and contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

The series' goal is to help current and prospective Chartered Professional Accountants (CPAs) understand what sustainability means, its challenges and opportunities as Canada transitions to a low-carbon economy, and the role they can play in that transition.

We present this publication on the 2021 MMPA Conference Sustainability: A Call to Action in collaboration with an important academic stakeholder, the MMPA Program at the University of Toronto.

**“The University of Toronto is pleased to partner with Chartered Professional Accountants of Canada [CPA Canada] to delve deeper into this very important topic that is increasingly defining the way we live and work,” says conference speaker Irene Wiecek, director, MMPA & BIGDataAIHUB. “The area of sustainability is shaping how the CPA profession is evolving. We need to continue to work together as we forge the new and more agile learning environment for our existing and future CPAs. Sustainability affects us all.”**



To this end, in March 2022, after two years of research and consultation, CPA Canada released the new qualifications for the Canadian CPA designation: Competency Map 2.0 (CM2.0). Throughout this series, we refer to **sustainability-related excerpts** from the profession's new competency map.

CM2.0 is an agent of change for the accounting profession in Canada. It establishes the body of skills and competencies required of newly certified CPAs and helps existing CPAs understand how the profession is evolving so they won't be left behind. CPAs need to be agile to remain relevant. They need to be future-ready.

<sup>1</sup> The MMPA Program hosts a one-day [MMPA Annual Conference](#) on topics that are particularly important and timely for business and/or the accounting profession.

CPA Canada’s collaborative publications explore impacts of many topics on the CPA profession. This six-part series adds to CPA Canada’s wealth of education, information and [resources related to sustainability](#).

**“Sustainability is the now and the future. CPAs are rooted at the heart of creating resilient value for their organizations and have a significant role to play to ensure the concepts of sustainable development, including accounting for all the capitals, is maintained for the longer term,” says speaker Davinder Valeri, director, Strategy, Risk and Performance, CPA Canada.**

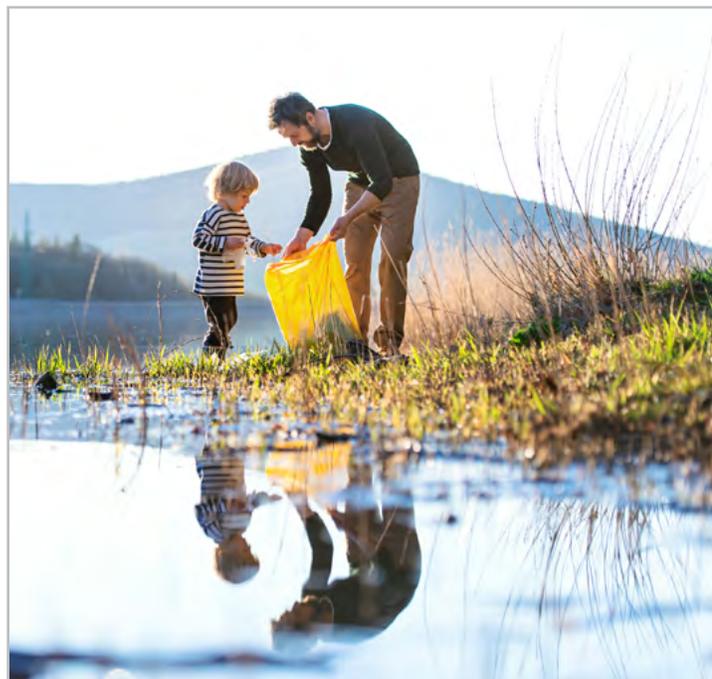
We encourage you to visit the [conference website](#) for speakers’ biographies, on-demand videos of the speakers’ full talks, slide decks and Q&A sessions.

Along with the [MMPA Program](#), CPA Canada extends hearty thanks to the conference speakers, organizers and supporters.

This series is not a call for **hope**, it is a call for **action**. Whether you are a prospective or current CPA, understand sustainability’s complexities as part of your continuous learning. Become future-ready.

**“ ... the generations before you brought us to where we are today. Unfortunately, your generation and the future generations are going to have to deal with those mistakes.”**

**SPEAKER TERRY GOODTRACK**



## PART 1

# Sustainability: Imperatives

In Part 1 of this six-part series of 10-minute reads, we present highlights of the [2021 MPPA Conference](#)<sup>1</sup>, **Sustainability: A Call to Action**, to explore opportunities, challenges and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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Here, **Part 1: Sustainability: Imperatives** looks at the drivers of sustainability and why you should act now.

**Part 2: Sustainability: Definitions and perspectives** looks at the definitional divide when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

**Part 3: Sustainability metrics: Can accountants save the world?** shows metrics that hurt sustainability and others that should be considered. It looks at valuation beyond monetization and warns against oversimplification.

**Part 4: Sustainability reporting and assurance: Accountants take the lead** looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new International Sustainability Standards Board (ISSB), accountants may convince regulators to change the rules of the game.

**Part 5: Canada's global commitment: Getting to net zero** examines Canada's global sustainability commitments, CPA Canada's role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

**Part 6: Calls to action for future-ready CPAs** focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the Canadian CPA designation and steps to take toward more sustainable economies.

Here, **Part 1: Sustainability: Imperatives** looks at the drivers of sustainability and why you should act now. Keynote speaker **Andy Hoffman** outlines reasons that the time to just think about sustainability has passed.

1 The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataIHUB](#) at the [Institute for Management & Innovation \(IMI\), University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

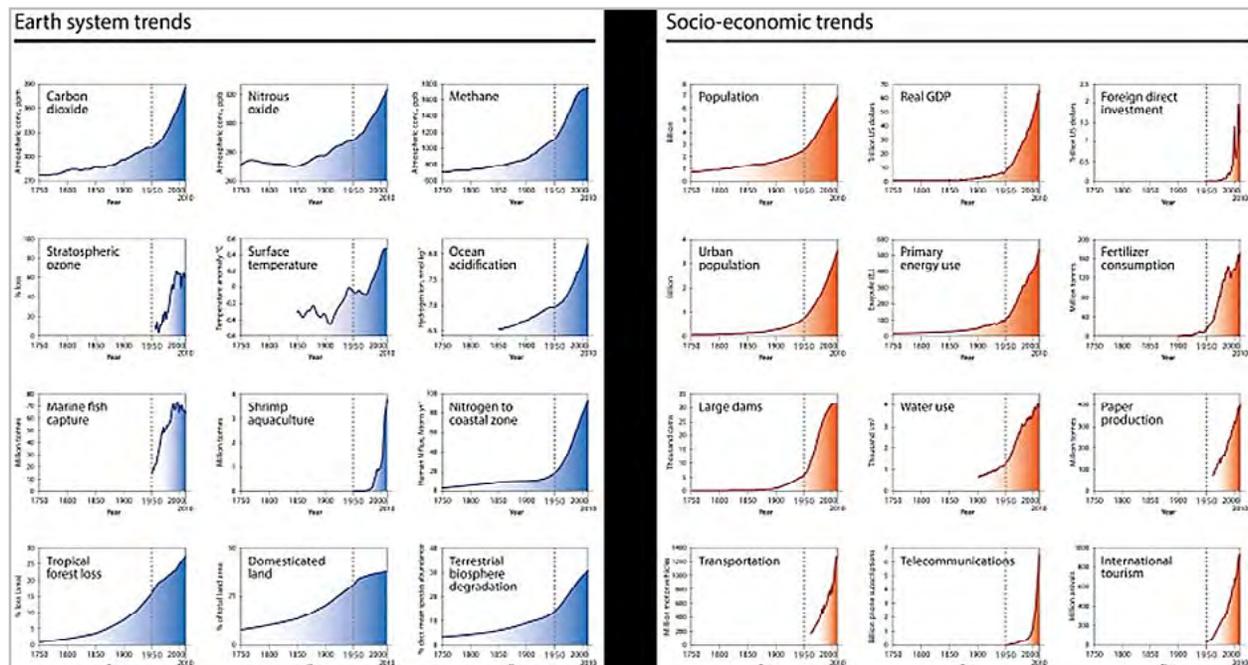
## Anthropocene: The age of humans

“In 1961, when I was born, there were three billion people on Earth. Today, there are 7.5 billion people. By 2050, there will be 10 billion people. That means it took Homo sapiens about 15,000 years to go from zero to three billion people. And, over my short lifetime, we’ve more than doubled that number. If I live to 2050, we will increase by that much again.”

ANDY HOFFMAN

Since the end of the Second World War, living standards and life expectancy have risen around the globe. These improvements have resulted in steep upward-climbing trends (Figure 1) in world population, water use, fertilizer consumption, methane and carbon dioxide (CO<sub>2</sub>) production and more that have led us to the crises we’re in today, says speaker Andy Hoffman. The dotted vertical line in Figure 1 marks the year **1950**, the official start of what scientists are calling the **Anthropocene**: the age of humans, an exact period where we move from the **Holocene Epoch**, the time since the last ice age, to a new “geological time interval ... **profoundly altered by human impact**” (Subcommission on Quaternary Stratigraphy, 2019). (Emphasis added.)

FIGURE 1: EARTH SYSTEM AND SOCIO-ECONOMIC TRENDS



Source: Andy Hoffman after Steffen, et al., 2015

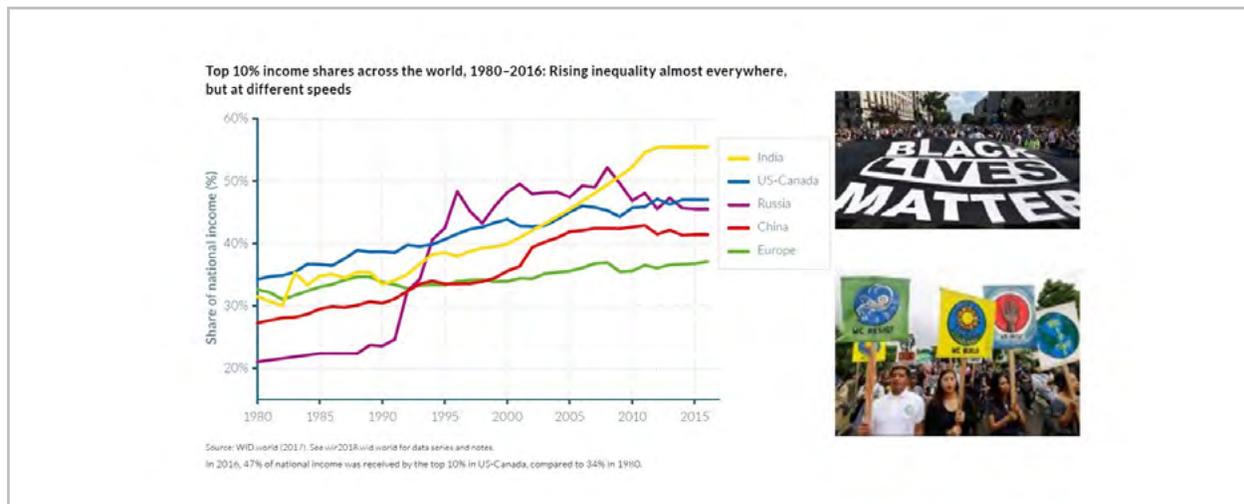
## Social inequities rise

The researchers who first introduced the tables in Figure 1 said, “Treating humanity as a whole, as discourse about the Anthropocene does, masks important equity issues ...” (Steffen, et al., 2015). For example, “most of the population growth has been in the non-[Organisation for Economic Co-operation and Development](#) (OECD) world but the world’s economy (GDP) is still strongly dominated by the OECD world” (Steffen, et al., 2015).

Income inequality is increasing globally over time (Figure 2). For example, in the U.S. and Canada, the top 10 per cent of earners accounted for about 47 per cent of national income in 2016, compared to 34 per cent in 1980 (Alvaredo, F. et al., 2019, p. 12). The COVID-19 pandemic spotlighted long-time social injustices in diversity, inclusion and fair distribution of benefits and burdens (Figure 2).

The disparities are unsustainable.

**FIGURE 2: INCOME, SOCIAL AND CLIMATE CHANGE INEQUALITIES**



Source: Andy Hoffman (right) and Hoffman (chart) after Alvaredo, 2019

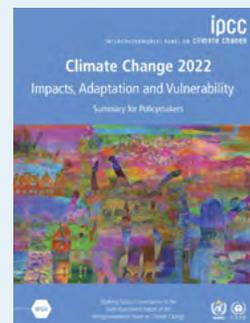
## Intergovernmental Panel on Climate Change (IPCC)<sup>2</sup> | 2022 Report

**February 2022.**

Overshadowed by news of Russia's invasion of Ukraine, the IPCC issued its sixth [report](#) on the science related to climate change. More than in its earlier documents, this report has a strong focus on **coupled systems and their interactions**: climate, ecosystems and their biodiversity and human society (IPCC, 2022). (Emphasis added.)

[Climate Change 2022: Impacts, Adaptation and Vulnerability](#) says, “Human-induced climate change, including **more frequent and intense extreme events**, has caused widespread adverse impacts and related losses and damage to nature and people, beyond natural climate variability. Some development and adaptation efforts have reduced vulnerability. Across sectors and regions, **the most vulnerable people and systems are seen to be disproportionately affected**. The rise in weather and climate extremes has led to some **irreversible impacts as natural and human systems are pushed beyond their ability to adapt**” (IPCC, 2022). (Emphasis added.)

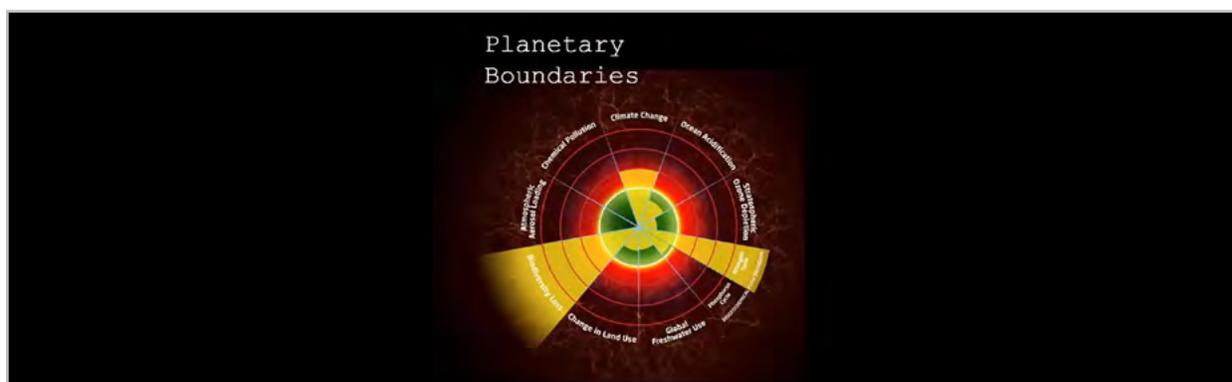
“The report is not just a diagnosis of malaise. It is, in the words of António Guterres, the UN secretary-general, an atlas of human suffering” (The Economist, March 5, 2022).



## Environmental boundaries crossed

In 2009, nine **planetary boundaries** were introduced as a new approach to make people think about global sustainability. “Transgressing one or more planetary boundaries may be **deleterious or even catastrophic** due to the risk of crossing thresholds that will trigger **non-linear, abrupt** environmental change within continental- to planetary-scale systems” (Rockström et al., 2009).<sup>3</sup> (Emphasis added.)

**FIGURE 3: PLANETARY BOUNDARIES**



Source: Andy Hoffman after Rockström et al., 2009

- 2 The [Intergovernmental Panel on Climate Change \(IPCC\)](#), with 195 member countries, was formed in 1988 by the United Nations Environment Programme and the World Meteorological Organization. It is the United Nations body for assessing the science related to climate change.
- 3 The boundaries were selected through defining “what constitutes unacceptable human-induced global environmental change.” They are a function of the “social and ecological resilience of impacted societies” and the degree of risk humanity is willing to take in transgressing the boundaries. (Rockström et al., 2009, Figure 3).

“We have already crossed **three** of those boundaries: biodiversity loss, levels of nitrogen and climate change,” warns Hoffman ([Figure 3](#)).

## ESG investing pressure

**“Investors around the world are plowing tens of billions of dollars a year into companies and funds that tout superior environmental, social and governance (ESG) attributes. Many assume they’re doing good for the environment or gender equality as they save for retirement.”**

JONES & MILSTEAD, 2022

Sustainable investing has grown at a rapid pace (Figure 4), to US\$17.1 trillion in 2020 (US SIF, 2021). In Canada, assets in ESG-themed mutual funds and exchange-traded funds (ETFs) doubled through 2021 to \$34 billion (Jones & Milstead, 2022).

However, Tariq Fancy, BlackRock’s former chief investment officer for sustainable investing, says that ESG investing is “a giant placebo” geared more to helping professional investors improve risk-adjusted returns than to promoting the global action required to solve complex, long-term threats such as climate change and inequality” (Jones & Milstead, 2022).

While the demand for sustainable investments has forced the corporate sector to pay more attention to sustainability issues, speaker Andrew King argues there is no reliable link between corporate sustainability and future stock return. King’s upcoming research paper (Berchicci & King, 2022) replicates and refutes “... one of the most important papers on ‘sustainable investing’ [Khan, Serafeim and Yoon (2016) ... and shows] that the original estimate of returns (300 to 600 additional basis points per year) is a statistical artifact caused by mismeasurement of corporate sustainability.”

**FIGURE 4: RAPID GROWTH IN SUSTAINABLE INVESTING**



Source: US SIF, 2021

## Call to action: What future-ready CPAs need to know

“As a profession, we have the opportunity to apply our unique lens to the seismic shifts in society and the world at large. How we address issues and harness opportunities like automation, AI, social and geopolitical pressures, blockchain technologies and ESG initiatives today will further cement our roles as the leaders of tomorrow.”

CPA CANADA, 2022

“[Leading the Way - Competency Map 2.0 - The path forward for our profession](#) captures skills and competencies needed as business, society and technology rapidly evolve. It is the foundation for changes to education programs, experiential learning and assessments for future-ready CPAs (prospective or practising),” says speaker [Irene Wiecek](#) of the new pre-certification qualifications for the Canadian CPA designation. “It reflects themes important in its creation, among them emerging opportunities for the accounting profession in sustainability, ESG, data governance, value creation, leadership, systems thinking and continuous learning.” More details about the competency map appear in [Part 6](#) of this series.

### [Leading the Way - Competency Map 2.0 - The path forward for our profession](#)

CM2.0 sustainability, including ESG, includes understanding how we sustain our environment, our people, our organizations and our economy over the longer term.

It includes understanding:

- our planetary boundaries and ecosystems
- diverse perspectives
- how to create and measure long-term value for stakeholders
- the significance of natural assets held, managed and regulated by the public sector (CPA Canada, 2022,)



[Part 2](#) in this six-part series looks at the **definitional divide** when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

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## PART 2

# Sustainability: Definitions and perspectives

In **Part 2** of this six-part series of 10-minute reads, we present highlights of the [2021 MMPA Conference](#)<sup>1</sup>, **Sustainability: A Call to Action**, to **explore** opportunities, challenges and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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[Part 1: Sustainability: Imperatives](#) looks at the drivers of sustainability and why you should act now.

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In this section, keynote speaker [Andy Hoffman](#) explains sustainability's continuing evolution and provides some definitions. Speaker [Terry Goodtrack](#) compares and contrasts the dominant view of sustainability to stewardship and the Indigenous perspective, while [Andrew King](#) provides what he describes as a contrarian view.

Is the market the solution to sustainability? Keynote speaker [Andy Hoffman](#) explains market shifts and market transformation.

1. The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\)](#), [University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

## Definitions

The Brundtland Commission<sup>2</sup>, in the 1987 United Nations' (UN) report *Our Common Future*, defined sustainable development as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” While the UN continues to use this definition, keynote speaker **Andy Hoffman** describes sustainability as a broader term about “managing resources without depletion.”

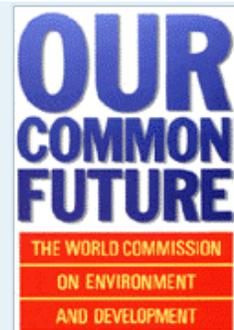
Even though the warnings of *Our Common Future* have gone largely unheeded, Hoffman says that “public awareness on these issues today is fundamentally different from 1987.” [Figure 1](#) shows a sample of organizations measuring or describing sustainability that reflect “sustainability’s evolution”. (For more on sustainability measures and reporting, see [Part 3](#) and [Part 4](#) of this series.)

### A generation and a half of deaf ears?

In 1987 the Brundtland Commission said, “We are serving ... an **urgent notice** ... that the time has come to [make] the decisions needed to secure the resources to sustain this and coming generations.

“**[T]he Commission’s hope for the future** is conditional on decisive political action now to begin managing environmental resources to ensure both sustainable human progress and human survival.”

(Brundtland, 1987)



2 Also called the Brundtland Report after Gro Harlem Brundtland, former prime minister of Norway who chaired the Commission.

FIGURE 1: SUSTAINABILITY'S CONTINUING EVOLUTION



Source: Andy Hoffman

### Weak versus strong sustainability

Weak sustainability, defined in purely economic terms, is the idea that **human capital** and **natural capital**<sup>3</sup> are interchangeable, says Hoffman. So, a natural resource stock can go down – say we extract coal, even by removing mountaintops (Figure 2) – as long as human capital goes up (i.e., we hire humans, we produce electricity from the coal and human beings benefit from that). This type of practice will continue for as long as it is economical to do so (i.e., until accounting includes the cost of the use of natural resources and production of residuals such as atmospheric emissions, debris, ecosystem disruption, environmental degradation, health effects, etc.). (See Part 3 for environmental-economic accounting.)

3 How companies create financial value is dependent to a lesser or greater degree on six capitals: financial, human, social, intellectual, manufactured and natural capital, which in turn may be impacted by the company's operations and its trade-offs between them. (CPA Canada, 2015, p. 17). For more discussion on the capitals see Part 3.

**FIGURE 2: MOUNTAINTOP REMOVAL: COAL SURFACE MINING**

Source: Human Rights Watch, 2018

Speaker **Andrew King** adds that “A well-regulated economy should be weakly sustainable,” and that the Brundtland Commission’s definition of sustainable development (i.e., meeting “the needs of the present without compromising the ability of future generations to meet their own needs” [see [Part 1](#)]) is also a form of weak sustainability.

Hoffman says that when human capital and natural capital are complementary but **not** interchangeable – the idea that there are certain things that nature does for us that human capital cannot replace – that’s **strong sustainability**. The concept of strong sustainability requires **systems thinking** and an understanding of coupled systems and their interactions: climate, ecosystems and their biodiversity, and human society (IPCC, 2022). (See [Part 1](#).)

King reframes the concept this way: “Strong sustainability says there are certain things in the natural world that have a right to exist regardless of their impact on human welfare.” For example, if we say, “We’re going to preserve the last remaining black-footed ferrets even if it takes a trillion dollars to do so, that’s strong sustainability.” However, to King, “That’s hard to justify from an ethics point of view. I think about things – perhaps wrongly – in a human way; about **human beings and maximizing welfare.**”

An omission in King’s admittedly hyperbolic example is that a single species can be a proxy for biodiversity or an ecosystem under threat. However, he points out that the same species, for example a fox, might contribute to the sustainability of an ecosystem to which it is native (parts of North America) but lead to the disruption of an ecosystem where it is introduced (e.g., Australia).

### Debate and trade-offs

**“The fundamental debate regarding sustainable development is whether we choose to adopt a strong or a weak conception of sustainability.”**

PELENC, BALLETT, & DEDEURWAERDERE, 2015

While the debate continues on weak versus. strong sustainability (see Figure 3 for more differences between them), instead of thinking in terms of either/or, Hoffman suggests, thinking in terms of certain places where weak sustainability applies and certain places where strong sustainability applies.

**FIGURE 3: STRONG VERSUS WEAK SUSTAINABILITY**

Main differences between weak and strong sustainability		
	Strong sustainability	Weak Sustainability
<b>Key Ideas</b>	The sustainability of natural capital by other types of capital is severely limited	Natural capital and other types of capitals (manufactured etc.) are perfectly substitutable
<b>Consequences</b>	Certain human actions can entail irreversible consequences	Technological innovation and monetary compensation for environmental degradation
<b>Sustainability issue</b>	Conserving the irreplaceable « stocks » of critical natural capital for the sake of future generation	The total value of the aggregate stock of capital should be at least maintained or ideally increased for future generation
<b>Key concept</b>	Critical natural capital	Optimal allocation of scarce resources
<b>Definition of thresholds and environmental norms</b>	Scientific knowledge as input for public deliberation (procedural rationality)	Technic/scientific approach for determining thresholds and norms (instrumental rationality)

Source: Adapted from Mancebo, 2013

Source: Pelenc, Ballet & Dedeurwaerdere, 2015

King proposes thinking in terms of **trade-offs**. He points out that lithium mining is very polluting and causes ecosystem fragmentation and disruption, one of the seriously transgressed **planetary boundaries**. Yet lithium is a key element in rechargeable batteries that are essential for electric vehicles, which, in turn, will play a significant role in reducing greenhouse gas (GHG) emissions to fight climate change.

Too little lithium mining could be detrimental to GHG reduction, yet too much could have significant negative environmental impact. King asks, “What is the **marginal effect** of these activities on welfare? That’s what I believe we have to measure if we’re interested in corporate sustainability.” (For more on this topic, see [Part 3](#), under Measure Limitations.)

This brings us to why this evolving term, sustainability, seems dependent on **perspective**.

## Perspectives

Any discussion about sustainability requires consideration of value creation (or destruction), economic, environmental and social issues as the following perspectives show.

### Human-centric view

The 1987 Brundtland Commission report [Our Common Future](#) “... is strongly about inter-generational equity and it’s fairly anthropocentric,” says Hoffman. “It looks at the needs of **human beings**. So, it really brings up an interesting tension: that sustainable development is all about maintaining long-term economic and **human well-being**.” For example, it reads, “... [S]ustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are made consistent with future as well as present needs” (Brundtland, 1987).

Andrew King, along with co-author Ken Pucker says, “... Our present economic system is based on the right of each individual to decide how best to pursue happiness. If a person decides that more value is created by flying for a vacation than for a job interview, he or she can do so. And these values, revealed by **individual choices**, cause the economic system to adapt to deliver what people value. Indeed, it is the effective delivery of these human desires that provides the moral underpinning of our free-market system” (King & Pucker, 2021). (Emphasis added.)

Because of this human-centric view, Hoffman says, “We have stumbled into the Anthropocene.” (See [Part 1](#).) He believes concerns about the Anthropocene and its challenges ahead are captured by Stephen Jay Gould, an American evolutionary biologist and historian, who said:

**“We have become, by the power of a glorious evolutionary accident called intelligence, the stewards of life’s continuity on Earth. We did not ask for this role, but we cannot abjure it. We may not be suited to it, but here we are”**

GOULD, 1987.

To speaker **Terry Goodtrack**, Gould seems to say that stewardship has been thrown upon us. “But ... Indigenous Peoples never view it that way. We see our stewardship role not as something that happened to us by accident, but something that we’re **part of**.” (Emphasis added.)



### Stewardship view

Goodtrack compares the dominant view of sustainability, which he sees as very close to the weak sustainability definition described earlier, to the Indigenous view. Figure 4 “ ... shows clearly the difference in language used and certainly shows that to Indigenous Peoples, sustainability has a deeper meaning,” he says.

**FIGURE 4: DOMINANT VERSUS INDIGENOUS VIEW OF SUSTAINABILITY**

	Dominant View of Sustainability	Indigenous View of Sustainability
Basic definition of sustainability	Enduring well-being of human societies and communities	Overall enduring well-being
Root assumptions	Dualistic worldview, as reflected in nature’s objectification and the human nature divide (emphasis on separation)	Interconnection and interdependence of all elements of the universe (emphasis on unity and relationality)
Human relationship with nature	Utilitarian attitude toward nature, essentially oriented toward a “regulated” exploitation	Sense of respect, giving and reciprocity, as expressed in the idea of caretaking or guardianship
Key notions and metaphors	Development Resources, Commodities, Ecosystem services, Nature benefits to people	Living well, Gifts, Relatives, Mother Earth

Source: Terry Goodtrack after Mazzochi, 2020

In the dominant view (Figure 4), humans are distanced from nature and see it as a resource to be exploited. By contrast, the Indigenous view says that humans are part of nature, interconnected, not separate. Nature gives but giving back and caretaking of Mother Earth are essential to overall well-being, not just that of humans.

## Indigenomics

“**Indigenomics** is a collective response to the violent removal of Indigenous economic world-view and the systemic exclusion of Indigenous Peoples from the mainstream economies that we know and experience today.

“It is a system that reminds us that **the intention of our Indigenous economies is to foster our well-being, to live in ecological balance and prosperity, and to transfer Indigenous concepts of balance, wealth and generosity across generations.**”

“For the first time ever, economics from an Indigenous world-view is being reclaimed within the modern economic space – the narrative of growing Indigenous business success is expected to skyrocket over the next decade. A new multibillion dollar agenda is on the horizon and the First Peoples of these lands are the drivers of new partnerships, investment and long-term growth.” Carol Anne Hilton, founder of [Indigenomics Institute](#) (Lacerte & Hilton, 2020). (Emphasis added.)



## Indigenomics

Author and founder of the [Indigenomics Institute](#), Carol Anne Hilton<sup>4</sup> says this of Indigenous view: “This is relational economics. The relational economy forms the foundation for Indigenous ways of being, a human state of being that is relational to nature, to the environment, to ourselves, to each other, to the cosmos and to time and space itself. It forms with it a powerful insight into ecological economics and modern economic development. Everything is connected. This is **Indigenomics**” (Hilton, 2021).



“**Indigenomics draws on ancient principles that have supported Indigenous economies for thousands of years and works to implement them as modern business practices.**”

INDIGENOMICS INSTITUTE

## Four beliefs

Through a series of stories, speaker Terry Goodtrack conveys four values linked to Indigenous beliefs and world-views and discusses the difficulties in reconciling the views of the dominant culture with Indigenous views.

4 Carol Anne Hilton is founder of the [Indigenomics Institute](#), and author of [Indigenomics: Taking a Seat at the Economic Table](#).

***Sustainability belief #1: Only take what you need and try to give back more than you take***

As an Indigenous community, we have difficulty aligning this belief with the capital accumulation and economic wealth model of the broader society that we operate within.

“In the modern context, our Indigenous communities are focused on growing wealth through community economic development corporations. I have heard people speak about how we should create sovereign wealth funds with capital that lasts for generations, especially for communities that have non-renewable resources,” says Goodtrack.

“This is an important and perhaps defining issue for our time as Indigenous Peoples. Does the means justify the ends? Does short-term pain in fact lead to long-term gain? Do we have limits or stop measures in place if we choose business opportunities that do not align with our values and our beliefs or is it a free-for-all? (See Community focus).

**Community Focus**

“Our only focus cannot be solely on capital accumulation without due consideration for improving social outcomes...What is the point of continued growing capital on the one hand if on the other hand we have growing suicides in our communities?”

Terry Goodtrack

(recounting the words of George Lafond, former tribal representative of the Saskatoon Tribal Council)

“On the flip side of that coin you could argue, ‘How else can we accumulate capital that can be deployed to social outcomes?’ Some may argue these industries employ Indigenous Peoples who are part of the Indigenous economy,” says Goodtrack.

**Building social capital with Indigenous communities**

“How do you go about building trust ... ? It starts with understanding [that] Indigenous groups are so diverse; you can’t blanket us all as having the same interests. There are many ongoing debates, pipelines for one. Whether for or against, there are many Indigenous people that hold values on both sides. You need to understand the individuals or groups you’re working with and not just the ‘Indigenous idea.’”

Carter Wilson, CPA Manager, MNP Winnipeg; Member of the Peguis First Nation (Mitchell & Wilson, 2022)

***Sustainability belief #2: Mother Earth provides for us and we must treat it in a respectful manner***

“This belief deals with being stewards of the land. Indigenous world-views begin with the land – Mother Earth,” says Goodtrack. “Protecting the land and protecting the environment, including water. We do not own the land. We have a stewardship role in it and we share it with all other beings.”

### ***Sustainability belief #3: Everything is interconnected. As stewards of the land it's our responsibility to maintain balance***

We could speak in terms of the Indigenous world-view of balance and connection to everything around us, but we can also look at modern business examples, says Goodtrack. The 2008 financial crisis showed us how interconnected our financial systems are and how that can have an impact and unintended consequences on many people around the world. Similarly, the pandemic's impact on supply chains and social systems showed us how interconnected we are.

“Nature shows us that with interconnectedness come ways to keep balance,” he continues. “For example, when there's an oversupply of one thing, nature will correct it. An abundance of rabbits will lead to an abundance of coyotes or foxes. A reduction in rabbits leads to a reduction in their predators. Since we are interconnected to plant life, to water, to air, to the earth, if we humans affect one area, that will affect others. The question is to what degree?”

“We have to be aware of interconnectedness [and unintended consequences].”

#### **Compare forest management and sustainable forest practice**

“Under forest management pine trees could be planted where a poplar forest grew. While it's true that trees were re-planted, the issue that arises is that by changing the type of tree from pine to poplar, a whole ecosystem may be affected. Living beings, both plant and animal, dependent on pine might not be supported by poplar.

“Sustainable forest practice would consider the ecosystem that the poplar tree grew within.”

Terry Goodtrack

(recounting the words of Aboriginal Financial Officers Association Canada staff member Toni Baggos, videographer and creative designer)

### ***Sustainability belief #4: Decisions we make today should result in a sustainable world for seven generations***

In Indigenous philosophy, the decisions we make today should result in a sustainable world for generations into the future. The Iroquois people, and many Indigenous cultures, referred to this as a **seven-generation principle**.

In today's context, the idea is to consider how decisions made around our energy, water and natural resources today will affect our lineage and those of others. The seven generations may begin with us, or we might be in the middle as the [short video \*Seven Generations\*](#) in [Figure 5](#) shows.

FIGURE 5: SEVEN GENERATIONS

“When you see the **seven generations** represented ... you’ll see there’s a thread that binds all of them, and this, again, reinforces and really causes us to consider **our relation, our interconnection and our dependency on each other** – from those that have come before us and for those that will come after us.

“So, the foundational principle of the seven generations ... is that **our choices, our behaviours and our mistakes** reverberate that far throughout history.”

Watch the [Seven Generations video](#).



Ron (Deganadus) McLester (McLester and Algonquin College, 2017). [Emphasis added.]

### Changing generational view?

A sample of top-of-mind, live-poll responses to the question, “How would you define sustainability?” collected at the beginning of the conference appear in Figure 6. The responses from the largely, student audience<sup>5</sup> seem to revolve around the environment, longevity and the future.

Andy Hoffman says the debate is changing around environmental issues. Anyone could be an environmentalist because we all benefit from a clean environment. In particular, “Young people are standing up ... around environmental issues in general and climate issues in particular .... They’re saying, ‘It’s our future you’re tampering with, and this isn’t fair.’ That actually starts to change the conversation.”

FIGURE 6: LIVE-POLL RESPONSES ON DEFINING SUSTAINABILITY



5 Master’s degree students in their 20s or early 30s.

## Call to action: What future-ready CPAs need to know

### Leading the Way – Competency Map 2.0 – The path forward for our profession

CM2.0 systems thinking and complexity theory, includes understanding:

- the interconnectedness of systems, including human, environmental, technological, organizational, regulatory and social
- how organizations adapt and manage interdependencies, unpredictable interactions and uncertainties (CPA Canada 2022, p. 29).



## The market as solution?

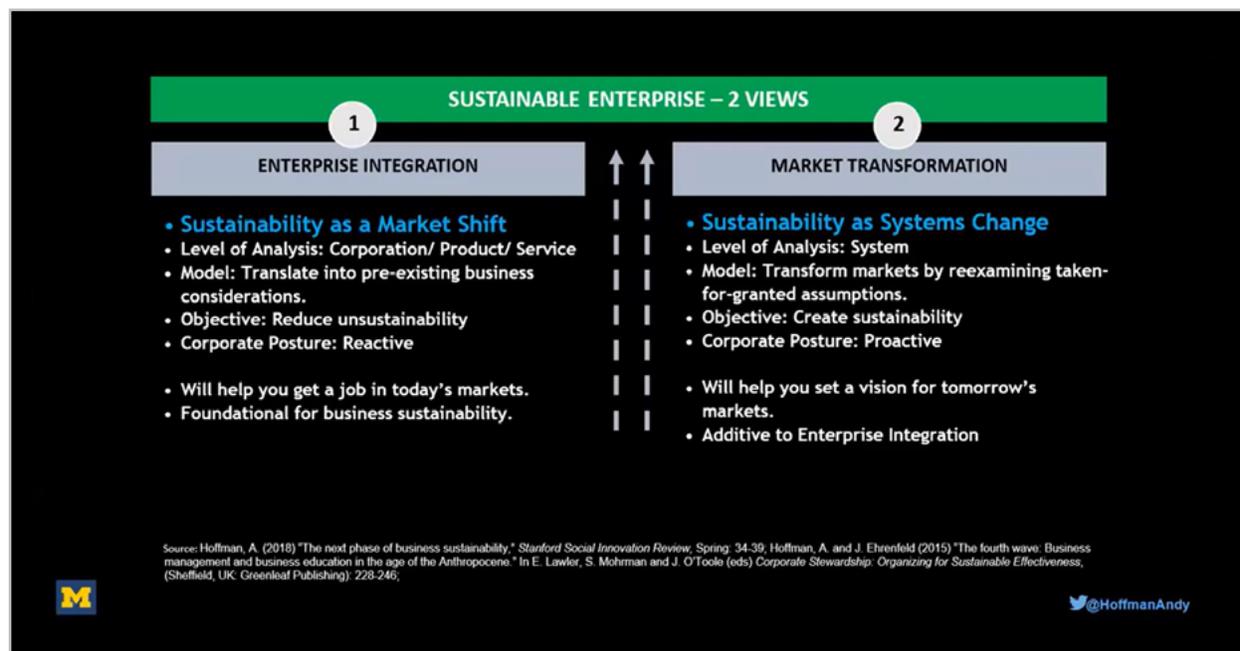
Over the past 100 years, the market (i.e., capitalism) has been responsible for raising the global standard of living and increasing life expectancy. The market does amazing things to benefit us, says Hoffman, but it has problems dealing with climate change and other issues.

**“Climate change is just one marker of a broader shift on the extent to which we are changing the systems of the Earth. We don’t know what we’re doing and we have to figure out how to get out of this. That’s where the market comes in. The market caused this and the market has to fix it.”**

ANDY HOFFMAN

The market is the solution to sustainability challenges, asserts Hoffman. The change is happening in two ways: 1) through **enterprise integration** and **market shift** and 2) through **systems change** and **market transformation** ([Figure 7](#)).

FIGURE 7: MARKET SHIFT AND MARKET TRANSFORMATION



Source: Andy Hoffman

## Market shift

Hoffman calls enterprise integration the “first phase of business sustainability.” To increase competitiveness, businesses **react** to market shifts “by integrating sustainability into pre-existing business considerations .... Enterprise integration is geared toward **present-day** measures of success ... [and] is focused on **reducing unsustainability**” (Hoffman, 2018). (Emphasis added.)

In a market shift, businesses still focus on products and services. They react to external drivers (e.g., regulation, shareholders, consumers). Sustainability might be siloed in an internal department (e.g., government relations, operational efficiency, marketing), or be part of the strategic core. No matter where it resides, **sustainability needs to be framed in the language that the business really cares about. This is what gets people to listen**, says Hoffman. (Emphasis added.) Whirlpool, for example, has focused on appliance efficiency because consumers increasingly care about that. Whirlpool doesn’t say that this is its way of addressing climate change. Instead, **consumer demand** is the language that works in the organization.

## Market transformation

By contrast, “the next phase of business sustainability ... **market transformation** is founded on a model of business transforming the market. Instead of waiting for a market shift to create incentives for sustainable practices, companies are **creating those shifts** to enable new forms of business sustainability .... [It is] focused on **creating sustainability**” (Hoffman, 2018).

Rather than focusing on products and services, a business focuses on systems and systematic change. Adding a wind farm wouldn't make an energy utility sustainable **because sustainability is a property of the system**. Talking about sustainability would mean thinking about “electricity generation, transmission, distribution, use and let's throw in mobility, since we start to be moving towards an electrified society. Then we can start to think about the sustainability of that system.”

## Financial-sector transformation

In 1993,

**... a paltry 12 per cent of companies published sustainability reports. Today, the figure stands at 80 per cent and over 90 per cent among the largest companies in the world. Changing attitudes to climate change have been the key driver behind this trend. Not so long ago, climate change was considered a corporate responsibility issue that might bring reputational risks for companies perceived to be part of the problem but would have no impact on current or future financial performance. All that changed with the advent of the Task Force on Climate-related Financial Disclosures (TCFD) in 2015, which saw that the financial risks inherent in climate change were being under-reported or not reported at all (KPMG, 2020).**

In 2019, the TCFD, under Mark Carney, then Governor of the Bank of England, rallied the financial sector – the providers of capital (banks, insurers, asset managers and those that supervise them) – to demand climate-related financial disclosure by firms it invests in.

Carney said, *“To bring climate risks and resilience into the heart of financial decision-making, climate disclosure [by the users of capital] must become comprehensive; climate risk management must be transformed and sustainable investing must go mainstream.”*

The goal was a faster transition to a low-carbon economy or net-zero economy. (For more on the role of the TCFD, see [Part 3](#) and [Part 4](#).)

### Business redefined?

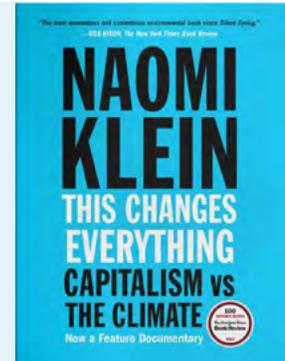
Activist and journalist [Naomi Klein](#) disagrees that the market is the solution (see Dissenting view: Capitalism versus climate) because business controls too much of the public agenda.

#### Dissenting view: Capitalism versus climate

“We have been told the market will save us, when in fact the **addiction to profit and growth** is digging us in deeper every day.

“We have been told it’s impossible to get off fossil fuels when in fact we know exactly how to do it – it just requires breaking every rule in the ‘free-market’ playbook: **reining in corporate power, rebuilding local economies and reclaiming our democracies** (Klein, 2019).” (Emphasis added.)

“... [W]ithout the courage to confront corporate rule and the greed-based logics of capitalism ... we will continue to fix absolutely nothing (Klein, 2021).”



Hoffman disagrees with Klein. He says that market transformation and systems change does challenge traditional business models. But, because the “... market is the most powerful institution on Earth, and business is the most powerful entity within it,” (Hoffman, 2018), we must use the tools we have to re-examine capitalism to solve the problems we face.

For example, the World Economic Forum’s [Davos Manifesto 2020](#) (Schwab, 2019) says that capitalism does need reform and a move from shareholder to **stakeholder capitalism**.

Indigenomics presents another business **re-definition** (see [Indigenomics](#)). Slowly, corporations and the federal government have started long overdue action to respect and implement the rights of Canada’s First Peoples, particularly as the demand grows for resources on traditional lands (see [Slow progress toward inclusion](#)).

## Slow progress toward inclusion

Heather Exner-Pirot, author and consultant in Indigenous and northern economic development, writes,

**2004–2005:** “[T]he Supreme Court [of Canada] affirmed that the Crown had a duty to consult and accommodate Aboriginal peoples when activities took place on their traditional territories that impacted their treaty and Aboriginal rights. This had major implications for the regulatory approval process. One immediate manifestation was that the number of impact and benefit agreements between project proponents and affected communities quadrupled from the period 2000–2005 to the period 2005–2010. Negotiating with Indigenous communities had gone from a ‘nice to do’ to a ‘need to do’ (Exner-Pirot, 2021).

“There can be no political self-determination without economic self-determination. For many Indigenous nations located in rural and remote regions, resource development represents the best opportunity to achieve that” (Exner-Pirot, 2021).

**2007:** The [UN Declaration on the Rights of Indigenous Peoples](#) (UN Declaration) is adopted.

**2021:** Fourteen years later, writes the [Assembly of First Nations](#) (AFN)<sup>6</sup>, a national advocacy organization representing First Nation citizens in Canada,

“... after decades of advocacy by First Nations – the Parliament of Canada passed *The United Nations Declaration on the Rights of Indigenous Peoples Act* (formerly Bill C-15). The [Act](#) received Royal Assent June 21, 2021.

“The Act sets out Canada’s obligation to uphold the human rights (including Treaty and inherent rights) of Indigenous Peoples affirmed by the ... UN Declaration. These include the right of self-determination and the right to have treaties respected and enforced.

“The UN Declaration contains international human rights standards that Canada and all members of the UN have affirmed and re-affirmed many times.

“The Act does not create new rights. Nor does it take away, diminish or redefine any rights. This is all about taking long overdue action to respect and implement rights First Nations already have.” (AFN, n.d.)

**Part 3** in this six-part series shows us metrics that hurt sustainability and others that should be considered. It looks at **valuation beyond monetization** and warns against oversimplification. Will accountants – with some help – save the world?

6 Canada has five National Indigenous Organizations recognized by the Government of Canada: [Assembly of First Nations](#) (AFN), [Congress of Aboriginal Peoples](#) (CAP), [Inuit Tapiriit Kanatami](#) (ITK), [Métis Nation](#) (MN), and [Native Women’s Association of Canada](#) (NWAC).

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## Additional recommended reading

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## PART 3

# Sustainability measures: Can accountants save the world?

In **Part 3** of this six-part series of 10-minute reads, we present highlights of the [2021 MPPA Conference](#),<sup>1</sup> **Sustainability: A Call to Action**, to explore opportunities, challenges and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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[Part 1: Sustainability: Imperatives](#) looks at the drivers of sustainability and why you should act now.

[Part 2: Sustainability: Definitions and perspectives](#) looks at the definitional divide when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

Here, **Part 3: Sustainability metrics: Can accountants save the world?** shows us metrics that hurt sustainability and others that should be considered. It looks at valuation beyond monetization and warns against oversimplification.

[Part 4: Sustainability reporting and assurance: Accountants take the lead](#) looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new International Sustainability Standards Board (ISSB), accountants may convince regulators to change the rules of the game.

[Part 5: Canada's global commitment: Getting to net zero](#) examines Canada's global sustainability commitments, CPA Canada's role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

[Part 6: Calls to action for future-ready CPAs](#) focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the Canadian CPA designation and steps to take toward more sustainable economies.

In this section, we look at metrics that lead us closer to sustainability and metrics that lead us away. First, we take a general look at sustainability measures and the trend to adopt them, but we leave evolution and consolidation of the myriad frameworks and standards, culminating in the powerfully supported new International Standard-Setting Board (ISSB) to [Part 4](#). Here, speakers [Andy Hoffman](#) and [Michael Vardon](#) explain the danger associated with GDP, easily the most frequently reported and least understood metric in macroeconomics, but key in policy setting. Vardon introduces environmental-economic accounting, and how macroeconomics needs to count nature in. Will accountants save the world? Speakers Hoffman, Vardon, and [Davinder Valeri](#) say why they are instrumental, while speaker [Andrew King](#) cautions that "impact accounting" and current measures have limitations, depending on context and necessary trade-offs.

1 The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\), University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

**“If the world wants to address our many challenges – if business wants to restore societies’ trust – business must be more transparent and acknowledge that the resources we exploit or conserve and the social benefits we engender or lose, must be factored into a company’s value and thus into day-to-day management. This is not a matter of incremental change, but a radical transformation. And *it’s the accountants who will lead the way.*” (Emphasis added.)**

PETER BAKKER, PRESIDENT AND CEO, WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (BAKKER, 2013)

## Measures leading to sustainability

**Sustainability information or environmental, social and governance (ESG) measures of non-financial information (NFI)** can be both quantitative and qualitative.

The very broad range of sustainability/ESG measures and information – for example, from greenhouse gas (GHG) emissions to diversity in a workplace to board composition – have resulted in a plethora of voluntary framework and standard setters, as [Part 4](#) in this series explains. Momentum is gaining for ESG measures outlined by the [Task Force on Climate-Related Financial Disclosures](#) (TCFD) and the World Economic Forum International Business Council’s 2017 project for [Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation](#), published in 2020. The same voluntary framework and standard setters have now converged under the auspices of the [International Sustainability Standards Board](#) (ISSB) (KPMG, 2022, p. 2) or have committed to work cooperatively with it. (See [Part 4](#) of this series.)

The metrics are to align corporate values and strategies with the UN’s [Sustainable Development Goals](#) (SDGs) (see Figure 2) and be used – and compared – consistently in mainstream annual reports across industries and geographies (World Economic Forum [WEF], 2020). For now, “companies adopting the WEF Stakeholder Capitalism metrics as a basis for sustainability reporting [can] develop corporate capability in anticipation of [ISSB] global standards and mandatory reporting” (KPMG, 2022).

**“[T]hose corporations that align their goals to the long-term goals of society, as articulated in the SDGs, are the most likely to create long-term sustainable value, while driving positive outcomes for business, the economy, society and the planet. This is the true definition of *stakeholder* [as opposed to shareholder] capitalism”**

KPMG, 2022 (EMPHASIS ADDED.)

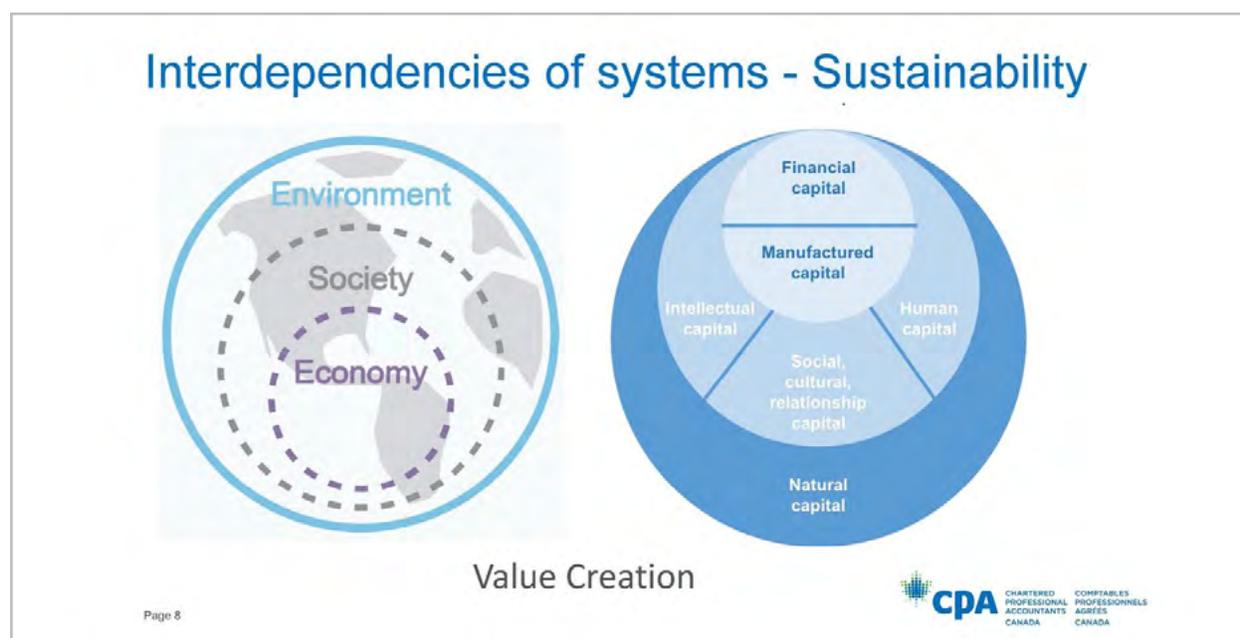
The WEF organizes the metrics “under four pillars aligned with the SDGs and principal ESG domains: Principles of governance, planet, people and prosperity” associated with value creation (KPMG, 2022).

**Capitals** are inputs (used in) and outcomes (affected by) an organization’s value-creation story.

### The capitals

The economy, society and the environment are interdependent. The economy relies on society and both rely on the environment, says speaker [Davinder Valeri](#). Intrinsic to those dependencies, the **capitals** are key in value creation (Figure 1).

FIGURE 1: VALUE CREATION AND THE INTERDEPENDENCIES OF SYSTEMS



Source: Davinder Valeri

Accountants and finance professionals are familiar with the three traditional capitals: **manufactured**, **financial** and **intellectual**. The environment is an input and greenhouse gas emissions are outputs affecting **natural** capital. But for long-term resilience, she advises businesses must also measure and manage **human** and **social** capital<sup>2</sup> – the “S” in ESG.

2 For examples of how this can be done, see the [A4S Essential Guide: Social and Human Capital Accounting](#). Examples were provided by the [Canadian chapter of the A4S CFO Leadership Network](#), where CFOs from large businesses work together to bring the management of environmental and social issues into their business processes and strategy. CPA Canada and A4S partnered to form the Canadian Chapter in 2017. (CPA Canada, 2022b).

## Examples of human and social capital – the “S” in ESG

Rapidly changing technology requires **human capital**, such as individual knowledge, new skills and competencies.

Training, whether through schools or corporations, increases human capital. In a corporation, training might initially reduce financial capital but resulting productivity improvements would increase it.

The COVID-19 pandemic cast a magnifying lens on societal deficiencies in equity, diversity, healthcare and more – social issues whose outcomes can be improved through organizations.

**Social and relationship capital** encompass how a company uses or affects society and its stakeholders beyond just shareholders, for instance through “shared norms, values and understanding” (WEF, 2020). It can be the “value added to society by the organization’s products, services and activities, as well as the relationships within and between communities, groups of stakeholders and other networks” (A4S CFO Leadership Network, 2017).

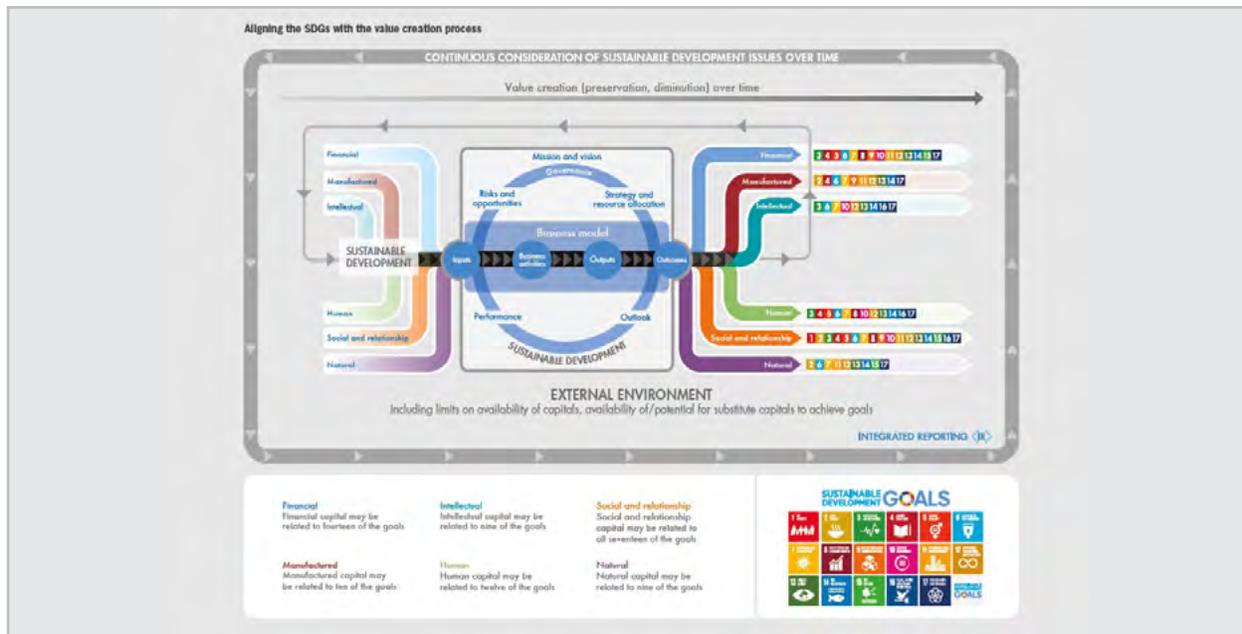
“Social capital complements economic capital by affirming the value of human relations in denominations that aren’t necessarily dollars. This distinction is especially useful for Indigenous communities, who may not have unlimited cash but who do have people as well as rich cultural traditions, teaching and values.”

Wayne K. Spear, Editor, *Journal of Aboriginal Management (JAMA)* (Spear, 2022)

**Figure 2** shows how capitals increased, decreased or transformed through a company’s activities, guided by its business model and strategy, could support or affect more than one SDG. For example, increased reliance on renewable energy sources and improving diversity in the workforce enhance natural and human capital and may contribute to the achievement of SDG 5 (gender equality), SDG 7 (affordable and clean energy), SDG 10 (reduced inequalities) and SDG 13 (climate action) (Adams, 2017).

“Whether or not the capitals [that] an organization uses or affects are owned by that organization, their availability, quality and affordability can affect the long-term viability of an organization’s business model and, therefore, its ability to create value over time. This is particularly the case with respect to capitals that are in limited supply and are non-renewable” (IIRC, 2013).

FIGURE 2: INTEGRATED REPORTING (&lt;IR&gt;): ALIGNING SDGS WITH VALUE CREATION



Source: Adams, 2017

## Measures that lead away from sustainability

### Discount rates

**“Certainly, a dollar tomorrow is worth less than a dollar today. But when you use discount rates you make statements about the value of the future.”**

ANDY HOFFMAN

Nicholas Stern, author of the 2006 *The Economics of Climate Change: The Stern Review* said that the costs of inaction on climate were far greater than the costs of action and that the climate crisis was the **biggest market failure** in history (Carrington, 2021). (Emphasis added.)

Keynote speaker [Andy Hoffman](#) says that Stern stirred up debate when he used an extremely low discount rate to calculate the costs of climate change and the cost of doing something about it. Stern’s point is that there are certain times where it is inherently immoral to use discount rates. For example, “Just using a 10 per cent discount rate, a straight-line depreciation rate, says that everything 10 years out and beyond doesn’t factor into our equation because it is inherently worthless,” says Hoffman.

In 2021, at the UN global climate summit, [Conference of the Parties 26 \(COP26\)](#), Stern said, “It means economists have grossly undervalued the lives of young people and future generations who are most at threat from the devastating impacts of climate change .... Discounting has been applied in such a way that it is effectively **discrimination by date of birth**” (Carrington, 2021). (Emphasis added.)

## Gross domestic product

“Gross domestic product (GDP) is the standard measure of the value added created through the production of goods and services in a country during a certain period. As such, it also measures the income earned from that production, or the total amount spent on final goods and services (less imports).

“While GDP is the single most important indicator to capture economic activity, it falls short of providing a suitable measure of people’s material well-being for which alternative indicators may be more appropriate” (OECD, n.d.).

“One of the most common criticisms of GDP since the 1970s is that it wholly ignores the depletion and degradation of the environment. Or rather, it can treat depletion and degradation of the environment as economic output. For example, cutting down a rainforest and selling the timber would increase GDP despite having a devastating effect on long-term well-being and economic growth” (Schweinfest, et al., 2021).

## More measures to consider

### Environmental-economic accounting: Macroeconomics frameworks

Speaker [Michael Vardon](#) explains that in macroeconomics current accounting is incomplete because many flows between the economy and the environment are not counted. The cost of the use of natural resources is not included<sup>3</sup>.

“Accounting for the environment is a natural extension of traditional national and business accounting.”

MICHAEL VARDON

Accounting is transactions. As accountants, we’re used to transactions with money and with goods and services coming in. “What we haven’t quite been so good at is some of the non-monetary transactions; in particular, the **ecosystem services** and the **residuals**, such as CO<sub>2</sub> emissions, which we put back into the environment. We typically don’t record the transactions we have with the environment,” says Vardon.

<sup>3</sup> For more information on natural capital accounting, see Vardon (2022).

## System of Environmental-Economic Accounting - Ecosystem Accounting (SEEA EA)

GDP “ ... measures everything, in short, except that which makes life worthwhile.”

Robert F. (Bobby) Kennedy  
(Glaser Progress Foundation, 2008)



Watch: [Making Nature Count with the System of Environmental-Economic Accounting](#) (UN, 2021 March 3)

Going beyond GDP to make nature count, the UN has adopted the System of Environmental-Economic Accounting:

“For the past 75 years we have been measuring our success and well-being in the dollars and cents of GDP while letting nature pick up the tab for our pollution, deforestation and degradation. [In 2021] we begin to change all that. The UN Statistical Commission is set to adopt a new framework to go beyond GDP and to finally make nature count.” – The [System of Environmental-Economic Accounting - Ecosystem Accounting \(SEEA EA\)](#). (UN, 2021, March 3)

“Without recording resources in/residuals out, we don’t pay for them and we don’t account for their cost. If we don’t measure them, we can’t manage them.”

Environmental accounting changes that.

In 1992, in response to the Brundtland Commission (see [Part 2](#) of this series), at the UN Earth Summit in Rio de Janeiro, [Agenda 21](#) called for the **inclusion of the environment** in countries’ [systems of national accounts](#)<sup>4</sup>. In 1993, the UN [System of Environmental-Economic Accounting](#) (SEEA) was introduced. In 2012, the UN recognized the [SEEA - Central Framework](#) as an international statistical standard. It is used in whole or part by about 90 countries, including Canada (for GHG emissions), and environmental accounts are mandated by the EU.<sup>5</sup>

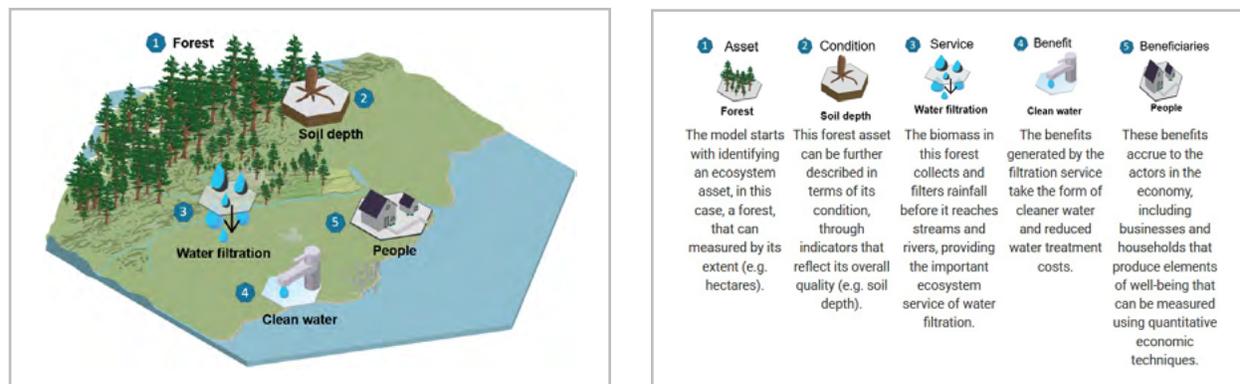
The Central Framework looks at individual environmental assets , such as water or energy resources. By contrast, the 2021 [System of Environmental-Economic Accounting-Ecosystem Accounting \(SEEA EA\)](#) goes further. It looks at the **extent** and **condition** of an ecosystem,

as well as its benefits and beneficiaries. It “takes a **spatial approach** to accounting [because] the benefits a society receives from ecosystems depend on where those assets are in the landscape in relation to the beneficiaries” (UN SEEA, 2021). See [Figure 3](#).

4 [Canada's system of macroeconomic accounts \(CSMA\)](#) or economic statistical statements provide an aggregated portrait of economic activity over a given period of time.

5 For example, see Statistics Canada. (2021, March 26). [Canadian System of Environmental-Economic Accounts: Energy use and greenhouse gas emissions, 2018](#).

**FIGURE 3: ECOSYSTEM ACCOUNTING CONCEPTUAL MODEL  
HOW ECOSYSTEM ASSETS GENERATE ECOSYSTEM SERVICES TO BENEFICIARIES  
IN A SPATIAL RELATIONSHIP**



Source: UN SEEA, 2021

The framework helps to answer questions such as: What is the contribution of ecosystems and their services to the economy, social well-being, jobs and livelihoods? What do estimates of a nation's wealth and economic potential look like once the state of its environment is considered? (UN SEEA, 2021).

A forest may generate more benefits as a forest than as lumber through air and water filtration, soil retention, slope stabilization, runoff mitigation, etc.

**“The adoption of this economic and environmental framework is a historic step towards transforming the way we view and value nature .... We must reflect nature’s true value in all our policies, plans and economic systems. The rewards will be immense.”**

UN SECRETARY GENERAL, ANTÓNIO GUTERRES  
(UN, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, [MARCH 2021])

## Measure limitations

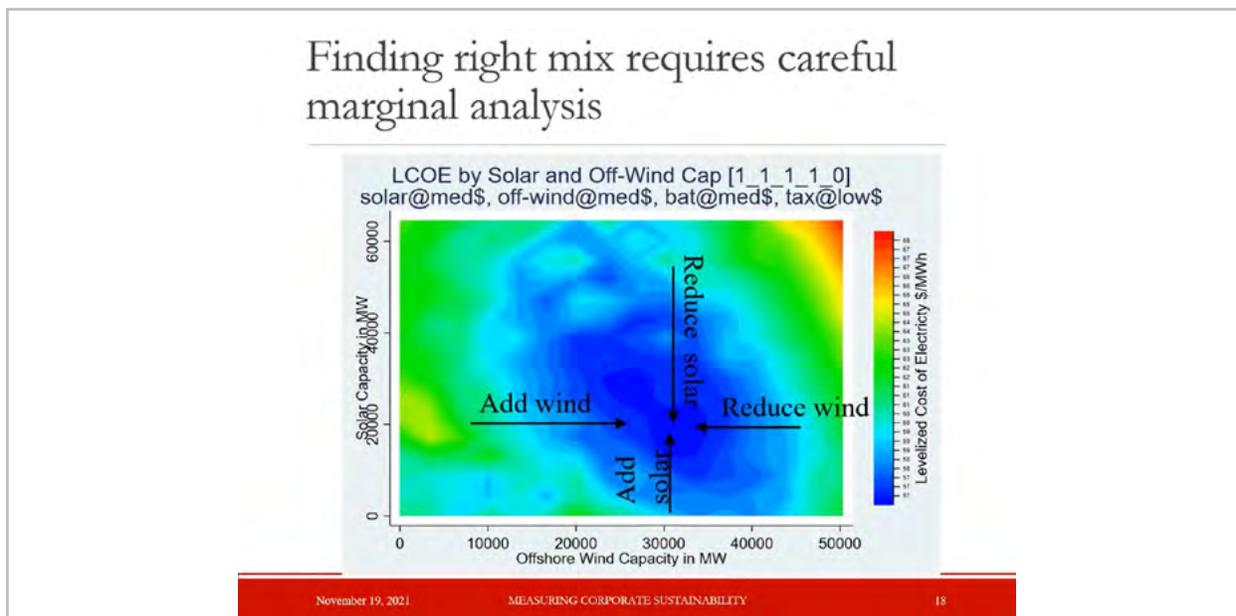
**“What is the marginal effect of the firm’s activities on welfare? That’s what I believe we have to measure if we’re interested in corporate sustainability.”**

ANDREW KING

Speaker [Andrew King](#) says corporate sustainability is extremely difficult to calculate and we need to understand limitations about what we can measure and measure accurately. King does not consider the sustainability of an individual corporation. Instead, he is interested in the overall economic, environmental, social system that we’re in and

its sustainability. In the article [Heroic Accounting](#), King and co-author Kenneth Pucker warn against **impact accounting**, through which proponents, such as Harvard Business School's [Impact Weighted Accounts](#) project, work to capture and monetize external impacts and reflect a company's financial, social and environmental performance in its financial accounts.

**FIGURE 4: FINDING THE RIGHT MIX REQUIRES CAREFUL MARGINAL ANALYSIS**



Source: Andrew King

They argue, **“New proposals for monetizing corporate planetary impacts are alluring, impossible and perilous”** (King & Pucker, 2021).

In their rebuttal article [Fair Accounting](#), T. Robert Zhochowski, Katie Panella and Ben Carpenter (2022) say, *“The movement to monetize corporate externalities is feasible, timely and necessary.”*

King warns that current measures may fail to capture corporate sustainability because they may:

- **use dangerous simplifications.** “Sustainability is a system-level construct, so ‘corporate sustainability’ is the effect of the corporation on the entire system,” says King. “[It] requires massive information about the corporation, the economy and all effects on resources. It requires calculating the response of the entire system.”
- **ignore local conditions and trade-offs among impacts.** For example, in the New England electrical system, a natural gas plant is valuable because it provides back-up power when renewables aren’t available. “It makes the grid more sustainable,” says King. “If gas weren’t available, coal would be used but that would be worse for

the environment. However, in Iceland, a gas plant would replace already-dispatchable hydro and geothermal sources, so it would be bad. Same gas plant, same emissions, different implications.”

- **measure average effects, not marginal ones.** For example, amounts emitted, costs of emissions, employee pay are current **averages**. Instead, King says, we need to think about **vectors** and what happens when inputs change. For example, solar energy becomes less valuable over time on a sunny day because we may have more power than we need. Some excess energy could be battery-stored or sent to flexible users but some of it will be wasted. So, the **marginal cost** of the solar goes up; its **marginal value** comes down. An analysis for the New England electrical system considered the **marginal value** of solar versus the **marginal value** of producing the power from wind. In Figure 4, the darker the blue colour, the lower the production cost of energy (based on a set of conditional constraints), the lower the cost to the consumer and, therefore, the greater the benefit.
- **might do more harm than good.** King maintains that measuring the wrong things or giving companies the wrong incentives could do more harm to people than good. What if, for example, a pharmaceutical company spends money to reduce water usage where water is plentiful, instead of using the same money to produce a cure for a disease that kills millions of people? It is not using its time or money efficiently, he says, and human well-being is not significantly improved.

## Will regulation guided by accountants save the world?

King advises focusing our efforts on **eco-efficiency** (rather than sustainability) and **political activity** to get **regulatory support**. Pay attention to actions firms can take voluntarily and have demonstrated in a few industries, he says, because individual or local initiatives can catalyze regulation. For example, California’s “... actions to curb vehicle emissions eventually led to national legislation” (King & Pucker, 2021).

**“We can’t put a moral stamp on corporations and say they’re good or bad .... What we really need is *regulation* and, for example, a price on carbon, a price on forest destruction. We need things that limit inputs or imports if those involve substantial environmental harm or social harm .... We need to get the right regulations, prices, rules of the game.” (Emphasis added.)**

ANDREW KING

“Accounting for the environment is a natural extension of national accounting and business accounting,” says speaker Michael Vardon.

He states that one of our key roles as accountants is to provide information and to make it objective. We most often enable other people to make decisions. They may not make the decisions we'd like but they will make them with the right information. With the right information, we hope they can make better decisions. We have an **accounting push** but we need a **policy pull**. We need more policy makers to understand and use the data.

Speaker Davinder Valeri adds that given the skills CPAs have and should attain, they can make sure data is of high quality and can help businesses make decisions that create value. These roles are explored in detail in CPA Canada's [Value creation decisions and measurement project](#) and [The Professional Accountant's Role in Data](#).

## Call to action: What future-ready CPAs need to know

CPA Leading the Way – Competency Map 2.0 – The path forward for our profession CM2.0, under CPA Ethical Mindset, states: “CPAs bring logic and structure to measuring and analyzing data to turn it into trusted information that is useful for decision-making, and they ensure that they understand the data provenance. CPAs make sure that decision-relevant data is appropriately captured, and that data/information systems/data privacy are safeguarded.

“Maintaining the integrity of the data/information is a priority, as is ensuring that data and systems are unbiased and that the resulting information is transparent (CPA Canada, 2022).”

Under Non-Financial Reporting, CM2.0 includes:

- the role of reporting information about an organization's performance using non-financial data
- an understanding of the role of strategy and governance
- the application of sustainability and other frameworks
- the reporting of activities in different and emerging circumstances (i.e., beyond traditional financial reporting).

“Data analytics and systems thinking are especially important in non-financial reporting.”

Under CPA Ethical Mindset, CM2.0 includes:

“We create and sustain value for stakeholders by bringing logic, structure and trust to information, as well as to the process of measuring and managing performance.”

“We are future-focused, embracing change and technology to foresee opportunities, create and sustain long-term value and manage risk for people, organizations and more broadly, for society and the planet” (CPA Canada 2022).

[Part 4](#) in this six-part series looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new ISSB, accountants may convince regulators to change the rules of the game.

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## PART 4

# Sustainability reporting and assurance: Accountants take the lead

In **Part 4** of this six-part series of 10-minute reads, we present highlights of the [2021 MMPA Conference](#),<sup>1</sup> **Sustainability: A Call to Action, to explore** opportunities, challenges, and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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[Part 1: Sustainability: Imperatives](#) looks at the drivers of sustainability and why you should act now.

[Part 2: Sustainability: Definitions and perspectives](#) looks at the definitional divide when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

[Part 3: Sustainability metrics: Can accountants save the world?](#) shows us metrics that hurt sustainability and others that should be considered. It looks at valuation beyond monetization and warns against oversimplification.

Here, **Part 4: Sustainability reporting and assurance: Accountants take the lead** looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new International Sustainability Standards Board (ISSB), accountants may convince regulators to change the rules of the game.

[Part 5: Canada's global commitment: Getting to net zero](#) examines Canada's global sustainability commitments, CPA Canada's role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

[Part 6: Calls to action for future-ready CPAs](#) focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the Canadian CPA designation and steps to take toward more sustainable economies.

In [Part 1](#) and [Part 2](#), speaker [Andy Hoffman](#) introduced us to the evolution in voluntary sustainability framework and standard setters. He said the market is the most powerful institution on earth and within that, business. In [Part 3](#), we learned about the powerful trend led by financial markets and international business through the [Task Force on Climate-related Financial Disclosures](#) (TCFD) and the [World Economic Forum](#) (WEF) initiatives to consolidate and standardize metrics and reporting.

In this [Part 4](#) of the series, speakers [Maria Theofilaktidis](#) and [Roger Simnett](#) continue the story that has culminated in the powerfully supported new [International Sustainability Standards Board](#), the [ISSB](#). We learn from speaker [Davinder Valeri](#) about CPA Canada's support and what this means for Canadian CPAs. Speaker [Roger Simnett](#) talks about the assurance developments associated with new standards.

- 1 The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\), University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

## Current sustainability reporting landscape



“ .... [P]reparers and consumers of environmental, social and governance (ESG) data all over the world are still struggling with a profusion of reporting frameworks and standards that do not enable consistent and comparable disclosures.”

WORLD ECONOMIC FORUM (WEF) 2021

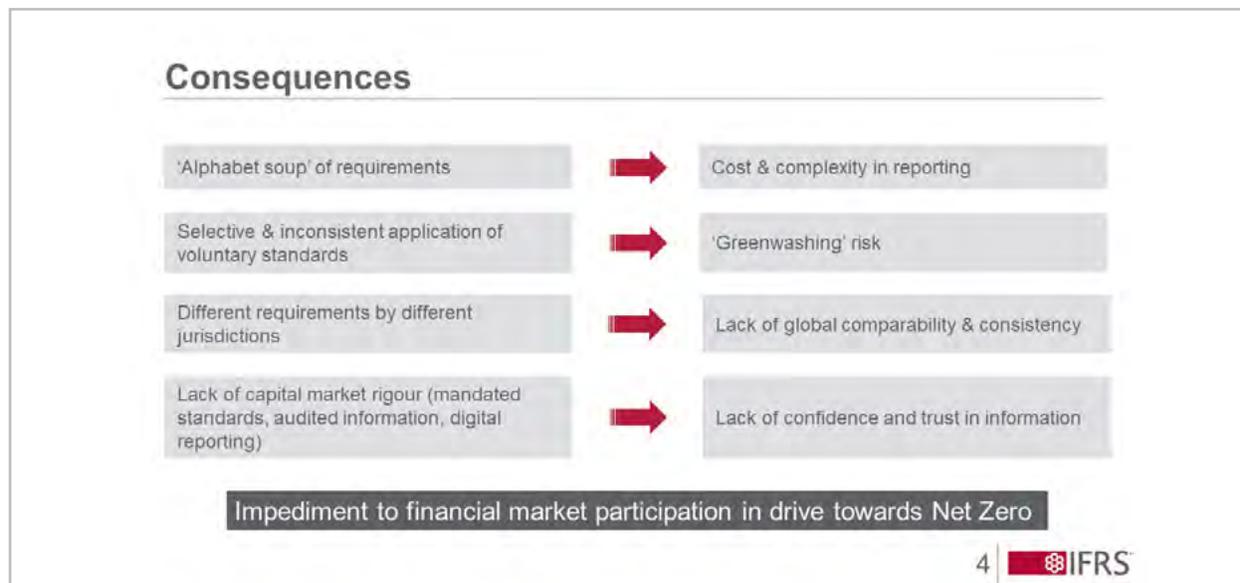
Speaker [Maria Theofilaktidis](#) says, “Financial markets clearly need information to operate efficiently and so they can assess the risks and opportunities facing individual companies. Today they also need to know those risks related to ESG. As a result, investor demand for high-quality information is huge. Investors want to provide capital but they want to do it effectively.

Meeting that demand has resulted in sustainability reporting ([Figure 1](#)) that is:

- an **“alphabet soup”** mix of international voluntary initiatives with frameworks addressing a spectrum of purposes and users: investors, financial markets, NGOs. The problem with the voluntary frameworks is not the content, it’s the number of them. That makes reporting costly and complex for investors, companies and regulators.
- **voluntary**, so companies can be selective about which frameworks to use. Because frameworks differ in content and methodology, some companies may choose a framework that makes them look better than their performance warrants (**greenwashing**).
- **inconsistent**. Varying sustainability measures and ratings agencies’ methodologies or jurisdictional requirements can result in inconsistent and divergent reports for the same company.

The lack of trust, lack of consistency and lack of quality in what is reported complicates the effectiveness and efficiency of financial market participation in the drive to reduce emissions by 2050 to reach net zero, says Theofilaktidis.

FIGURE 1: CURRENT SUSTAINABILITY REPORTING LANDSCAPE



Source: Maria Theofilaktidis and IFRS

## IFRS Foundation and its future in sustainability reporting

### Powerful support

In October 2021, a month ahead of the UN global climate summit, [Conference of the Parties 26 \(COP26\)](#), 60 organizations representing more than EUR 8.5 trillion in assets and employing more than 5 million people released an open letter in support of the International Sustainability Standards Board (ISSB). In it they state:

The standardization that has already taken place in financial accounting offers a blueprint for success [for ESG data]. In the past, accounting faced myriad metrics, jurisdictions and organizations, and coordination took decades. The global accounting rules in place today ensure that company performance in any industry or country is comparable and companies can be held to account by investors.

To achieve a similar outcome on the ESG front – and to do so fast – the world should follow the same template and establish an independent body that can ensure objectivity and due process. We therefore strongly support the initiative of the **International Financial Reporting Standards (IFRS) Foundation** to create an International Sustainability Standards Board (ISSB) to develop globally accepted standards for sustainability reporting that can be adopted worldwide” (WEF, 2021).

In November 2021, at COP26, the IFRS Foundation announced the formation of the ISSB.

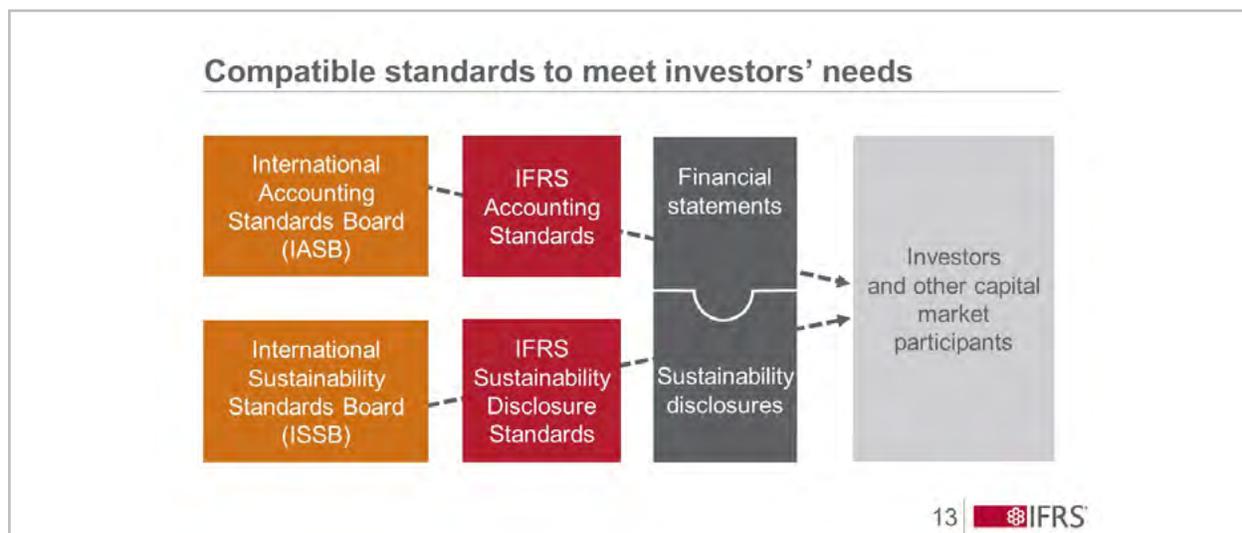
## New standards board: ISSB

**“The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies’ sustainability-related risks and opportunities to help them make informed decisions” (IFRS Foundation, 2021a).**

With the oversight of the IFRS Foundation, the International Accounting Standards Board (IASB) develops the IFRS Accounting Standards that “bring transparency, accountability and efficiency to financial markets around the world,” and that are required in more than 140 jurisdictions (IFRS, 2021).

Explains Theofilaktidis, “The IASB and ISSB will sit as sister boards. The expectation is that they will collaborate very closely to ensure connectivity and compatibility between the IASB accounting standards and the ISSB sustainability disclosure standards so that the standards will complement each other and provide comprehensive information to investors.”

**FIGURE 2: IFRS: COMPATIBLE ACCOUNTING AND SUSTAINABILITY DISCLOSURE STANDARDS**



Source: Maria Theofilaktidis and IFRS

## The ISSB consolidates some of the leading voluntary frameworks and standard setters

The new ISSB consolidates the Climate Disclosure Standards Board (CDSB) and the Value Reporting Foundation (VRF), some of the leading investor-focused sustainability disclosure organizations. The VRF itself consolidates the Sustainability Accounting Standards Board (SASB) and the International Integrated Reporting Council (IIRC)<sup>2</sup>, says Theofilaktidis.

<sup>2</sup> See [Part 3](#), The Capitals and the Integrated Reporting (<IR>) Framework from the International Integrated Reporting Council (IIRC), now consolidated under the new ISSB.

### The ISSB collaborates with the Global Reporting Initiative

With the ISSB's initial announcement, speaker **Roger Simnett** says, "We are not necessarily seeing information aimed at broader sustainability, such as Global Reporting Initiative (GRI) information, but investor-focused information." The GRI was involved in developing the World Economic Forum International Business Council's project for [Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation](#) (see [Part 3](#) of this series). In July 2021, GRI was appointed co-creator with the European Financial Reporting Advisory Group (EFRAG) of the new EU Sustainability Reporting Standards (GRI, 2021).

In March 2022, the IFRS Foundation and GRI announced they would " ... align capital market and multistakeholder standards to create an interconnected approach for sustainability disclosures."

"By working together, the IFRS Foundation and GRI provide two 'pillars' of international sustainability reporting – a first pillar representing investor-focused capital market standards of IFRS Sustainability Disclosure Standards developed by the ISSB, and a second pillar of GRI sustainability reporting requirements set by the [Global Sustainability Standards Board](#) (GSSB), compatible with the first, designed to meet multistakeholder needs" (IFRS, 2022a).

### The ISSB publishes prototype climate and general disclosure requirements

The prototypes, released at COP26 in November 2021, were developed by the ISSB's Technical Readiness Working Group, which includes the IFRS's IASB, the CDSB, the VRF, the Task Force on Climate-Related Financial Disclosures (TCFD) and the WEF.

"The [Climate Prototype](#) sets out the requirements for the identification, measurement and reporting of climate-related financial information" based on the TCFD's four themes of governance, strategy, risk management and metrics and targets (Duru, et al., 2021).

"The [General Requirements Prototype](#) establishes principles for the reporting of sustainability-related financial information, e.g., concerning the definition of materiality in the ESG context or a company's integration of sustainability reporting into its governance (e.g., committees and management's role in assessing risks and opportunities)" (Duru, et al., 2021).

After a 120-day consultation period, ending July 29, 2022, the ISSB will review feedback. It plans to issue the new standards by year end (IFRS, 2022b).

### The ISSB adds geographic and experience diversity

Because sustainability is not a single topic, board members will have expertise in different fields and will represent different geographic areas. To be inclusive of emerging, developing and developed economies, the ISSB will have a multilocation global footprint. Montreal will be the regional centre for the Americas, with \$8M in funding from the federal government

(Canada, Department of Finance, 2021). CPA Canada facilitated an extensive collaboration effort of more than 55 other Canadian public and private institutions to support the Canadian government's offer to host the office (CPA Canada, 2021).

### The ISSB will liaise with the new Canadian Sustainability Standards Board

Canada's [Independent Review Committee on Standard Setting in Canada](#) (IRCSS) explores sustainability topics in a December 2021 [consultation paper](#), including public interest and responsibilities to Indigenous Peoples in the development of standards and establishing a [Canadian Sustainability Standards Board](#) (CSSB), with consideration of its governance and accountability framework. "A CSSB will also liaise with the new ISSB, ensuring that the Canadian perspective is part of international decision making," says Edward Waitzer, Chair of the IRCSS (IRCSS, 2021).

### The ISSB generates some concerns

**"[B]y its inherent nature, standard setting is a process fraught with tension and conflict .... Compromises must be reached for a standard to be set. By definition, the standard setter can't make everyone happy."**

ROBERT G. ECCLES, FOUNDING CHAIRMAN, SASB, 2022



Photo: [Pink Elephant Communications](#)

Private companies in the U.S. and Canada that do not publicly trade debt or equity are not required to disclose financial statements nor have them audited. "In Europe, however, limited liability public and non-public companies must publish a balance sheet, profit-and-loss account, annual report and auditor's opinion. Small- and medium-sized businesses meeting balance sheet and turnover thresholds must also disclose financial information" (Tarver, 2022).

### More of what Greta Thunberg calls "Blah, blah, blah"?

Is the formation of the ISSB substantive and not more "blah, blah, blah"?

"At the end of the day, ISSB is another voluntary standards setter with no enforcement capabilities. So, they must have buy-in from the regulators overseeing the markets they serve. The EU has enforcement capability. So, their standards, developed by EFRAG and GRI, actually have teeth. So far, ISSB is just "blah, blah, blah." Jean Rogers, founder of the Sustainability Accounting Standards Board (SASB) (Harrison, 2021)

### A step toward substance and away from "blah, blah, blah"

March 2022. The International Organization of Securities Commissions (IOSCO) conveys its support for the ISSB sustainability standards exposure drafts (IOSCO, 2022).

The U.S. does not follow the IFRS Foundation's IASB, so may not be concerned by the ISSB nor its collaboration with GRI (Eccles, 2022).

## Government roles?

**In 2018, a general sentiment was that “standards for sustainability reporting should be left up to market forces or established through a process that would have regulatory support .... [But, there] has been a momentous shift from arguing about market forces versus regulation to arguing about who should be responsible for developing the standards to be enforced by regulation. We shouldn't forget this.” (Emphasis added.)**

ROBERT G. ECCLES (2022)

“What is the role of government in the markets?” asks keynote speaker [Andy Hoffman](#). Many believe government has no role in the market and that regulation is an unwarranted intrusion. He argues this is a naive idea because the rules of the market are set by the government.

Speaker [Andrew King](#) adds that since the very first [UN Conference on the Human Environment \(1972\)](#) and the [Brundtland Commission \(1987\)](#), which recognized the same problems we face today – climate change, ocean health, nitrogen disruption, etc. – the suggested remedy was corporate transparency plus voluntary action. That suggestion continued right through the 1990s, 2010s, 2020s, he says. But transparency plus voluntary action has forestalled some of the regulation that we really need.

For the ISSB standards to make a difference, they must become mandatory.

### Making ISSB standards mandatory

For the capital market standards to become mandatory requires a collaborative effort.

- ISSB's role will be to set the standards.
- [International Organization of Securities Commissions](#) (IOSCO), as the global standard setter for the securities sector, will review the standards, endorse them and support its members in using them as a baseline for their own sustainable reporting requirements (IOSCO, 2022).
- ISSB and IOSCO will work with audit-standard setters to facilitate third-party assurance on the sustainability disclosures.
- Jurisdictions will decide whether they require the standards and how to incorporate them into their specific jurisdictional requirements.

The ISSB cannot mandate the standards but definitely can be a part of the process of encouraging their adoption, says speaker Maria Theofilaktidis. In the meanwhile, companies should continue to apply the existing frameworks until the proposed standards are adopted.

## Assurance of non-financial information

**“Reliable checks on companies’ sustainability credentials will take years to develop, auditors say, meaning investors pouring trillions of dollars into green funds remain at greater risk of being hoodwinked.”**

JONES & JESSOP, 2022

Although companies traditionally communicate through the annual report, **non-financial information** (NFI) may be found in the directors’ report or management commentary, says speaker Roger Simnett. When NFI is included in the financial statements, it is covered by auditing standards. Since [International Auditing and Assurance Standards Board](#) (IAASB) revisions in 2016–2017, auditors must read and consider these other sources of information.

Simnett says that NFI is now reported by 80 per cent of the largest companies (N100) in each of 52 countries (KPMG, 2020), and that with increased reporting is an increasing demand for assurance.

### Competition for assurance standards

Independent assurance of sustainability information increased to 51 per cent from 45 per cent for the same companies between 2017 and 2020, says Simnett. However, the accounting profession provided just 60 per cent of that assurance (KPMG 2020).

Two main assurance standards are used in practice:

1. The [IAASB’s ISAE 3000, \*International Standard on Assurance Engagements\*](#). ISAE is an umbrella standard. Other standards fit underneath it, such as [ISAE 3410, \*Assurance Engagements on Greenhouse Gas Statements\*](#).
2. [AA1000 Assurance Standard](#), updated in 2020, is widely used. It was developed by [AccountAbility.org](#), a global consulting firm and standard setter.

**“Extended External Reporting (EER) Assurance** is used to describe engagements to provide assurance on different forms of **non-financial reporting** (NFI), including integrated reporting, sustainability reporting and non-financial reporting about environmental, social and governance matters. This [2018] [video](#) provides an overview of EER Assurance” (IAASB 2021).



For additional information, see Krasodomska, Simnett, & Street (2021) and Venter & Eck (2021).

“The accounting profession tends to use the **IAASB ISAE 3000** and encourages others to use that standard,” says Simnett. “Sometimes in practice we see both used.”

The IAASB has addressed major challenges in undertaking assurance engagements for **Extended External Reporting** (EER). (See inset.)

Simnett’s presentation provides many ideas for future research on assurance of NFI. For example, materiality assessment can be difficult in sustainability reports.

## Call to action: What future-ready CPAs need to know

### CPAs’ role in trustworthy information: Competency Map 2.0

#### [Leading the Way - Competency Map 2.0 - The path forward for our profession](#)

**CM2.0**, under **CPA Ethical Mindset**, reads: “CPAs enhance the trustworthiness of information and processes in many roles by: ensuring that the information and related systems being used are relevant and reliable, and/or acting independently to provide external and internal assurance.



“All CPAs follow the provincial/regional body’s CPA Code of Professional Conduct and apply professional skepticism. This plays a large part in engendering trust” (CPA Canada, 2022).

**Q:** How does the increasing importance of sustainability reporting affect our roles as auditors and our responsibility in the future?

**A:** There are two dichotomies. 1) businesses from an operational standpoint need to figure out how they create value and why that’s fit for purpose. 2) Then, the auditor needs to give comfort and assurance to external parties to say, yes, this business is actually doing what they’re saying; it is walking the talk.

**SPEAKER DAVINDER VALERI**

[Part 5](#) in this six-part series examines **Canada’s global sustainability commitments**, **CPA Canada’s role** in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

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## PART 5

# Canada's global commitment: Getting to net zero

In **Part 5** of this six-part series of 10-minute reads, we present highlights of the [2021 MMPA Conference](#),<sup>1</sup> **Sustainability: A Call to Action, to explore** opportunities, challenges, and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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**Part 1: Sustainability: Imperatives** looks at the drivers of sustainability and why you should act now.

**Part 2: Sustainability: Definitions and perspectives** looks at the definitional divide when viewing sustainability from the perspectives of the corporation, the environment, the exploiter and the steward. Is the market the solution to sustainability challenges?

**Part 3: Sustainability metrics: Can accountants save the world?** shows us metrics that hurt sustainability and others that should be considered. It looks at valuation beyond monetization and warns against oversimplification.

**Part 4: Sustainability reporting and assurance: Accountants take the lead** looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new International Sustainability Standards Board (ISSB), accountants may convince regulators to change the rules of the game.

Here, **Part 5: Canada's global commitment: Getting to net zero** examines Canada's global sustainability commitments, CPA Canada's role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

**Part 6: Calls to action for future-ready CPAs** focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the Canadian CPA designation and steps to take toward more sustainable economies.

In this section, speaker **Dan Wicklum** looks at Canada's global commitments to sustainability and how Canada will achieve net-zero greenhouse gas (GHG) emissions. Speaker **Davinder Valeri** describes CPA Canada's commitment to net zero, and what it means for Canadian CPAs.

1. The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\), University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

## Canada's global sustainability commitments

In 2015, Canada and 192 other countries agreed to implement the [United Nations 2030 Agenda for Sustainable Development](#), which includes 17 [Sustainable Development Goals \(SDGs\)](#).

The goals “are a call for action by all countries – poor, rich and middle-income – to promote prosperity while protecting the planet. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection and job opportunities, while tackling **climate change** and **environmental protection**” (UN Climate Action, n.d.). (Emphasis added.)

In November 2021, **193 countries**, including Canada, reaffirmed the 2016 [Paris Agreement](#) at [COP26: United Nations climate change conference \(2021\), Glasgow, Scotland](#). That legally binding international treaty was an agreement to limit the increase in global average temperature to below 2 C, **preferably to 1.5 C**, below pre-industrial levels.

As part of Canada's commitment to the Paris Agreement, on June 29, 2021, the [Canadian Net-Zero Emissions Accountability Act](#) became law. The

Act requires the Government of Canada to set five-year targets, put a plan in place to achieve the targets and have progress against that plan evaluated by Canada's Commissioner of the Environment and Sustainable Development.

### [COP26<sup>2</sup>: United Nations climate change conference \(2021\), Glasgow, Scotland:](#)

Four COP26 Goals (abbreviated) to fight climate change:

1. **Achieve global net zero by 2050** and keep the limit of 1.5 degrees within reach
2. **Adapt** to protect communities and natural habitats and build resilience
3. **Mobilize finance** through international financial institutions
4. **Work together** through collaboration between governments, businesses and civil society

### [Canadian Net-Zero Emissions Accountability Act](#)

“The Act establishes a legally binding process to set five-year national emissions-reduction targets as well as develop credible, science-based emissions-reduction plans to achieve each target.

“It establishes the 2030 greenhouse gas emissions target as Canada's Nationally Determined Contribution (NDC) under the Paris Agreement emissions reductions of 40 per cent to 45 per cent below 2005 levels by 2030.”

2 The UN global climate summits are called “Conference of the Parties” or COPs. Over the 30 years COPS have been held, “climate change has gone from being a fringe issue to a global priority.” (UNRIC, 2021).

## Net zero defined

Net zero means that the human-made anthropogenic emissions going into the atmosphere are balanced out by the human-made or anthropogenic emissions that come out of the atmosphere. Taking emissions out could be as simple as planting a tree or as complex as changing agricultural practices or mechanically scrubbing CO<sub>2</sub> directly out of the atmosphere, says speaker Dan Wicklum. Finding the most effective and most likely pathways is necessary **now**.

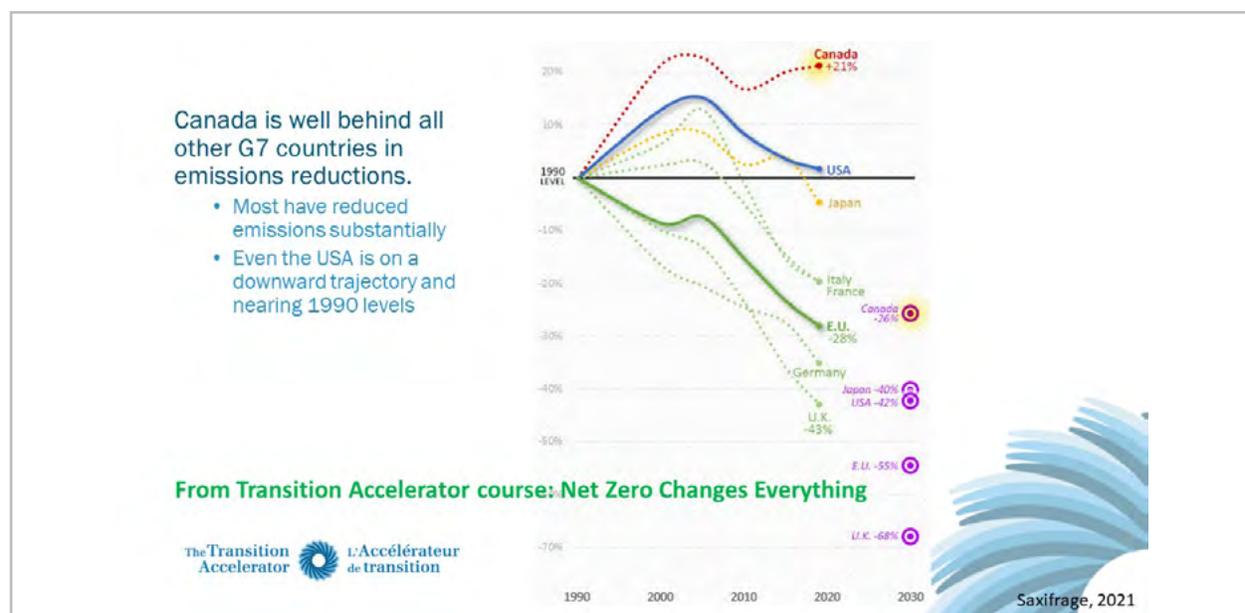
## Net zero changes everything

**“Scientists have been telling us for 30 years that we need to reduce our emissions or we would not like the state of the world that we leave for future generations. Put bluntly, we have dithered as a planet so much that we no longer have the ability just to reduce emissions. We have to eliminate emissions in a net-zero definition by 2050.”**

DAN WICKLUM

Climate change is real and is caused by human activities. Of all the G7 countries, **Canada is the laggard** on the global stage in terms of reducing emissions (Figure 1). Since 1990, our emissions in Canada **have increased** substantially, U.S. emissions have flatlined and those of all other G7 jurisdictions are lower.

**FIGURE 1: CANADA LAGS BEHIND G7 COUNTRIES IN REDUCING EMISSIONS**



Source: Dan Wicklum and The Transition Accelerator after Saxifrage [2021], 2022

## How Canada will meet its targets

As part of the requirements of the [Canadian Net-Zero Emissions Accountability Act](#) Canada established the [Net-Zero Advisory Body \(NZAB\)](#). It provides independent advice on targets and emissions reduction plans. NZAB reports to the Minister of Environment and Climate Change.

As co-Chair of NZAB, Wicklum sees its job as “... mostly as catalytic.” It will “... give advice to the government on how the whole system in Canada – multiple levels of government, academia, professional associations and others – can be aligned, bring value and come up with the best plans – **the most likely pathways** – to net zero and to actually implement them.”

NZAB met with 14 domestic and international organizations that had developed stringent pathways to net zero to learn from their experiences and to identify what worked and what didn't work.

### Canada Releases its first 2030 Emissions Reduction Plan followed by a contradictory announcement

The first required report under the [Canadian Net-Zero Emissions Accountability Act](#) was released on March 29, 2022.

“Addressing unnamed politicians who would say that the current moment – with the war in Ukraine stoking inflation and driving up gas prices – is a bad time for fighting climate change, Prime Minister Justin Trudeau told his audience in Vancouver that ‘this is no time for excuses.’”

“‘The question is not whether we keep going on climate action,’ Trudeau argued. ‘The question is how much more we can do, and how quickly?’”

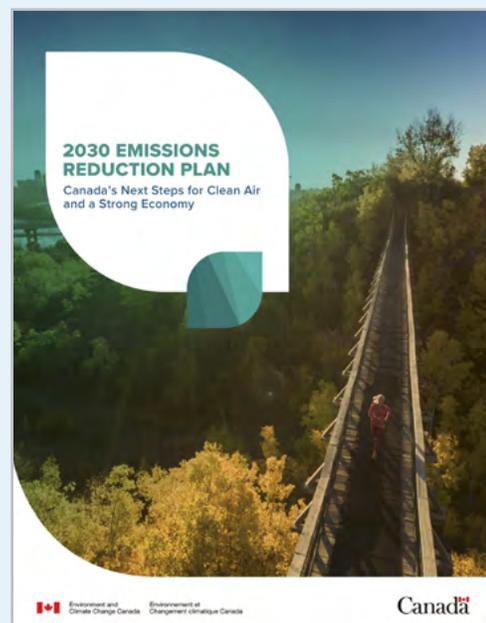
“The challenge is most acute – and most politically fraught – in oil and gas. As the government acknowledges in its own report, ‘the oil and gas sector contributes significantly to the Canadian economy’ and ‘the challenge of meeting Canada’s climate objectives and transforming an industry as complex as oil and gas to net-zero emissions is huge’” (Wherry, 2022).

Environmental groups were critical about the oil and gas industry being required to cut fewer emissions than other sectors over the next eight years. “Oil and gas sector emissions are projected to be 31 per cent below 2005 levels by 2030 – less than the 40 per cent to 45 per cent economy-wide reduction” (Tasker, 2022).

#### Contradictory announcement

On **April 6, 2022** the Canadian federal government announced approval of an oil megaproject off the coast of Newfoundland and Labrador that might produce 200,000 barrels daily starting in 2028 (Roberts, 2022).

UN Secretary-General António Guterres’ said, “**Climate activists are sometimes depicted as dangerous radicals. But the truly dangerous radicals are the countries that are increasing the production of fossil fuels .... Investing in new fossil fuels infrastructure is moral and economic madness**” (UN, 2022). (Emphasis added.)



From that consultation, NZAB developed a set of principles to guide its own pathways to net zero.

- **act early and urgently.** Doing a little bit now for emissions reductions and a lot later will not work.
- **be bold and proactive.** Incremental changes to existing systems will not meet net-zero emissions targets. NZAB has taken the approach of defining future systems that meet net-zero requirements for buildings, transportation, agriculture, energy, then building pathways to those future systems.
- **beware of dead ends.** While some of the cheapest, easiest ways to reduce emissions would certainly help us to get to our 2030 emissions reduction targets, they might waste valuable time. For example, internal combustion engines cannot be a part of a credible pathway to net zero, so hybrid vehicles could be liabilities and delay action.
- **make programs and policies** that respond to the needs of people, not just the needs of economic models or sectors.
- **acknowledge there's more certainty than uncertainty. Eliminating** emissions means leaving the emissions-**reduction** paradigm. "We cannot wait for new innovations. We cannot wait for economic conditions to change or to improve. We have the ability to act now based on existing technologies," says Wicklum. Acknowledging that means that the number of energy systems that can actually be net zero and functional is small. For example, personal mobility means a move to public transit and electric cars and half-ton trucks, **not** hybrid vehicles.
- **don't get caught in the "net."** The "net" is the use of removal technologies to reduce emissions, rather than eliminating them in currently emitting sectors.<sup>3</sup>
- **motivate people** to switch to low-emissions lifestyles and businesses. The health benefits of removing the combustion byproducts and the health-care savings may actually pay for the transition. (See Princeton University, C-PREE, 2020).
- **collaborate every step of the way.** The most likely pathways will be grounded in real-world experience and built collaboratively, with different pathways for different regions and sectors.

<sup>3</sup> Even so, the [2030 Emissions Reduction Plan](#) released March 2020 is heavy on CO<sub>2</sub> scrubbing technologies but less demanding of the oil and gas sector than others. (See inset.)

## Canada's pathways to net-zero energy systems

Wicklum is also CEO of the [Transition Accelerator](#), a pan-Canadian organization that supports “... Canada's transition to a net-zero future while solving societal challenges” (Transition Accelerator, n.d.).

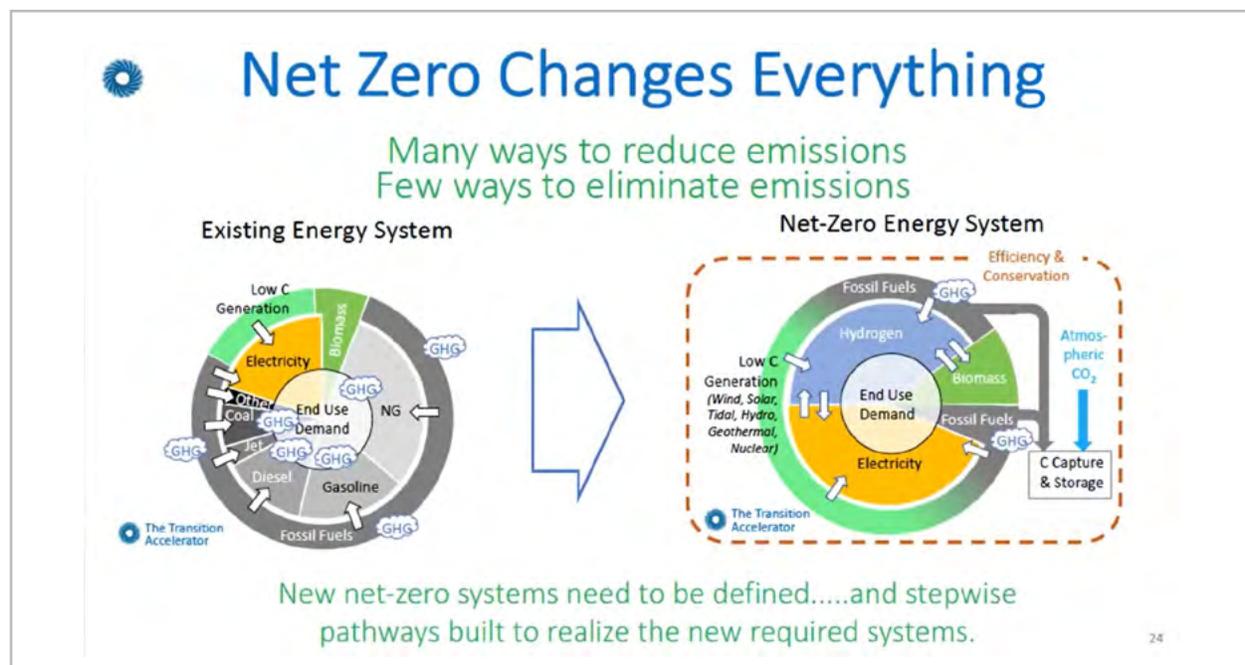
The Transition Accelerator defines new systems that will achieve net zero, then convenes industry-driven coalitions to build pathways to realize them.

Figure 2 shows Canada's **existing energy system** (left), dominated by fossil fuels. What Canada needs by 2050 is a **net-zero energy system** like the one on the right.

“We can't rely on changing our existing systems incrementally,” says Wicklum. The Transition Accelerator is working on four priority areas to drive maximum impact:”

- **electrification and grid integration**
- **Canada's hydrogen economy** (massive use of hydrogen as a zero-emission fuel because trains, for instance, cannot be electrified and batteries would be too large)
- **electric vehicle market penetration**
- **building decarbonization**

FIGURE 2: MOVING CANADA TO A NET-ZERO ENERGY SYSTEM



Source: Dan Wicklum and The Transition Accelerator

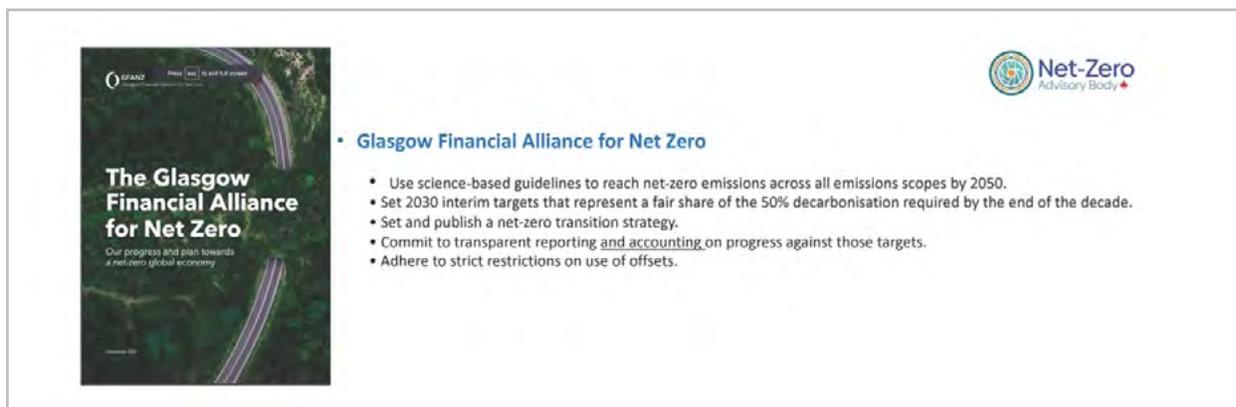
## Beyond just governments: Public and private financial investment

Every conference speaker emphasizes that collaboration is essential to address sustainability and climate change issues. Wicklum argues that getting to net zero has gone beyond governments alone. The [Glasgow Financial Alliance for Net Zero \(GFANZ\)](#) is an example of private-sector leadership.

Representing more than 450 major financial institutions from across 45 countries (including Canada), members come from every segment of the financial-sector value chain: asset owners, insurers, asset managers, banks, investment consultants, exchanges, rating agencies, audit firms and other key financial service providers. Launched in April 2021 by Mark Carney, UN Special Envoy for Climate Action and others,<sup>4</sup> GFANZ released its report [Our progress and plan towards a net-zero economy](#) at COP26. (GFANZ, 2021). Mark Carney, GFANZ co-chair, said of the forum's commitment:

**“We cannot get to net zero through niche efforts; we must green [decarbonize] the entire financial system, along with every sector of our economies. To mobilize the capital needed, GFANZ is accelerating the best practice tools and methodologies that are essential for ensuring that the climate is at the heart of every financial decision.”**

FIGURE 3: GLASGOW FINANCIAL ALLIANCE FOR NET ZERO



Source: Dan Wicklow after GFANZ, 2021

**“Sustainable finance refers to financial activities that take into account environmental, social and governance factors as a means of promoting sustainable economic growth and the long-term stability of the financial system.”**

CANADA, DEPARTMENT OF FINANCE, 2021

4 For more information, see [Glasgow Financial Alliance for Net Zero \(GFANZ\)](#).

In Canada, the [Sustainable Finance Action Council](#) will support the country's transition to a low-carbon economy and net-zero emissions by 2050. "Its mandate is to make recommendations to the Government of Canada on the critical market infrastructure needed to attract and scale sustainable finance in Canada," says Wicklum. While NZAB is a permanent body, this sister organization is an ad hoc, two-year council that NZAB works with closely.

## What about Canada's fossil fuels?

**"If we're absolutely clear about our goal or objective, which is net zero, it's going to require uniquely Canadian partnerships between the federal and provincial governments and business on a shared objective. The way I like to think about it is that we have these tremendous resources. ... We should be reinvesting all of those cash flows in the energies of the future, including the transition of our core businesses and the building up of skills for people. ... It's absolutely doable but, as you know, it won't happen haphazardly. It has to be done very deliberately, with a clear objective and in a way that brings everyone along."**

MARK CARNEY (MASSOUD, 2021)

## How targets can be derailed

Turbulent domestic and world news illustrates roadblocks and detours on the path to net zero. For example:

- Russia's winter 2022 invasion of Ukraine caused a spike in oil and gas prices that has prompted plans for increased rather than decreased oil and gas production in the U.S., Canada and other countries partly to reduce dependence on Russian oil, but also because higher prices make extraction economical when environmental accounting is ignored. (Tollefson, 2022; Williams & Shakil, 2022)
  - " ... despite bold promises about cutting ties with Russia, European nations have thus far opted for easy energy: the amount of Russian oil and gas entering Europe has actually increased since the war in Ukraine began" (Tollefson, 2022).
  - The same conflict "could prompt a long-term shift in sustainability." For example, " ... Italy, the Netherlands and the United Kingdom are all accelerating efforts to install wind power. Fertilizer plants across Europe have announced they will scale back production" (Tollefson, 2022).
  - The growing wealth gap means the rich may not be impacted by increased gas prices or may switch to electric vehicles. However, others will not be able to afford either option (Tollefson, 2022).

- Northern Canadian Indigenous communities will experience increased pressure or opportunity to accept or engage, participate and gain ownership in increased plans for resource extraction (Industry Strategy Council, 2020).
- The Canadian federal government implemented a carbon-tax week in April 2022, as the Ontario government promised to reduce gas sales tax if re-elected in June 2022 (Rocca, 2022).

## How CPA Canada is committed to net zero and what it means for Canadian CPAs

### CPA Canada's commitment

**“In the early days, members asked ‘Why are accountants in this space?’ That was more than 30 years ago. Today, sustainability is a key theme for the accounting profession and continues to be a strategic priority for CPA Canada.”**

DAVINDER VALERI

At the forefront of understanding sustainable development and climate change issues for more than 25 years, CPA Canada is committed to building a more sustainable future through research, convening stakeholders, promoting dialogue, contributing to government policy development and providing thought leadership, guidance and tools to members, leaders, policymakers and the investment community on these issues ([Figure 4](#)).

“As creators, enablers, preservers and reporters of sustainable value, accountants bring an important business perspective to Canada’s climate change dialogue” (CPA Canada, 2022a).

FIGURE 4: CPA CANADA'S STRATEGIC PRIORITY



Source: Davinder Valeri and CPA Canada

CPA Canada along with 13 (of 16) other accounting bodies of the global [Accounting Bodies Network](#) (ABN) of [Accounting for Sustainability](#) (A4S) has **publicly committed** to achieving net-zero greenhouse gas (GHG) emissions within its own organization and to providing the training and infrastructure to support its membership to achieve their own net-zero ambitions (CPA Canada, 2021).

For example, in collaboration with Natural Resources Canada, CPA Canada has produced [guidance on sustainability and climate change](#) (Figure 5), including [briefs, case studies and more](#) on how climate change affects business, and how accountants can help organizations adapt. CPA Canada also provides [sustainability resources](#) and [climate change resources for accountants](#).

FIGURE 5: GUIDANCE &amp; EDUCATION – SUSTAINABILITY/CLIMATE CHANGE

## Guidance & Education – Sustainability/Climate Change

**Courses:**

- Build professional capacity within the private sector to adapt to the impacts of climate change.
- Build capacity within corporations and municipalities to improve climate-related disclosures and integrate climate change considerations into decision-making processes

**Audiences:**

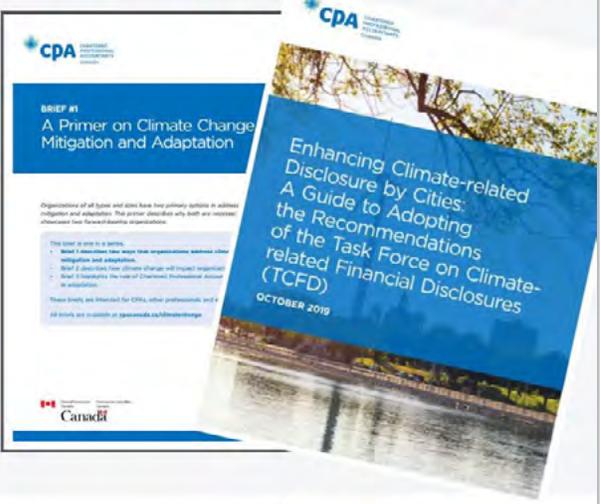
- Boards of Directors
- Senior Financial Executives (e.g., CFOs)
- CPAs in Business
- CPAs in Professional Services (e.g., Audit, Consulting)
- Cities / Investors

**Guidance:**

- GHG Emissions
- Strategy, Risk / Data
- Valuations & Climate Change
- Reporting

**Credentials:**

- Value Creation Certificate: Sustainability for CPAs
- Advanced Data Management Certificate



Resources available at:  
[www.cpacanada.ca/climatechange](http://www.cpacanada.ca/climatechange)




Source: Davinder Valeri and CPA Canada

### Canadian chapter of the A4S CFO Leadership Network

“The aim of the A4S CFO Leadership Network is to get to the point that we don’t say ‘sustainability’ anymore because it’s just business as usual,” says Valeri. “We need to change our mindset such that we no longer have to create a business case around sustainability. It will just make sense.”

Boards and CEOs are increasingly turning to their CFOs and their finance functions to understand climate change and its impact on their business. The function is now being asked to provide clarity and some oversight over sustainability information.

To support the CFO function, CPA Canada and A4S partnered in 2017 to open a [Canadian chapter of the A4S CFO Leadership Network](#), where CFOs from large businesses work together to bring the management of environmental and social issues into their business

processes and strategy. The [A4S Knowledge Hub](#) provides guides, case studies, webinars and more for the finance function, with topics covering everything from engaging the board to enhancing investor engagement.

In addition, accountants have the skills to make sure structured and unstructured data is of high quality and to help businesses make informed decisions. The role of CPAs in data management is explored in depth in [The Professional Accountant's Role in Data](#), a joint publication of CPA Canada and the [International Federation of Accountants](#) (IFAC).

## Call to action: What future-ready CPAs need to know

### [Leading the Way - Competency Map 2.0 - The path forward for our profession](#)

**CM2.0** considers the UN's [Sustainable Development Goals](#) (SDGs) in its design and coverage. This is done by acknowledging the higher calling of the CPA profession, the emphasis on high-quality education and on sustainability as a foundation for the map (CPA Canada, 2022b).



[Part 6](#) in this six-part series focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the **Canadian CPA designation** and steps to take toward more sustainable economies.

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## PART 6

# Calls to action for future-ready CPAs

In **Part 6** of this six-part series of 10-minute reads, we present highlights of the [2021 MMPA Conference](#),<sup>1</sup> **Sustainability: A Call to Action**, to explore opportunities, challenges and often contradictory forces for accountants, corporations, communities and countries practising, transitioning to and embracing sustainability.

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**Part 3: Sustainability metrics: Can accountants save the world?** shows us metrics that hurt sustainability and others that should be considered. It looks at valuation beyond monetization and warns against oversimplification.

**Part 4: Sustainability reporting and assurance: Accountants take the lead** looks at the powerful trend backed by capital markets and international business to consolidate and standardize sustainability metrics and reporting. Through the new International Sustainability Standards Board (ISSB), accountants may convince regulators to change the rules of the game.

**Part 5: Canada's global commitment: Getting to net zero** examines Canada's global sustainability commitments, CPA Canada's role in getting there, and conflicts and contradictions faced by economies transitioning to net zero.

Here, **Part 6: Calls to action for future-ready CPAs** focuses on what we can do as professionals and individuals to move toward more sustainable living. It looks in detail at the new pre-certification qualifications for the Canadian CPA designation and steps to take toward more sustainable economies.

In this section, speaker **Irene Wiecek** introduces professional calls to action, beginning with the new pre-certification qualifications for the Canadian CPA designation, **Competency Map 2.0**. We learn about why the 2020s are critical for meeting **sustainability's call to action** and the consequences if we do not. Speaker **Terry Goodtrack** and others show us ways to lead more sustainable personal lives.

1. The 2021 MMPA conference is hosted by the [Master of Management & Professional Accounting \(MMPA\) Program](#) and [BIGDataAIHUB](#) at the [Institute for Management & Innovation \(IMI\), University of Toronto at Mississauga \(UTM\)](#). The MMPA program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession. Readers are reminded that this series provides just selected highlights of the speakers' information-packed presentations and Q&A. To learn more, visit the [conference website](#).

## Professional calls to action

### The path forward

[Leading the Way - Competency Map 2.0 - The path forward for our profession](#) (CM2.0) captures skills and competencies needed as business, society and technology rapidly evolve. It is the foundation for changes to education programs, experiential learning and assessments for future-ready CPAs (prospective or practising). It reflects themes important in its creation, among them emerging opportunities for the accounting profession in sustainability, ESG, data governance, value creation, leadership, systems thinking and continuous learning.

Throughout this series, we have included sustainability-related excerpts from [Leading the Way - Competency Map 2.0 - The path forward for our profession](#) (CM2.0).

Speaker [Irene Wiecek](#) puts those excerpts into context by describing CM2.0's higher-level themes and how CM2.0 will prepare pre-certification CPAs and current CPAs to be future-focused.<sup>2</sup>

**“We’re in a period of exponential change that will continue into the foreseeable future. CM2.0 is about CPAs responding to that call to action.”**

IRENE WIECEK

### CM2.0: A visionary map

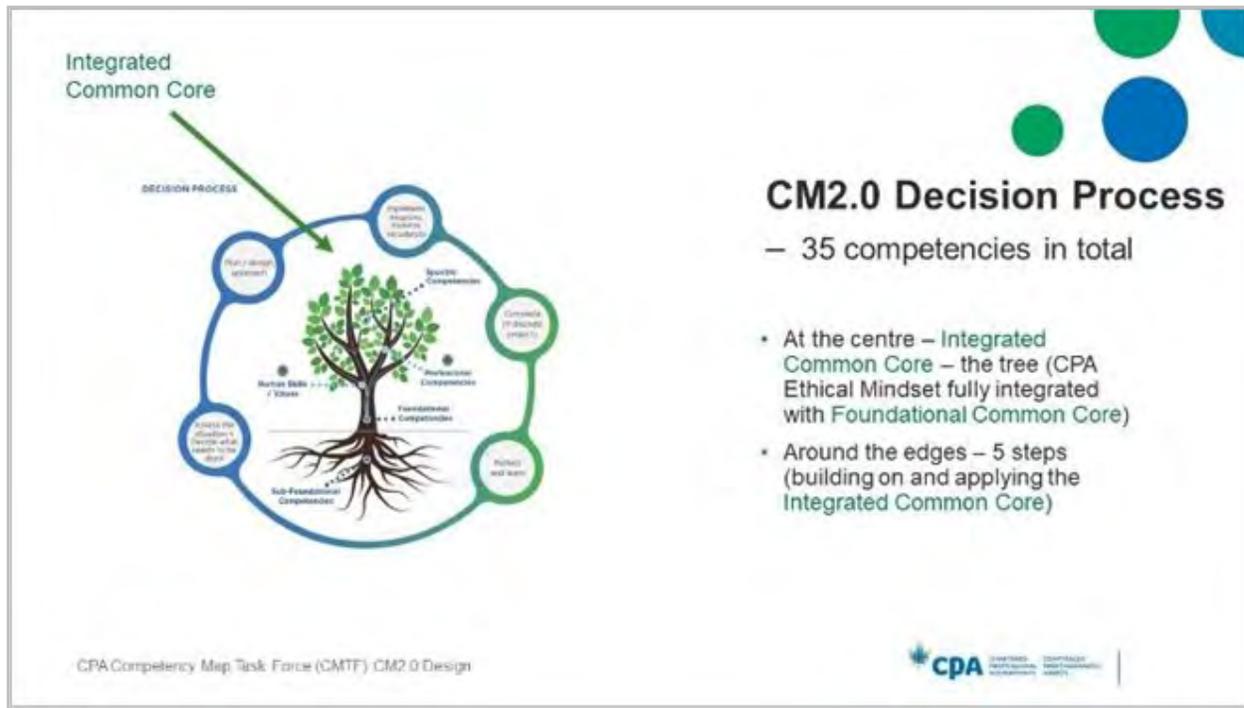
Unlike a traditional map, CM2.0 is visionary ([Figure 1](#)). At a high level, its components are those required of CPAs through their decision processes, which will increase in complexity as CPAs gain proficiency.

**“The map is visionary, not prescriptive. It is a guiding light to help us navigate periods of change.”**

IRENE WIECEK

<sup>2</sup> Readers are encouraged to read the published CM2.0 document, [Leading the Way - Competency Map 2.0 - The path forward for our profession](#), for detailed descriptions, context and finalized graphics.

FIGURE 1: CM2.0: A VISIONARY MAP

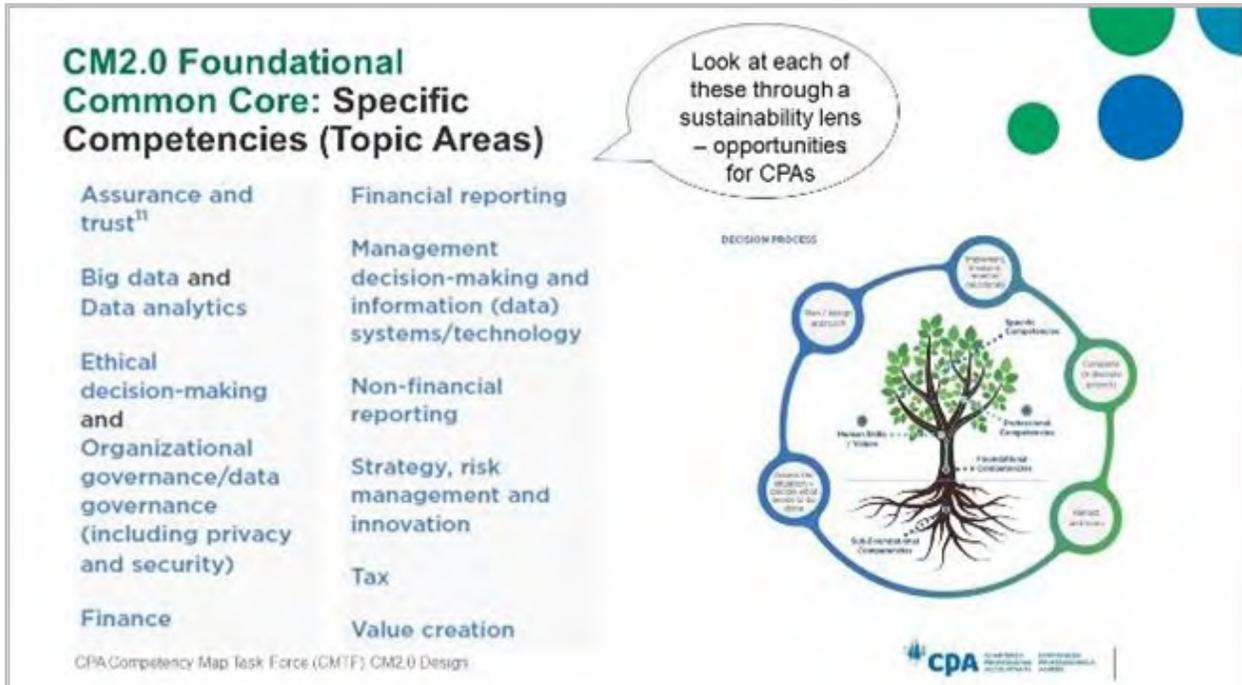


Source: Irene Wiecek and CPA Canada

**CM2.0** prepares future-ready CPAs by:

- **fostering human skills and values** that are more resilient to automation (including curiosity and creativity)
- **ensuring understanding of complex and interconnected systems** – a need mentioned by nearly all of this conference’s speakers – and ability to take advantage of technological and other innovations
- **laying the foundations for evergreen (continuous) learning** and future specialization in existing and emerging areas
- **focusing on a foundational common core** to facilitate collaboration with other experts (e.g., in the areas of science and data science)
  - The foundational common core of CM2.0 has three parts: **specific competencies** that build on **foundational competencies** ([Figure 2](#)) and **sub-foundational competencies** ([Figure 3](#)).
  - Viewed from the conference theme of sustainability, the core competencies present many **opportunities** for CPAs, and sustainability is foundational ([Figure 2](#) and [Figure 3](#)).

FIGURE 2: CM2.0 FOUNDATIONAL COMMON CORE



Source: Irene Wiecek and CPA Canada

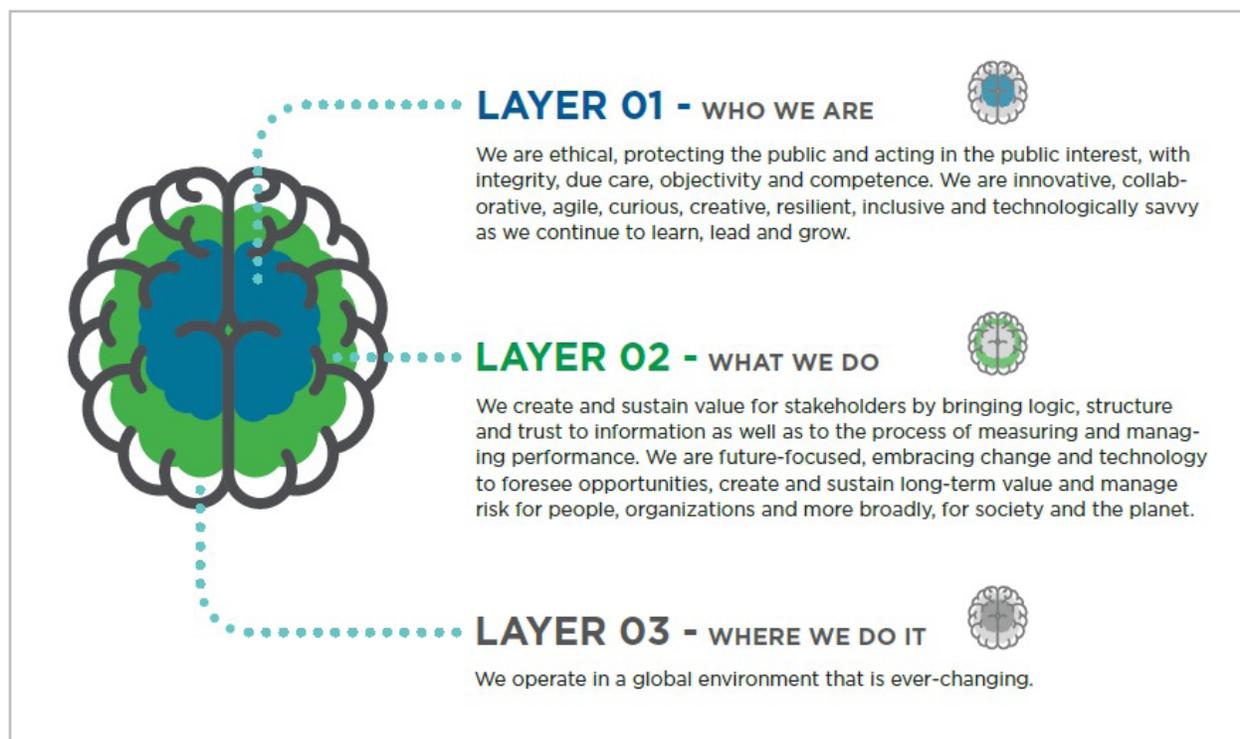
FIGURE 3: CM2.0 SUB-FOUNDATIONAL COMMON CORE



Source: Irene Wiecek and CPA Canada

- **embedding an ethical mindset** and **embracing the higher calling** of the profession (acting in and protecting the public interest) in an increasingly complex, diverse and global environment
- Figure 4 shows many messages repeated by this conference’s speakers; particularly relevant is creating and sustaining long-term value and managing risk for **stakeholders beyond just shareholders**: people, organizations and more broadly, **society and the planet**.

FIGURE 4: CPA ETHICAL MINDSET



Source: CPA Canada, 2022, p.12

### Professional support

Through CPA Canada, CPAs are part of a global network committed to sustainability, to net zero and support of its members (see [Part 5](#) of this series). Montreal will be the Americas’ regional centre for the newly formed International Sustainability Standards Board (ISSB) (see [Part 4](#) of this series).

Moving forward, achieving net zero means a societal cultural transformation.

## Cultural transformation needed

“The despair we feel from climate projections must turn into action .... The 2020s are critical. Along with decarbonizing our economies and pursuing carbon-capture technologies, governments must prioritize nature in their policy decisions. The private sector should urgently implement net-zero commitments with strong nature-based considerations.

DR. BRONSON GRISCOM, CONSERVATION INTERNATIONAL (GRISCOM, 2022)

We need to reconsider consumption and economic growth as the Earth’s population reaches 10 billion people, says keynote speaker [Andy Hoffman](#).

“If everyone wants to continue to consume as the typical North American does, we’ve got a serious problem,” he warns.

We need to reconsider:

- how we use materials and work to maximize their use
- what we eat
- how we travel and how much we travel

He asks, “Here’s the Gordian knot of our time: Is there such a thing as sustainable consumption?” The [World Business Council for Sustainable Development](#) (WBCSD) tries to answer this question in its 2011 document, [A Vision for Sustainable Consumption](#) and on its website.

The COVID-19 pandemic showed us the importance of the “S” in ESG. Can social relationships substitute for consumption?

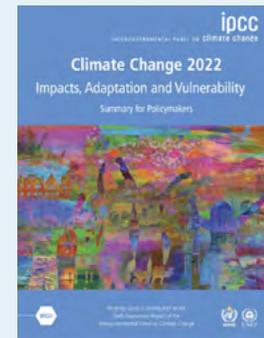
## Intergovernmental Panel on Climate Change (IPCC)<sup>3</sup> | 2022 Report News Release, April 4, 2022

April 4, 2022.

“Without **immediate and deep emissions reductions** across all sectors, limiting global warming to 1.5 C is **beyond reach**.

“Having the right policies, infrastructure and technology in place to enable changes to our lifestyles and behaviour can result in a 40 per cent to 70 per cent reduction in greenhouse gas emissions by 2050 ...

“The evidence also shows that these lifestyle changes can improve our health and wellbeing” (IPCC, 2022).



<sup>3</sup> The [Intergovernmental Panel on Climate Change](#) (IPCC), with 195 member countries, was formed in 1988 by the United Nations Environment Programme and the World Meteorological Organisation. It is the United Nations body for assessing the science related to climate change.

## Contradictory forces dominate transitions: A message to new CPAs

As new and current CPAs, you may work for the generation and a half that have left the messages of the [Brundtland Commission \(1987\)](#) unheeded ([Part 2](#)), have forestalled regulation ([Part 4](#)), contradict their messages of sustainability ([Part 5](#)), are agnostic about climate change and our transgression of planetary boundaries ([Part 1](#)), who do not see the value in stakeholder – not just shareholder – capital ([Part 2](#), [Part 3](#), [Part 4](#)).

As speaker [Andy Hoffman](#) says ([Part 2](#)), as CPAs, you must frame sustainability in the language that the business really cares about to get people to listen. Challenge unsustainability and use professional skepticism: beware of greenwashing and impressive, yet unrealized, aims by:

- ESG investing ([Part 1](#))
- markets ([Part 2](#))
- the WEF, ISSB, government plans ([Part 3](#), [Part 4](#), [Part 5](#))

CPAs must fight for the realization of these aims. “As future leaders, you need to question practices and actively seek ways to solve problems,” says Wiecek.

It is **your** future.

## Taking personal action



**“People often ask me what one thing I would recommend to restore the relationship between land and people. My answer is almost always, ‘Plant a garden.’ It’s good for the health of the earth and it’s good for the health of people. A garden is a nursery for nurturing connection, the soil for cultivation of practical reverence. And its power goes far beyond the garden gate – once you develop a relationship with a little patch of earth, it becomes a seed itself.”**

ROBIN KIMMERER, 2013

In 2019, speaker Terry Goodtrack said to the Aboriginal Financial Officers Association (AFOA) Canada’s three summer students, Thomas Roundpoint, Troy Francis and Austin Courchene:

“The unfortunate thing is this. The generations before you brought us to where we are today. Unfortunately, your generation and the future generations are going to have to deal with those mistakes.”

He challenged them to share what they thought we should all do at an upcoming retreat. Figure 5 captures their four steps to more sustainable living.

**FIGURE 5: FOUR STEPS TO MORE SUSTAINABLE LIVING**

STEP 1: Very basic	STEP 2: Basic	STEP 3: Further	STEP 4: Even further
<p>Make a start:</p> <ul style="list-style-type: none"> <li>• reduce, reuse, recycle</li> <li>• encourage others to recycle</li> <li>• reduce reliance on disposables</li> <li>• use public transportation</li> <li>• carpool / ride-share, fly less, bike</li> </ul>	<p>Consider:</p> <ul style="list-style-type: none"> <li>• switching to a vegetarian diet</li> <li>• eating local</li> <li>• eating organic</li> <li>• planting a garden</li> <li>• using cloth diapers</li> <li>• buying from eco-friendly companies</li> </ul>	<p>Go a little further:</p> <ul style="list-style-type: none"> <li>• make eco-conscious clothing choices</li> <li>• plant a tree</li> <li>• compost your organics</li> <li>• organize your waste</li> <li>• save your leftovers</li> <li>• conserve water</li> <li>• reduce water pollutants</li> <li>• save energy in the house</li> </ul>	<p>Go even further. Consider:</p> <ul style="list-style-type: none"> <li>• switching to an electric vehicle</li> <li>• energy-efficient housing</li> <li>• going vegan</li> <li>• eating a plant-based diet</li> </ul>

Source: Terry Goodtrack recounting AFOA Canada summer students' project, 2019

## Concluding thoughts

The cost of doing nothing is too great. See the videos in Figure 6 and Figure 7.

**FIGURE 6: JULY 2021: ONE MONTH OF EXTREME WEATHER AROUND THE WORLD (SOURCE: ANDERSON, COSTA & LAMBORN, 2021)**



Watch the [video from The Guardian](#).

**FIGURE 7: STATE OF GLOBAL CLIMATE 2021 (SOURCE: WORLD METEOROLOGICAL ORGANIZATION [WMO], 2021 2021)**



Watch the [video from the WMO](#).

## Will accountants save the world?

Not alone, but they will help lead the way. As every conference speaker emphasizes, **collaboration** is among the most important actions on sustainability and climate change issues.

Speakers provided important messages in reply to student questions. Below is a sampling from this exchange.



**Q:** As students and future CPAs, how can we develop a value-creation mindset before we enter practice?

**A:** Traditionally as CPAs we are perceived to be the gatekeepers / naysayers when an opportunity is put on the table: We are quick to find reasons why we cannot approve it. I would say as a newly minted CPA please have a creative mindset, an innovative mindset. Be open-minded. Be willing to consider what you don't know and to challenge.

Be willing to deal with non-financials/intangibles: see their value, even if you can't put a dollar to them. See the value behind human capital, e.g., how do organizations treat their employees?

On the culture side, you want to work for an organization that you feel builds your values.

**SPEAKER DAVINDER VALERI**

**Q:** How can accountants best incorporate the Indigenous holistic approach that includes consideration for all ecosystems and environments to ensure that the organization embraces and maintains sustainable practices?

**A:** About 8 years ago, speaker Terry Goodtrack visited Chief Jack Caesar in the Ross River Dena community, Yukon. He noticed a water truck going to every household because local water was undrinkable from mining-associated mercury and land un-useable after resource extraction.

Chief Caesar said, “We’re not averse to business development, but we want to be included in business developments, and we want to be able to use the land thereafter.”

In our profession as accountants, we need to be able to measure beyond just the corporation. We’re very proficient risk analyzers. We’re taking on the role of providing advice on strategy and taking the larger view beyond just the corporation to society. This is where we can really add value.

As a call to action, consider the four beliefs I spoke about ([Part 2](#)). Do something. Act on it.

**SPEAKER TERRY GOODTRACK**

When we talk about sustainability...

**A:** “It’s not governments, it’s not organizations, it’s not CPA Canada that [is] going to make change. It’s you. It’s the individual.

The choices that you make today will shape the future of tomorrow.”

**SPEAKER DAVINDER VALERI**

**A:** “Focus on the future as opposed to the past using a multi-stakeholder perspective and recognize relevant value streams, not just the financial.”

**STUDENT MADISON HOGAN, MMPA CLASS 2022**

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