

## **Moving from Fear to Hope**

### **Finding the good news in the midst of a global ecological crisis**

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We watch and listen to the news bites on climate change and global warming, severe weather events, water and food shortages, the devastation of our rain forests, species extinction, the inevitable pandemic that they tell us is coming, and the constant reminder that fossil fuels, among other natural resources, are going to run out one day. As a global society, we've experienced first-hand the impact that the demand for fossil fuels has had upon our nations as we compete with each other for a finite amount of these resources. We are also becoming increasingly aware that we cannot so easily ignore, tune out or become complacent to this very real possibility. Our lives are changing; we are rapidly heading from one crisis (record-high oil prices to a record decline in just a few short months) to another (credit crisis) in our culture of global consumerism.

As a recent participant in UBC's pilot podcast "Imagining a Sustainable Future", I could not have fathomed that I would learn so much in such a short time, that I would be shocked into fear, and that it would leave me changed. The course's pre-reading material measured six inches thick, and as I read through it, I was struck by three things: this material is very academic; there is much to be fearful of; but mostly, it left me wondering 'where is the hope?' I had not found any, but what I learned about sustainability in one day set me on my journey to find the hope, eclipsing everything I ever thought I knew or had gleaned from the news media. More importantly, I felt a need to simplify the fearful and shocking messages. Serendipitously, I discovered that in order to reach the masses we need simplicity backed up by real science, so that we can be confident of our simplification and interpretation. We need a greater awareness, without being bogged down by both the academia and intellectualisms surrounding it, or the careless and out-of-context news stories that proliferate and overwhelm us in our daily lives.

Sustainability is a big topic. It takes time to understand it. This paper is only able to scratch the surface of it, but I hope that the messages included here simplify some of the bigger messages, and leaves you with a sense of hope that we can, and that we are making a difference.

The term sustainability can make us somewhat uncomfortable or fearful. We're not ready to accept that a new reality may be waiting in the wings for us because we don't really know what that will look like. We've heard of hybrid cars, green buildings, green consumerism, and the like, but mostly we're afraid of what we might have to give up for it; that it will cost more, and reduce our free-flowing affluence that we've become quite accustomed to; that we will have fewer choices; or worse, that our choices will be taken away from us. What we have to fear most is our own ignorance, or perhaps even arrogance, and failure to act. Failing to act would be catastrophic, leading us to a 'cascade of unintended consequences'.

According to *David Suzuki's Green Guide*, "We are in a time of transition between the industrial era and the sustainability era. By using our unique foresight, we can envision a different future, a sustainable future. After a destructive period of human arrogance, we are on the brink of an environmental revolution." This is hopeful! But what does it all mean?

### **What is sustainability, and how much do we really know about it?**

We've heard this term for decades now, and there are others that we may have heard in relation to it, and be less familiar with: the ecological footprint, the tipping point, leverage points, income per capita and quality of life, carrying capacity, the happiness factor; and some that are outright obscure: biocapacity, overshoot, affluenza.

Sustainability is defined as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." A World Watch article, *What Is Sustainability Anyway?* tells us that: "...sustainability and the good life are tightly interwoven. Prerequisites to both include human survival, ecosystem health, and some degree of social equity."

### **What's frightening lies within our ecological footprint and biocapacity**

The ecological footprint is a measure of how our lifestyles impact the planet and other people, and calculates how much productive land, freshwater and sea is needed to feed us and provide all the energy, water, materials we use, and how much land is needed to absorb our waste. The Earth is 11.2 billion hectares of biologically productive land and sea surfaces; for a population of 6.7 billion people, that is **1.8 hectares per person**.

<b>Average ecological footprints (hectares)</b>	
United States	9.6
Canada	7.6
Australia	6.6
U.K.	5.6
Europe (EU-25)	4.8
Middle East & Central Asia	2.2
Latin America	2.0
China	1.6
Asia Pacific	1.3
Africa	1.1
<b>Global Average</b>	<b>2.2</b>

The difference between our ecological footprint and biocapacity is called either 'reserve' or 'deficit' (overshoot). Globally, we are in a state of overshoot.

### **What we need to fear**

As early as 1988, our biocapacity shifted to a deficit; we now use 30% more resources per year as can be produced. "The Earth's remarkable regenerative capacity can no longer keep up with our demands.

People are turning resources into waste faster than nature can turn waste back into resources." (*David Suzuki's Green Guide*)

William E. (Bill) Rees, UBC Professor, School of Community and Regional Planning, on Cognition, Culture and Sustainability (2008), tells us a really 'inconvenient truth':

- Industrialized world reductions in material consumption, energy use, and environmental degradation of over 90% will be required by 2040 to meet the needs of a growing world population fairly within the planet's ecological means. (BCSD 1993; "Getting Eco Efficient")
- Resource depletion is a measure of humanity's evolutionary 'success', and although there is remarkable consistency in the history of resource exploitation: resources are inevitably overexploited, often to the point of collapse or extinction. (Ludwig, Hilborn and Walters 1993)
- During the 20<sup>th</sup> Century:
  - ~ The human population quadrupled to 6.3 billion
  - ~ Energy use increased 16-fold
  - ~ Industrial production grew 40-fold
  - ~ Water use increased 9 times
  - ~ Fish catches rose by a factor of 35
  - ~ Carbon Dioxide emissions increased by a factor of 17
  - ~ Sulphur emissions increased 13-fold
  - ~ Other air pollutants rose by a factor of 5
  - ~ Tropical deforestation and desertification accelerated, etc.

World Watch's article, *What Is Sustainability Anyway?* goes on to say that:

- Twenty percent of the world's people, the global consumer class, consume 70 to 80 percent of the world's resources, and their excesses are leaving the world's ecosystems strained.
- As much as half of the Earth's land is transformed or degraded, and three-quarters of the world's fisheries are at capacity, overexploited, or depleted.
- Our vast and accelerating logging operations and dependence on fossil fuels have increased atmospheric carbon concentrations to levels never seen before.
- By diverting or damaging rivers, we've dried out seas (or created new ones); changed local weather patterns, and disrupted entire ecosystems.
- Globalization is spurring a rapid increase in the size of the global consumer class, driven by growing advertising expenditures (*in 2002, advertisers spent \$451 billion to convince people that they would find happiness in the latest fad or fashion*) and widening access to consumer credit.

We suffer from an almost 'pathological fixation' on ever increasing consumption, even at the expense of personal and social well-being. Coined as the term 'affluenza', its symptoms include: high levels of debt; increasing work stress; declining physical health. (Source: Harvard professor Lizbeth Cohen and World Watch: What Is Sustainability Anyway?)

It is ironic that World Watch published this article in 2003, and here we are five years later, having reached a global credit crisis. A 'cascade of unintended consequences' set in motion. For decades, few were willing to address consumerism's failure to satisfy people.

If we fail to act, "There is a legitimate possibility that our children will face calamity on a scale that we can't imagine, on a scale beyond anything humanity has ever seen. This is a prospect that makes it hard to think, makes my vision blur with angry, impotent tears. It terrifies me." (Chris Turner, *The Geography of Hope*). It terrifies me too, and it breaks my heart. I can no longer live a 'status quo' life. I have reached my own personal tipping point.

### The happiness factor and why it matters from an environmental perspective

It's true; we don't need 'stuff' to be happy. A study on happiness shows us that money does not bring us greater happiness. People overestimate the life satisfaction they will gain from obtaining things, and there is great satisfaction and happiness to be found in those who give money away or are in service to others. People are happy when their basic needs are being met, and the old standard economic measurement as income per capita upon our standard of living and quality of life has done little to increase our happiness.

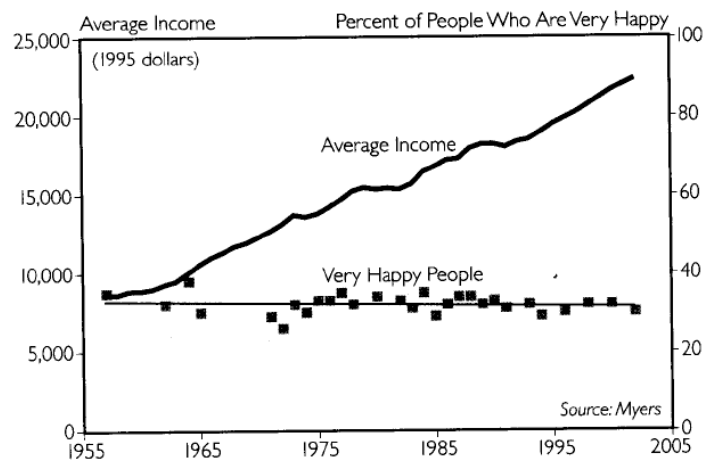


Figure 8-1. Average Income and Happiness in the United States, 1957-2002

"There is a relationship between happiness and our ecological footprints...happy people are more ecologically responsible. Happy people tend to be more focused on personal growth, relationships, and community involvement than on money and possessions. Happy people also tend to be more mindful... including the ecological consequences of their actions." (David Suzuki's Green Guide)

## Between fear and hope

“We have a choice in our thinking: when we are fearful, it is negative and scary; when we are hopeful, we are positive, we smile more, we radiate energy that can inspire others,” says Donella Meadows. “There is too much bad news to justify complacency. There is too much good news to justify despair.”

Julian Simon, economist and author of *The Ultimate Resource*, stated that “indeed, we might run out of copper, but who cares? The mere fact of shortage will lead someone to invent a substitute. The ultimate resource is people – skilled, spirited, and hopeful people who will exert their wills and imaginations for their own benefit, and so, inevitably, for the benefit of us all.” Ah, some good news at last!

## Finding the hope

According to Bill Rees, “We have the technology today to enable a 75-80% reduction in energy and (some) material consumption while actually improving quality of life.” Alex Steffen tells us, that “if we want to change the world, one of the most powerful things we can do is show how the future could be better. We have much of the toolbox of solutions we need to build a bright green future: designs, technologies, policies, practices, and insights.”

“Returning to a cyclical system – harvesting renewable resources sustainably, reusing and recycling materials in preference to mining virgin ones, rebuilding and nurturing agricultural soils, weaning ourselves off of fossil fuels, and so on – along with respectful husbanding of biodiversity, will start us down the path of **material sustainability**. Giving due and purposeful attention to the inequities that lock billions into wretched poverty and undermine the security of all will start us toward **social sustainability**.” (World Watch, *What Is Sustainability Anyway?*)

## The good news

They say that good news travels fast. I have yet to see or experience it in actuality in terms of sustainability, and I don't quite understand yet why the good news isn't being shouted from every rooftop. To find the hope, I went in search of it and found some remarkable resources: *David Suzuki's Green Guide*; Chris Tuner's, *The Geography of Hope*; Alex Steffen's, *World Changing: A User's Guide For The 21<sup>st</sup> Century*, and Malcolm Gladwell's, *The Tipping Point*.

I found example after example of the great and brilliant work that is being done by individuals, corporations (they are not always the bad guys!), cities, and nations. Too much so to reiterate for the purpose of this paper, but what I have learned in this personal journey of discovery is that little changes can have big effects, as summarized in *David Suzuki's Green Guide*:

- Every step we take to reduce electricity usage in the home has up to three times the impact we might imagine.

- When we reduce our material consumption by a kilogram, we save up to 200 kilograms of waste and pollution.
- When we vote for candidates based on their environmental platform, we start to change how governments operate.
- The ripple effect expands as we share our stories and experiences with family, friends, colleagues and acquaintances.
- More & more people are discovering that environmentally responsible behaviour is enriching, not impoverishing.
- We are not alone in this: millions of people belong to international and national environmental groups, local green groups, and community sustainability groups. Thousands more join each day. As this movement grows, it approaches what is known as the tipping point. Small changes that appear to have little or no effect on a system keep occurring until a critical mass is reached. Then one further small change “tips” the system and a large effect is observed.

### **We can dare to imagine a sustainable future**

David Suzuki assures us that, “a sustainable future lies within the reach of our imaginations: imagine a vehicle whose only waste product is water; imagine getting a cheque from your utility company every month instead of a bill, because your home generates more electricity than it consumes; imagine fresh, delicious and nutritious food grown locally without pesticides, antibiotics, genetically modified organisms, or growth hormones; imagine an agriculture system where trees, perennial grasses, cattle, chickens, and hogs are raised in sustainable, humane ways with few resources from off the farm and no waste; imagine a city without noise and pollution from the infernal internal combustion engine; imagine never having to worry that invisible environmental hazards are undermining your health and your children’s health; imagine industrialized nations that consume no fossil fuel, relying instead on solar energy, geothermal energy, and other sources of clean energy; imagine that every product you buy is free from toxic chemicals, and that when things eventually wear out or break down, their manufacturer is responsible for taking care of them; imagine that everything you ever buy is biodegradable, reusable, or recyclable.”

What is hopeful about imagining and visualizing a green future, is that this is not a ‘science fiction’ version of an ecological utopia. These developments are much closer to becoming reality than many people realize.

### **What we are achieving**

- Zero energy buildings (rely upon renewable energy).
- Zero emission vehicles (prototype hydrogen fuel cell and fully electric vehicles).

- Zero waste (redesigning patterns of production and consumption so that everything is reusable, recyclable or safely biodegradable).
- Sustainable agriculture (local and organic).
- Sustainable products (underwear, carpets, shoes, office furniture, and clothing); even Nike, once reviled by activists, has adopted the principles of cradle-to-cradle design: that all materials go back to soils safely, or they go back to industry.

### **From being fearful to being hopeful**

It's said that people's values are evolving rapidly, and I can attest to that. I also agree with Chris Turner, "What the world needs is an 'exuberance epidemic' on a scale the world's never seen." Vast amounts of information and supporting data is at our fingertips, and if we are brave enough to delve into it, we may at first discover just how much more we have to be fearful of. The good news is that there are vast amounts of great things happening, every day! We can find hope. Hope is in our willingness to consciously make that shift toward change. Is it happening fast enough? What will that tipping point be for our global society? Can we save ourselves fast enough? I believe we can.

Good work is taking place, often quietly unbeknownst to us, and it is having an effect. It is gaining momentum. We can act, we have to act, and by responding to our own private and inner call to action, we can help change the world. We can set the tipping point in motion. When that point is reached, we will all just know. In that knowing, our hope comes to fruition. Our children deserve a future as exciting, rewarding, and perhaps even more fulfilling than the one we've always known. It will look different, it will feel different; and hopefully it won't just be about 'stuff' anymore, but something much greater than that.

Each of us also needs to "find our allies and heroes, and to share what we're learning," (Alex Steffen's, *World Changing*). Create that 'exuberance epidemic'.