From green washing to green wisdom

Pat Thomas
www.howlatthemoon.org.uk

Thank you so much for having me here tonight.

As Sophie said my 11x great grandfather was once the Lord of this manor and he is very often painted as the villain of the peace because his enclosures of this village are credited with kicking off the Midlands Revolt. John Quarles was also a Merchant Adventurer and thus an early advocate of globalisation, he was also a Draper, which meant he traded in fine woollen cloth for wealthy Elizabethan fashionistas.

But that's not the only place where my ancestry is rooted in the dysfunctionality of the modern world. My great grandfather was a Texas oil baron who acquired houses, cars and wives and various other trappings of wealth in vast quantities. Elsewhere in my family was a biochemist who patented the method for turning beets into sugar.

Deep in the past, deep in the Southern states of the America, my family were farmers who grew tobacco and cotton. They were slave owners. Along with parcels of land, cattle, feather beds, bridles and saddles, the wills of my ancestors show them bequeathing "negro" men, women and children to their own children and their heirs "forever".

When I eventually married, I joined a family whose renowned ancestor, in the late 1800's, founded an arms company that produced the rifles that helped 'tame the West' and eventually the Lewis automatic machine gun which made killing people a whole lot more efficient.

In a cinematic twist, the gun maker eventually bought the sugar factory in California that once engaged the services of my beet-distilling ancestor. By then he'd stopped making guns and was instead making radial tyres, which he is credited with inventing, for these new-fangled automobiles that everyone seemed to be driving around in.

Ask me why I'm inclined towards a career in environmentalism and a fairer more sustainable world and all I can say is: with ancestral Karma like that what else could I legitimately do?

Dig deep enough and we all have family stories like this – and they are in important reminder that every generation leaves its handprint on the world, and that as the songwriter Billy Joel once wrote "we didn't start the fire" although some of us have spent a really long time and a lot of energy trying to help put it out.

So when I was invited to talk this evening, the first thing I thought was 'Sure, I can talk about sustaibility'. But then having agreed to do that – and after about 5 minutes of reflection – I wondered whether I was out of my ever loving mind to take this on because it is such as complex topic.

I've spent a large chunk of my professional life talking about different aspects of environment, health, sustainability and system change. It's never been simple, it's never been straightforward, it's always been emotive and most recently I believe it has become a spectacularly fragmented and unproductive discussion. One that has been co-opted, diluted and sanitised by all sides of the sustainability debate, which means that no matter what I say tonight I guarantee you that it won't answer all your questions, it might even miss something that you think is important and I'm likely to say something that you really disagree with.

What is sustainability?

So it's probably reasonable to start with the question: what is sustainability? And you probably won't be surprised to learn that there is actually no agreed definition of what it is, what it entails and there's no real agreed criteria by which we can assess who is 'best' at it.

Being a woman of a particular age I've been an observer of the evolution of the term sustainability. I grew up in the 70s at a time when the scientific focus was on systems thinking – that is to say an understanding of relationships between organisms and their environments.

Scientists and writers of that era were looking at the way human society operates and the interactions between population growth, industrial production, food production, resource depletion and pollution and this work has deeply influenced the way that I look at problems to this day.

The term sustainability actually arose out of this systemic thinking – and was first used, as far as I know, in 1972 in a book called A Blueprint for Survival where it referred to living within the limits and boundaries of the Earths carrying capacity. A rational concept that terrified the emerging global businesses whose operating mantra was 'no limits'

Within a decade the term sustainability was being used interchangeably with phrases like "eco development" and "sustainable development" – terms that come from an entirely different worldview, and which have dominated the discussion ever since.

The most common definition of sustainability today is "meeting the needs of the present without compromising the ability of future generations to meet their own needs". That sounds superficially good; but the more you read it the more worrying it becomes.

That definition was put forward to the United Nations by the Bruntland Commission formerly World Commission on Environment and Development (WCED). The

Commission's recommendations were incorporated into a famous report published in 1987 known variously as the Bruntland Report or more popularly Our Common Future.
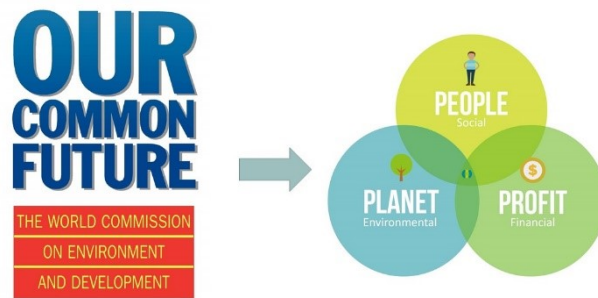
The Bruntland definition went on to form the basis of something which became known as the 'triple bottom line' a view that defines sustainability as balancing social, economic and environmental factors sometimes referred to as people, profit and planet.

The report was considered ground-breaking at the time but looked at from today's perspective you can see, running through it, a political and a corporate subtext which very much supported the notion 'business as usual'. It's also problematic because while profit can be measured in a simple mathematical way, culture and environment, which are far more complex and changeable, can't. And this makes the three equations difficult to compare let alone balance.

Nevertheless this idea of the triple bottom line and balancing the planetary 'budget' persist even today – and is parroted by corporations and campaigners alike.

Fast forward to 2016 and the United Nations launches its 2030 agenda – which includes the 17 Sustainable Development Goals.

They are presented in bright building blocks with inspirational, aspirational statements

about things like ending hunger and poverty – goals no compassionate person could disagree with. And yet these have been and continue to be criticised for requiring the kind of continued growth and expansion – the 'business as usual' – that has already

been shown to unbalance our climate, empty our oceans, destroy our biodiversity and reduce our ability to feed ourselves.

Some of the other criticisms of the SDGs is that they largely fail to address the core causes of things like poverty, hunger and inequality. They've been slated for being inconsistent, difficult to quantify and monitor and for not addressing infrastructure or the necessary costs attached to creating thee changes. They are non-binding, and they are not universal so each country can create their own individual interpretation of what they mean.

Some of these criticism are more valid than others, but I suppose ultimately, what they demonstrate is that, when it comes to sustainability it's always easier to wish and to promise (and to lie) than it is to deliver.

Or to put it another way, as a friend of mine is fond of saying: sustainability is like teenage sex; everyone says they are doing it, but hardly anyone is; and the ones who are doing it are probably not doing it right.

Embracing complexity

The reasons for that is that sustainability is complex. It is made of diverse parts which may have specialised roles, but are interdependent, and which interact and rely on each other for collective purpose. To use the description of holism – "the whole is greater than the sum of its parts".

 And faced with this complexity it's understandable that we compartmentalise, we grasp at single concepts and single solutions especially if they promise that we don't have to change our lives or our thinking or our habits too much.

But really we need radical solutions and policies that support deeper systemic change. We need to recognise that climate destruction, as worrying as it is, is not the only issue

and that sustainability is not just about carbon, energy, resources and pollution. It is also about health, wellbeing, equality, longevity, tradition and culture. Its functioning encompasses technology, logistics and social and political cohesion. Perhaps most importantly of all it sustainability requires boundaries and restraint and therefore, trade-offs within those boundaries.

Which is kind of a long-winded way of saying we can't have it all and survive.

Carbon – the only game in town?

It may surprise you to hear me say that climate change isn't the most important issue. But actually I do see climate change as the symptom rather than the core problem and I believe that framing it as the core problem has the potential to work against true sustainability.

Everywhere you look in the news there are people, particularly young people, gathering together, blocking roads, storming buildings, gluing themselves to cars, pavements and airplanes; holding up signs saying we need to do something about climate change

The something they want us to do is to balance the carbon budget so that we can get to net zero carbon emissions. And that takes us back to unhelpful triple bottom line thinking.

The human system and the economy that supports it has expanded dramatically, from the days when we lived in what's been called an 'empty world' to now where we are all living in a 'full world'.
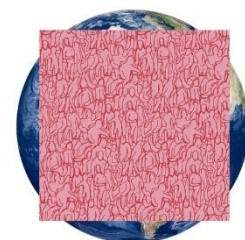
Empty World   Full World

That's because, over the past century-and-a-half, enormous amounts of cheap energy from fossil fuels enabled the rapid growth in resource extraction, manufacturing, and consumption; and these in turn led to population increase, higher levels of pollution and accelerated loss of natural habitat and biodiversity.

This is a systemic problem, but invariably we address it as if it were a collection of isolated problems that will respond to symptomatic treatment (for instance switching to unleaded petrol or electric cars; biofuels and bioplastics, paper straws instead of plastic ones, eco fashion, using genetic modification to revive extinct or threatened species or to engineer novel crops). This kind of incrementalism, in my mind, constitutes an endlessly frustrating round of short-term measures that give the advantage to corporations and policymakers that want to maintain business as usual and to keep reaping the profits from a growth economy.

But there's another issue and that is the belief that simply reaching net zero is the key to halting climate change.

Around 80% of the carbon in our atmosphere comes from burning fossil fuels. You can think of it like a faucet. Turning down or shutting off the carbon faucet would certainly help lower the concentration of greenhouse gases in the atmosphere. But manufacturing, industry, agriculture, transport, energy generation, the internet all depend on keeping the faucet flowing.

In a net zero scenario these industries continue to grow and continue emit climate changing gases into the atmosphere. But that's OK because we will plant trees and try to shore up other natural carbon sinks to offset this continued growth.

But here's the thing. Not all trees are the same. They need to be the right trees in the right places. The best trees are the ones that grow fast and live long and the

place we most need these trees is in polluted cities. But a study this year found that city trees tend to grow fast and die young.

Also carbon sinks operate on short-, medium-, long-term and very long term cycles, and they can be erratic. In fact in some models, climate change as it progresses has been shown to make existing carbon sinks less efficient so it becomes a self-perpetuating problem.

And even if we do manage to 'balance the carbon budget" over the next 10-12 years, the effects of climate change roll out well outside of any human timescale.
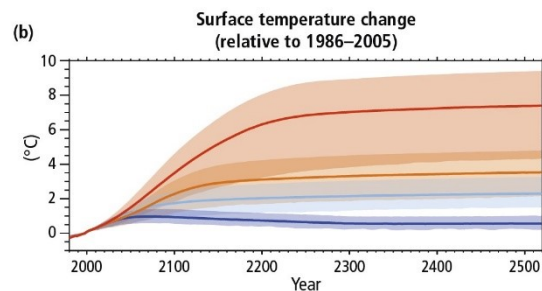
So for example, in a study published in 2008, scientists in the US used a fairly sophisticated Earth systems model to simulate the response of our climate to different levels of carbon dioxide emissions over the next 500 years. What they were looking for was what level of carbon dioxide could be emitted and still prevent further warming of our planet. The answer was basically zero.

Assuming there were zero emissions from the year that report was published, the model showed that the level of carbon dioxide in the atmosphere would slowly begin to fall as carbon "sinks" such as oceans, forests, prairies and wetlands absorbed the gas. But it also showed was that even if these sinks performed optimally, global temperatures would remain high for at least 500 years after that CO2 faucet was turned off.

To put that into a genealogical context, my 11x great grandchildren will still be coping with the effects of greenhouse gases in the atmosphere today. And of course in the last decade we have not turned the carbon faucet off. In that time we have identified 350 ppm as a
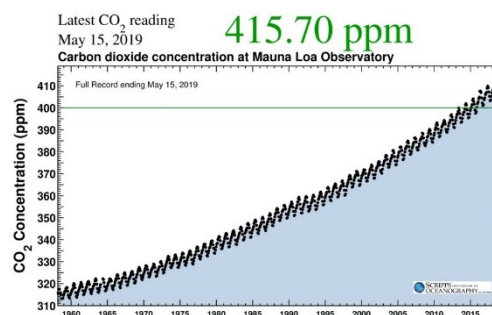
liveable levels of greenhouse gases in the atmosphere and we surpassed 400ppm of CO2 in the atmosphere in 2013 and earlier this year we surpassed 415 ppm.

Which makes a nonsense of stuff like this that keeps popping up in my Facebook feed.

Changing the public conversation

Balancing the carbon budget it not a simple equation. What we call climate is the result multiple factors working together. In fact, every year we learn more and more about just how complex the earth is and how deeply intertwined natural systems are and how a small imbalance in one area can translate into bigger imbalances elsewhere.

What these models are showing and what the progressions we are living with right now shows is that we can't prevent climate change. We are already locked in to it. Its effects on the environment are already observable.
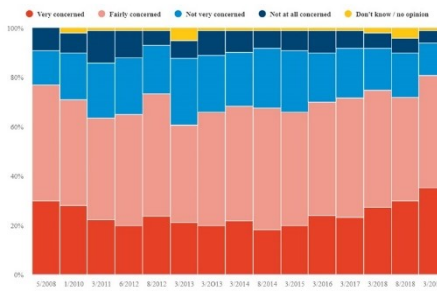
Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted and trees are flowering sooner. Sea levels are rising, storms and rainfall are becoming more intense. Droughts, heatwaves and consequently wildfires are more common all over the world. In fact, if you are a 30-year-old today you have never experienced a year when overall temperatures were lower than normal.

And so some people are rising up and saying we have to do something. You could say that by focussing on climate we've simplified the conversation and made it easier for more peple to be a part of it.

You could say that what we are witnessing in the streets now is a collective, creative expression of grief that comes with the realisation of how things are. Inasmuch as that is true it is emotionally very moving, but I'm not sure that it has moved us any closer to meaningful policy change.

You could also say that this expression of grief and concern has the potential to become infectious and inspire more people beyond the social media bubble to be more deeply concerned about the challenges we face. But, again, viewed over the longer term there is not yet much evidence of this.

Moving the Needle?

In fact, when you aggregate various surveys into people's attitudes towards climate change, the actual number of people who remain 'fairly concerned' about climate change has not changed much at all in years. A relative few are more alarmed but there is no evidence that this alarm has translated into meaningful change.

Symptoms

So let's go back to my original assertion that climate change is a symptom and not the core problem. Don't misinterpret what I am saying. Climate change is real and it is important and as a symptom it is pretty alarming. But our failure to see climate change in context is also a threat.

Framing climate change as an isolated issue gives permission to scientists, economists and policy makers to continue to graze on familiar pastures where more technology and bigger technology, the financial investment in technology and industrial production of technology and the profits from technology and the so called knowledge economy, is the forever and always answer to the challenges we face.

But to fuel this kind of economy, this kind of green growth and expansion, we need energy. And of course energy generation is the single biggest contributor to climate change. So we address this with so-called green energy: solar, wind, wave, nuclear power generators, geothermal heat pumps, biomass plants.

And as we do we go from covering the earth with these:


To covering it with these:

Adapt and survive

So if I want my 11x great grandchildren to have a better life – and I really, sincerely do – what needs to be done?

One of the interesting things about the atmospheric greenhouse gas and global warming slides I showed earlier is that all of them, even the ones that predict that we might be able to mitigate the worst of climate breakdown are based on emissions only as if these are the only factors that can and do change.

None of these models take into account the notion of adaptation – either the voluntary kind or the kind that is forced upon us by circumstance. Modellers are continually trying to improve the sophistication of climate models to, for instance, take into account potential socioeconomic and political changes.

In all of these scenarios, our energy use continues to rise and it is interesting to see that in these increasingly sophisticated projections, coal and oil still play a major part in the so-called energy mix. And of course we say that

Primary energy in 2100 by model for SSP baseline scenarios
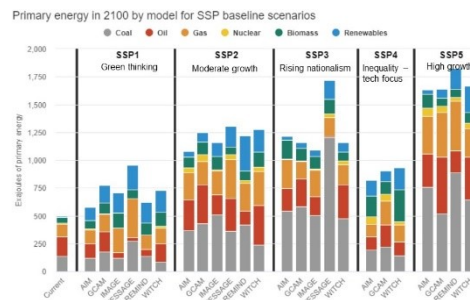
can't be the case, but just this week we've seen Cumbrian authorities give the go-ahead to Woodhouse Colliery in Cumbria – the UK's first deep coal mine to be opened in decades.

But there are those of us who believe that what we need is a new philosophy something that can encompass a vision of life, of a better life, beyond what we know right now. One that recognises that you cannot solve a problem with the same thinking that caused it and that we can't solve this crisis with empty world thinking and a continued focus on MORE and BIGGER.

Once again, don't misinterpret what I am saying: mitigation is important, but it's not enough. Focusing on incremental change means we don't develop the ability to think systemically, nor do we need to understand the Earth system and how human systems fit into that.

To have any type of sustainable future, we should be putting much more energy and resource into adaptation. Into understanding how things are changing, how we will live within those changes, how we will eat and how we can reorganise society and business so that it works within planetary boundaries and so that we – and future generations – are less vulnerable to the coming effects of climate change.

Examples of adaptation measures include: reducing what we produce and buy so that we can reduce waste, using scarce water resources more efficiently; adapting buildings to withstand future climate conditions and extreme weather events; building flood defences and raising the levels of dykes; relocating coastal dwellers, rethinking

immigration and what we owe to our fellow human beings, planting geographically appropriate crops and reinvigorating local and regional agriculture; choosing tree species and adopting forestry practices that make trees less vulnerable to storms and fires; and setting aside land corridors to help species migrate.

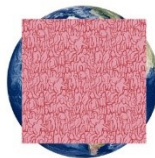And it really is a different way of thinking. So to use a simple example:

Want more fish?

Empty World Thinking

- MORE Fishermen
- MORE (and BIGGER) Boats
- MORE Nets
- MORE fish farms
- BIGGER markets
- MORE genetically engineered fish

Full World Thinking

- Marine protection zones
- Limits on total allowable catch
- Smaller fleets
- End to driftnets
- Revive spear fishing and cast nets
- Seasonal, local fish
- Save female fish

There's a lot to chew over here even in this simple example.

And it gives a hint of the more politically complex and challenging struggles ahead many of which are still being met with more and bigger thinking. That means we are looking at decisions choices around implementing genetic, nuclear and military technologies, and the ways in which they intersect with consumerism, and infrastructure and social equality, the right to privacy and ownership of your own 'data' and, arguably most importantly, the renewal of democracy.

Embracing adaptation is a direct challenge to that mindset. It means we must finally accept that having it all and sustainable living are completely incompatible and act from that position.

Very often this acknowledgement of limits and boundaries which I mentioned earlier is heaved onto the backs of average citizens. The world is currently full of people in authority telling us all what we can't have, what we can't do, where we can't go and framing this as a noble individual sacrifice for the planet.

Certainly we all need to do our bit, but beyond personal sacrifice we need to insist on government and corporate sacrifice. Maybe even on technological sacrifice. We need to insist on a way of life that is not built on a foundation of unbridled consumption and waste. One way to do this is to stop voting for politicians who promise more and bigger, who promise to make our countries great again by stimulating growth and accumulation.

The people who make those promises are last century's men and women. They don't get it and they don't deserve your support. Continuing to hand power over to people with that growth mindset will take our feet off the path towards true sustainability and shunt us instead into quite literally a planetary dead end.

Less is more!

Thank you for listening!