

The Wise Response Society Inc



To persuade all levels of Government and civil society that, to be sustainable, environmental, economic and social trends require urgent and systemic change.

Presentation available at bit.ly/WRTOSRF

“As demand for growth exceeds earth’s physical and biological resource limits, causing unprecedented risks, what knowledge and changes do we need to secure New Zealand’s present and particularly future well-being?”

Chair, Sir Alan Mark

Patron, Sir Geoffrey Palmer

Wise Response is a broad coalition of academics, engineers, lawyers, artists, sportspeople etc who are calling on New Zealand’s Parliament to comprehensively assess imminent risks to New Zealand and to draw up plans to deal with them.

Limits to Growth - 42 years later...

World3:

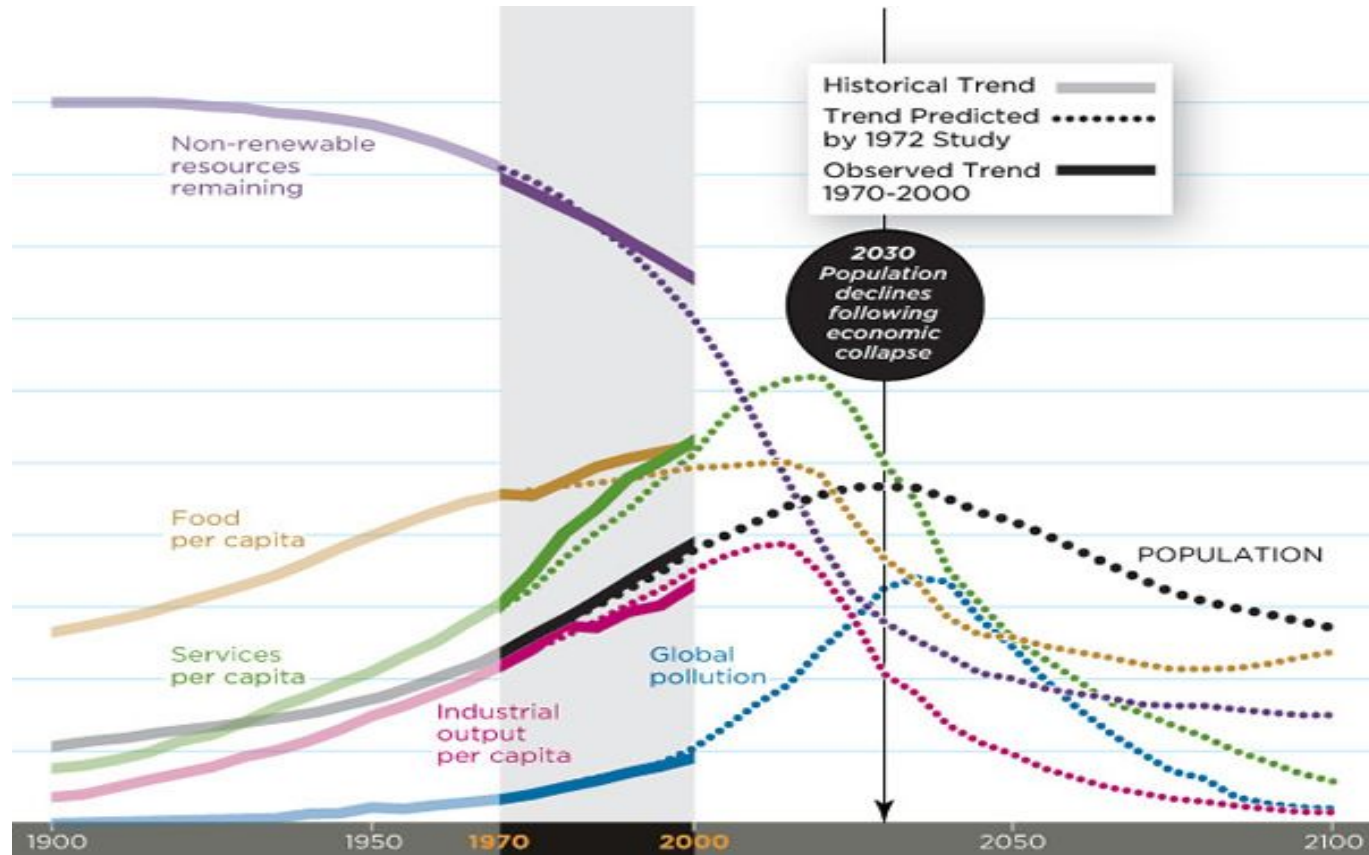
42 Years on

2014:

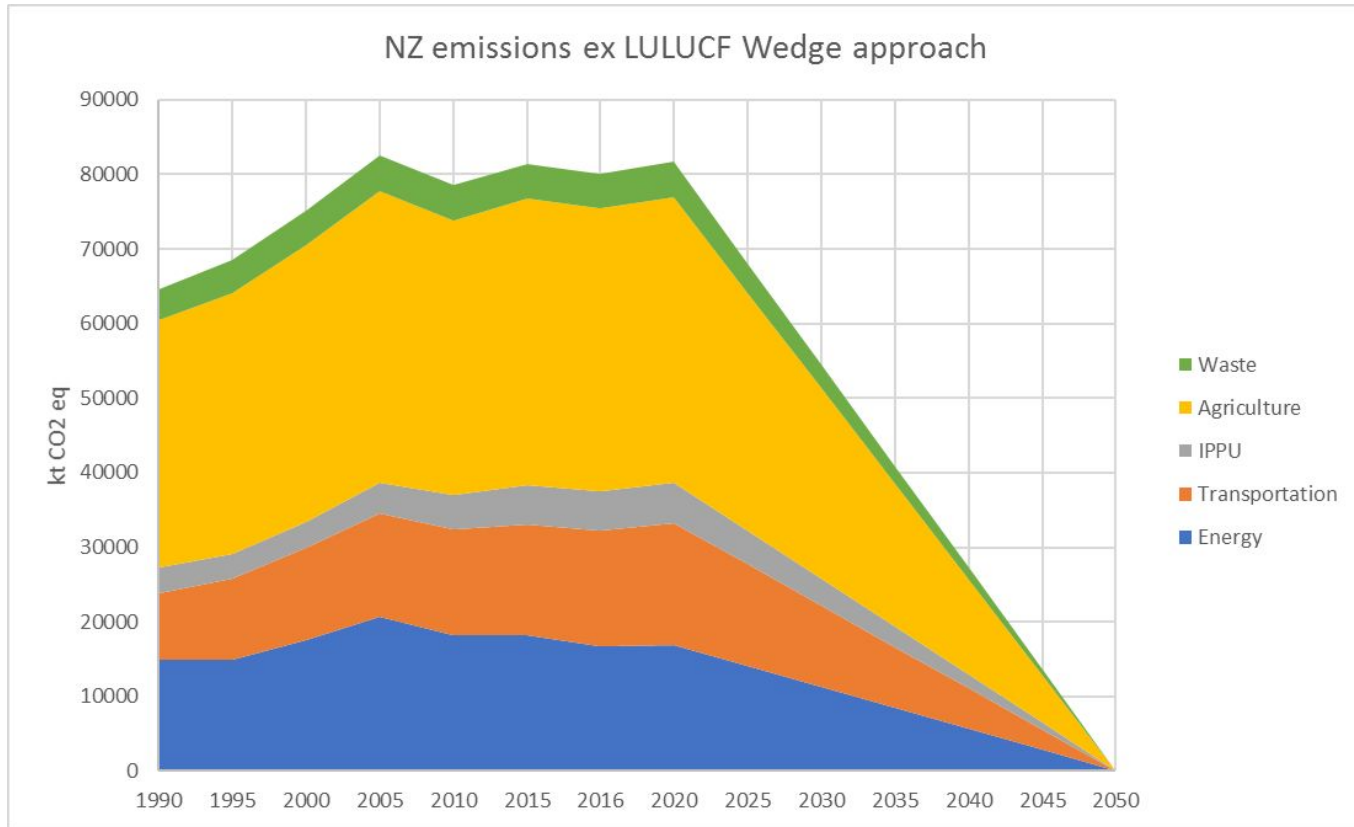
Graham

Turner's

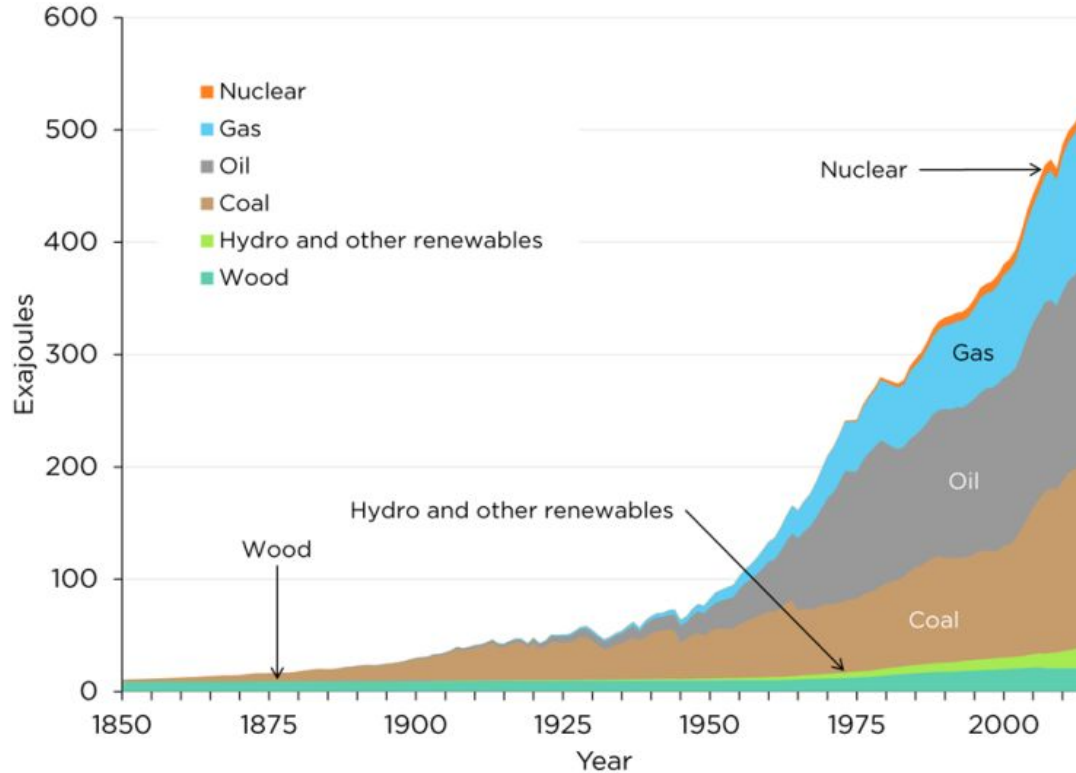
Report



From an environmental perspective, how fast must we change?

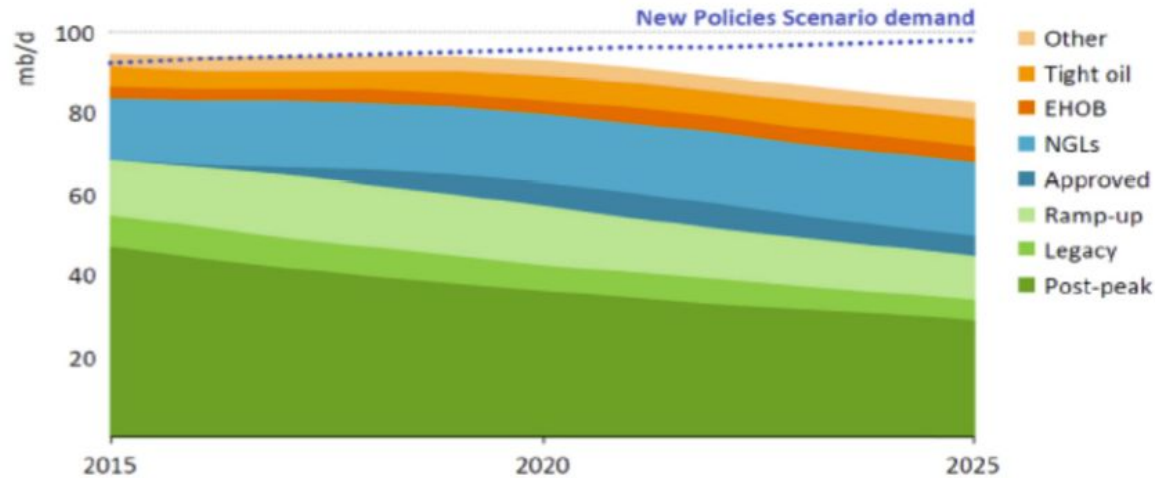


What are we actually doing?



International Energy Agency

Figure 3.16 ▶ Global supply outlook from selected sources in the New Policies Scenario



A supply-demand gap emerges that must be filled by production from conventional crude oil projects yet-to-be-approved

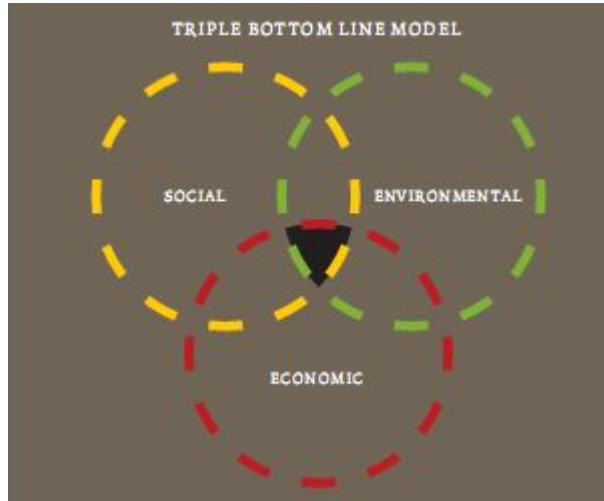
**What does this
mean for Water
in Southland??**

Growth is not sustainable.

In an absolute and literal sense, you cannot grow indefinitely.

Contrast the two images below as models of how the economy and society relate to the environment:

Current business 'best practice':



Thinking based in physical limits:



We need to rethink our economic assumptions

Kate Raworth's Doughnut Economics is an alternative to the existing system.

http://bit.ly/doughnut_economics

A 1 minute introduction:

<https://www.youtube.com/watch?v=Mkg2XMTWV4g>



Q&A

www.wiserresponse.org.nz for further information on the activities and submissions by the society.

The following slides contain further background and resources for those wishing to investigate further.

ARE WE PREPARED TO CHANGE?

"If you ask, let's say, an eight year old like my son, it's all pretty clear:

If it's the way we live, consume and produce that causes climate change, and depletes resources why don't we simply stop it and start doing things differently?

And if there are millions of people too poor even to meet their basic needs, why don't we tell the rich to share a bit of their overflow so that there is enough for all?

Christiane Kliemann:

<https://shift-magazine.net/2015/11/19/are-we-prepared-to-change-to-prevent-climate-change/>

The Simpler Way has as guiding principles:

- Simpler lifestyles, much less production and consumption, much less concern with luxury, affluence, possessions and wealth.
- Small, highly self-sufficient local economies, largely independent of the global economy.
- More cooperative and participatory ways, enabling people in small communities to take control of their own development.
- A new economy, one not driven by profit or market forces, and a zero-growth or steady-state overall economy, which produces much less than the present economy.
- Some very different values, especially cooperation not competition, and frugality and self-sufficiency not acquisitiveness and consuming.

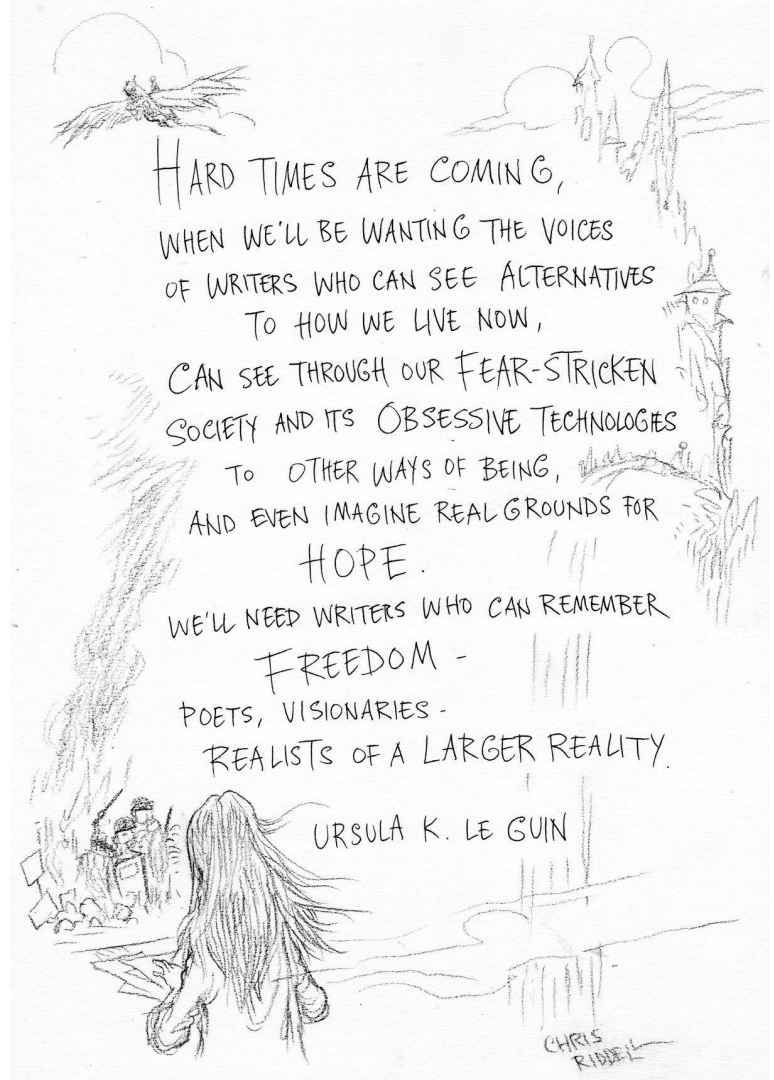
<http://bit.ly/29hAoNP> <http://bit.ly/1VsvcFi>

Further reading

David Fleming was most certainly one of those authors, and 'Surviving the Future, Culture, Carnival and Capital in the Aftermath of the Market Economy' is most certainly a book worth your time to read! Invercargill Library has a copy in, and it's on Audible too if you prefer to listen.

<http://bit.ly/2Bs6ZgA>

“Localisation stands, at best, at the limits of practical possibility, but it has the decisive argument in its favour that there will be no alternative.”



Growth is not sustainable.

Examples of less unsustainable thinking (from below): 'reduce, reuse, recycle', triple bottom line accounting, mitigation, adaptation, 'reactionary' approaches.

We must move 'beyond the threshold' into strongly sustainable thinking: http://bit.ly/ssanz_whatIs

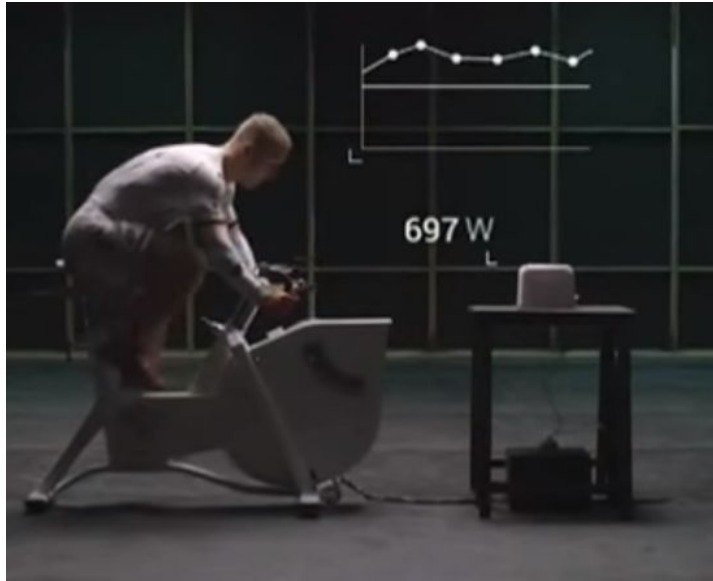
BEYOND THE THRESHOLD: A SUSTAINABILITY NAVIGATION TOOL

The purpose of this tool is to assist perception and understanding of the full scope of 'sustainability'. We are all on a journey and this tool is intended to validate, locate, and illuminate all initiatives toward sustainability. A useful feature of the tool is that it summarises 'connection' as the overarching condition required for sustainability.

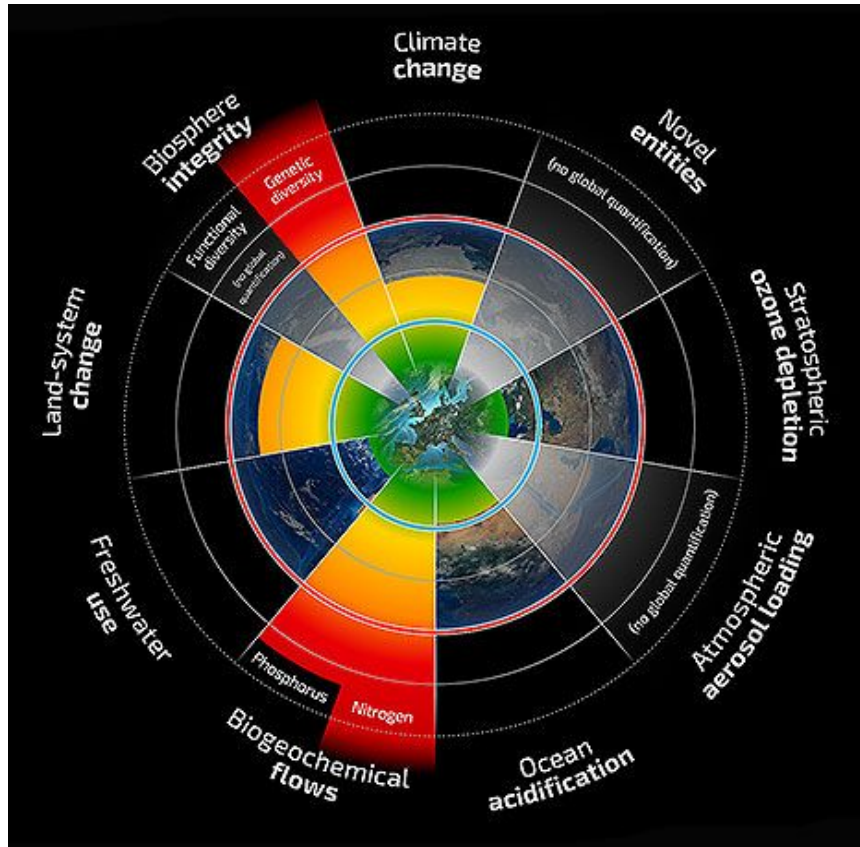
Note, time can flow in either direction. Today can be anywhere on the connection spectrum. The 'threshold' represents the achievement of such milestones as 'zero waste' and a return to atmospheric carbon dioxide levels of 350ppm. Where do your personal and professional activities lie on the spectrum?

CONNECTION	TOTALLY DISCONNECTED				THRESHOLD	TOTALLY CONNECTED	
HUMAN IMPACT	MORE DAMAGING		DAMAGING	LESS DAMAGING		REJUVENATING	OPTIMAL
PARADIGM	CURRENT					NEW	
PHASE	UNSUSTAINABLE		LESS UNSUSTAINABLE			STRONGLY SUSTAINABLE	
CHARACTERISTICS	Economic growth first and last. Straight line (growth, planning, thinking).		Minimise impacts: reduce, reuse, recycle. Triple-bottom-line, footprint-based, mitigate, adapt, react, modify, responsibility.			Eco-system-centric. Connect, re-design, enhance, circular feedback, inspire, celebrate.	

Understanding energy; the energy/electricity confusion and our dependence on cheap fossil energy - the concept of energy slaves



Planetary Boundaries



We're already 'over the limit' with regard to several of these boundaries.

Four of nine planetary boundaries have now been crossed as a result of human activity, says an international team of 18 researchers in the journal Science (16 January 2015).

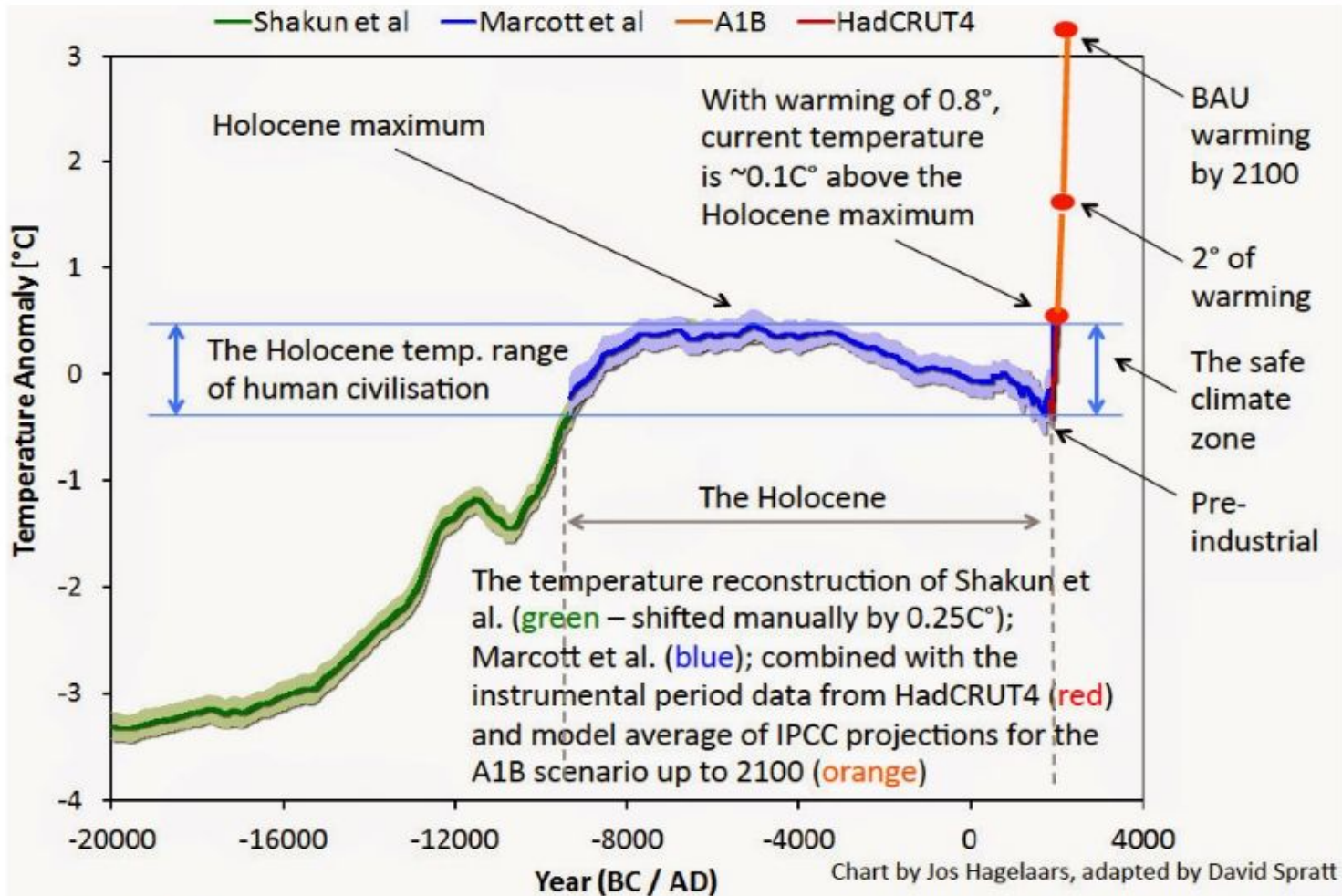
The four are: climate change, loss of biosphere integrity, land-system change, altered biogeochemical cycles (phosphorus and nitrogen).

Two of these, climate change and biosphere integrity, are what the scientists call "core boundaries". Significantly altering either of these "core boundaries" would "drive the Earth System into a new state".

"Transgressing a boundary increases the risk that human activities could inadvertently drive the Earth System into a much less hospitable state, damaging efforts to reduce poverty and leading to a deterioration of human wellbeing in many parts of the world, including wealthy countries,"

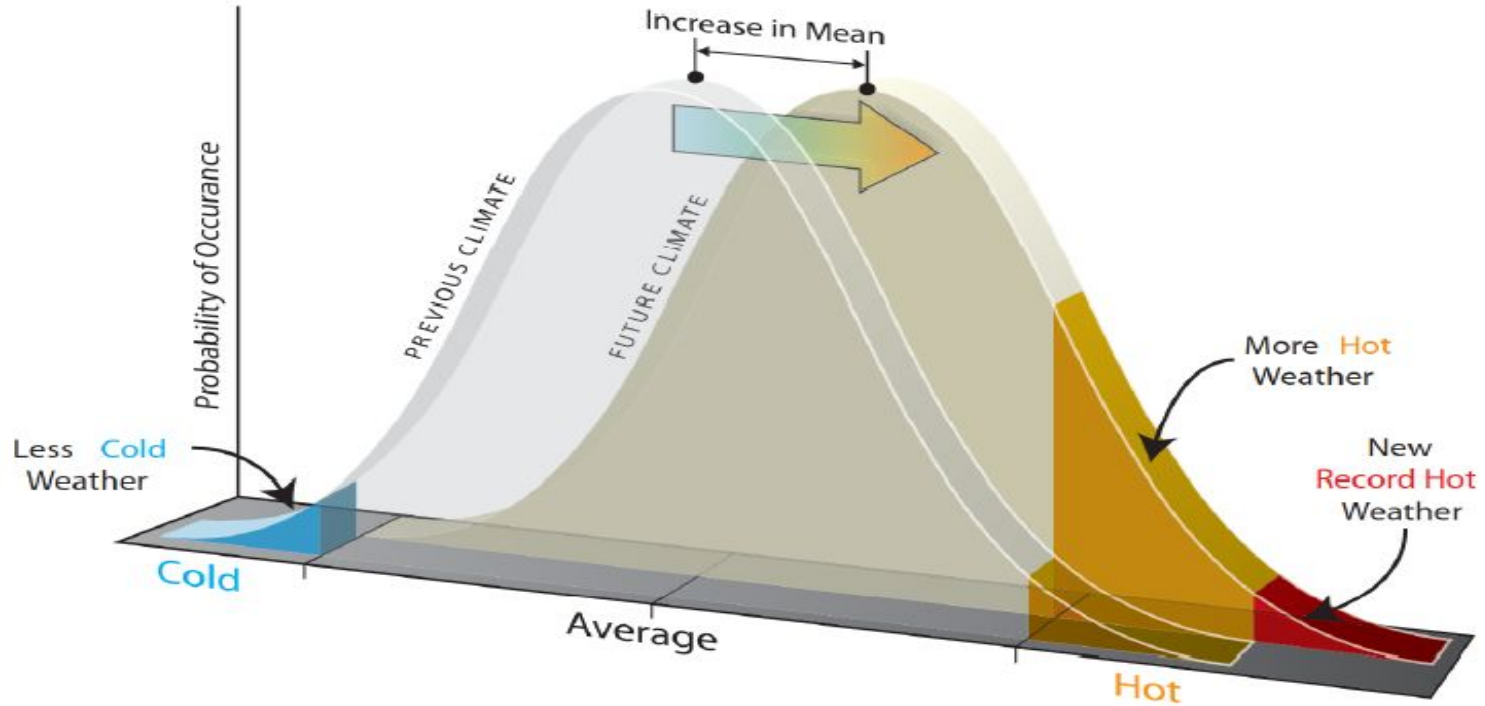
<http://www.stockholmresilience.org/research/research-news/2015-01-15-planetary-boundaries---an-update.htm>

Climate Change:



Global temperature and the Holocene safe-climate zone

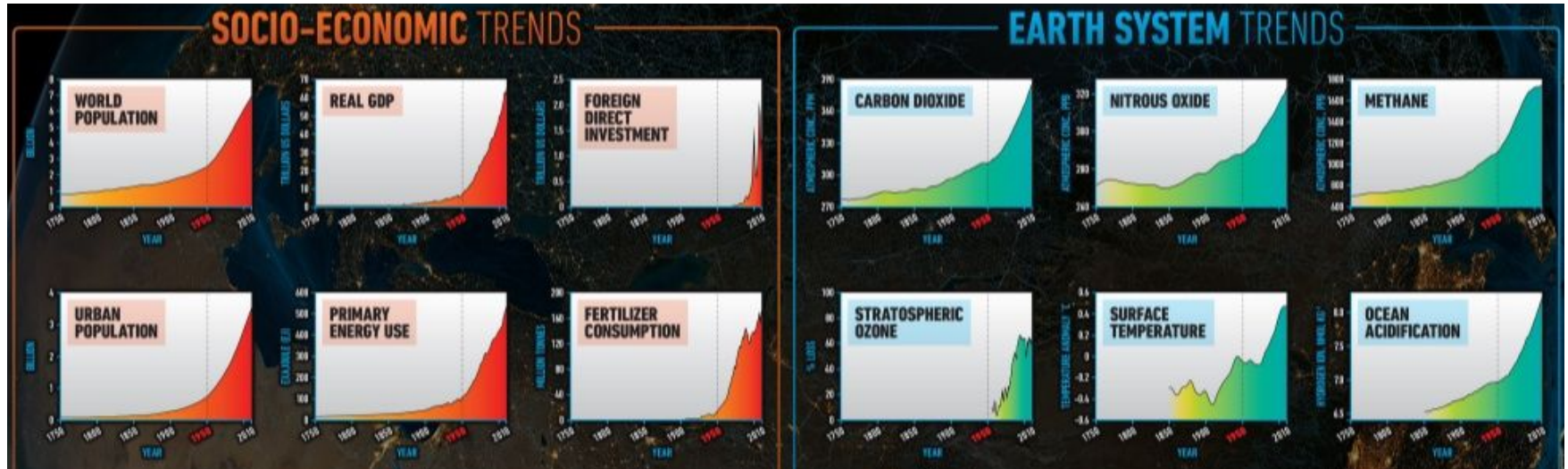
Effect of shift in the average on the frequency of extremes



Exponential Trends:

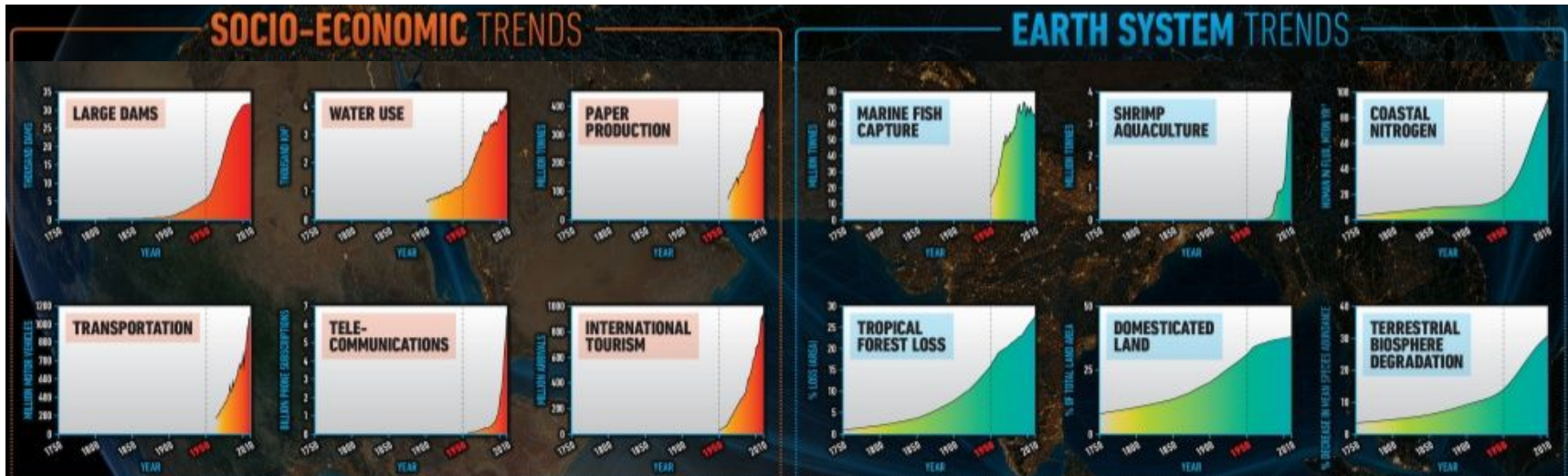
In the first half of this century, we were doing more with more. We were no-where near the limits. After more than half a century of rapid expansion, we are now at or near many limits. The exponential nature of the growth

(<http://bit.ly/18w23UM>):



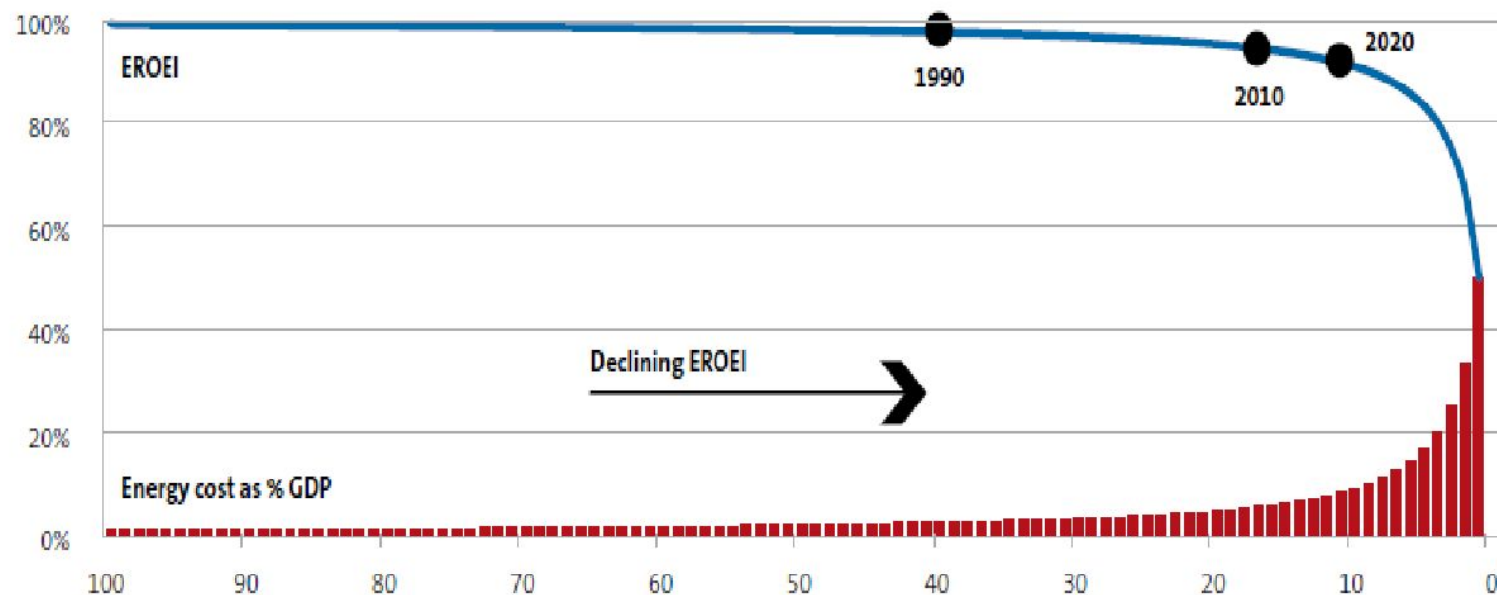
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From an biophysical limits perspective, how fast will change happen?

Fig. 1.5: Nearing the energy returns cliff-edge*



Current mindset and assumptions

- Population will increase from 7 billion today to around 9 billion by 2050
- To alleviate poverty, and offset environmental effects, economic growth is essential
- Growth can continue with no regard to energy supply constraints
- A continuing expansion of fossil-fuels is inevitable, as other sources cannot meet this demand.
- Governments are unlikely to act quickly to address global warming
- Companies & investors are thus justified in continuing “business-as usual”
- Technological solutions such as Carbon Capture & Storage (CCS) will handle any warming impact

These views are fundamentally, demonstrably flawed

Current policy-making paradigm (Climate example)

The underlying assumptions are:

- Climate change is not yet dangerous, and up to 2°C of climate warming, relative to pre-industrial levels, is manageable, because...
- Big tipping points (events irreversible on human time scales) and large-scale feedbacks are unlikely before 2°C of warming.
- We have a substantial carbon budget left for the 2°C target.
- There is time for an orderly, non-disruptive reduction in emissions within the current political and economic paradigm.
- Mitigate for 2°C, but we may fail so also plan to adapt to 4°C.

Despite the recent Paris climate meeting aspiration to aim for a 1.5°C limit, international policy-making is, in effect, normalising a +3°C target and giving up on 2°C.