

From Pat van Berkel, Privacy - 9(2)(a)

There are two main concerns addressed in this submission. Firstly, the danger from existential risks to life on our planet, Earth, and consequently to life in Aotearoa. Secondly, the danger from considering risks only a few years into the future, and ignoring serious risks that have a long lead-in time.

1. Existential Threats

An existential threat is one that extinguishes all or most human life on Earth or reduces the quality of human life to a point where the humans live a life out of their control and to a low living standard.

The existential threats include:

- Climate change: kills many people and makes life untenable on Earth
- Nuclear war: kills many people and makes life untenable on Earth
- Biotechnology: kills or sickens humanity (eg, create a deadly pathogen)
- Artificial intelligence and robots: kills or controls most of humanity
- Autonomous weapons
- Nanotechnology: kills, sickens or controls most of humanity
- Ecosystem collapse (species extinction and biodiversity loss caused by pollution, loss of soil and forests, taking too much from our seas, surface mining, damaging groundwaters, and climate change) : ultimately makes life untenable on Earth

The above existential threats are human-caused.

The following existential threats are natural (although pandemic could be a result of biotechnology misuse)

- Pandemic
- Supervolcano eruption
- Comet or asteroid impact
- Coronal mass ejection
- Interstellar events

Note that existential threats are far more serious than localised hazards (such as earthquakes and storms) which affect parts of New Zealand but not all people in NZ.

There is not much we can do about the natural existential threats (which are fortunately rare) but we can ensure the human-caused existential threats do not eventuate. However we have already seen the huge effort that has had to go into ensuring a political response to prevent climate change. We are on the brink of disaster because the earlier premonitions were ignored. We must not deal with the remaining existential threats in the same way.

We have seen misinformation relating to climate change for the first few decades (and occasionally still) and similarly with the COVID-19 pandemic. There is much research needed to understand how to overcome this.

The path to ensuring the existential threats are minimised is complex. Research is needed into this subject but it is a difficult subject and requires deep research. However the cost to New Zealand in not engaging in research on how to eliminate the existential threats is immense.

Each of the existential threats has unique characteristics that require unique solutions and hence unique research to ensure they don't eventuate. To complicate it further, some of the threats could combine together, eg, AI and biotechnology.

My submission is that the research system includes the following principles:

1. The long-term safety of New Zealand people is a key area of research.
This includes the identification of existential threats and the determination of how to reduce the threats well before they become serious.
2. Research on existential threats is given a high priority (so that prevention of the threat is possible and we don't attempt to remedy the threat when it is too late.)
3. Research on existential threats fully covers the social and political responses (as well as the hard science behind the threat)

In the meantime, while such research takes place, there need to be principles in place to minimise the risks such as:

1. The existential risks from all research or development proposals need to be clearly articulated
2. Research or development proposal explain how the existential risks are avoided or minimised

The study of existential risks to life on Earth currently takes place in a number of universities and research organisations around the world including to a limited extent in New Zealand. See Appendices 1 and 2 on recent research in New Zealand into existential threats.

2. Looking to the long-term

My second concern is that research in New Zealand doesn't look sufficiently far into the future. We create new products and don't carry out sufficient analysis of the long-term dangers of the product. We carry out projects without looking into the long-term consequences, nor the long-term influences that may affect the viability of the project.

We need to look a minimum of 7 generations into the future. A person lives 4 generations and their grandchild will live another 4 generations. It takes 7 generations for a tree to mature.

My submission is that the research system includes the following priorities:

1. Carry out research into the consequences of inadequate future-thinking, identifying examples where short term thinking in NZ (or around the world) resulted in long-term negative consequences (eg, expanding dairy farming beyond the capacity of nature to handle its pollution) that outweighed the positive consequences.
2. Carry out research to identify mechanisms that ensure long term consequences (positive and negative) are included in policy analysis and upheld in policy decisions.

See Appendix 3 for recent NZ research into short term thinking and identification of remedies.

Appendix 1: Matt Boyd & Nick Wilson's paper on *Anticipatory Governance for Preventing and Mitigating Catastrophic and Existential Risks*, in the *Policy Quarterly: Focus on Social Insurance*, Nov 2021

<https://ojs.victoria.ac.nz/pq/article/view/7313/6467>

Abstract: "The world faces many large-scale risks. We describe these global catastrophic and existential risks and identify some challenges in governing the prevention and mitigation of such risks. We identify that risk reduction activity in Aotearoa New Zealand has not appropriately addressed these threats. On the basis of the challenges identified, we then deduce the desired features and functions of an entity for effectively governing risk reduction approaches. We argue for an entity that is: anticipatory, central/aggregating, coordinating, apolitical, transparent, adaptive and accountable. We offer structural options for such an entity and outline the merits of several options."

Appendix 2: Matt Boyd & Nick Wilson's paper on *Catastrophic Risk from Rapid Developments in Artificial Intelligence*, in the *Policy Quarterly: Focus on Family Well-Being*, March 2020

<https://ojs.victoria.ac.nz/pq/article/view/6355>

Abstract: This article describes important possible scenarios in which rapid advances in artificial intelligence (AI) pose multiple risks, including to democracy and for inter-state conflict. In parallel with other countries, New Zealand needs policies to monitor, anticipate and mitigate global catastrophic and existential risks from advanced new technologies. A dedicated policy capacity could translate emerging research and policy options into the New Zealand context. It could also identify how New Zealand could best contribute to global solutions. It is desirable that the potential benefits of AI are realised, while the risks are also mitigated to the greatest extent possible.

Appendix 3: Jonathan Boston article "Assessing the options for combating democratic myopia and safeguarding long-term interests" *Futures* 125 (2021), Elsevier

Behind paywall: <https://www.sciencedirect.com/science/article/abs/pii/S0016328720301580?via%3Dihub>

Abstract: Faced with intertemporal policy conflicts, democratic political systems tend to favour short-term interests over long-term interests. Such phenomena, variously described as political short-termism, democratic myopia and a presentist bias in policy-making, threaten the interests of future generations. Numerous proposals – constitutional, institutional, policy-oriented and analytical – have been advanced to counter short-termism and protect long-term interests. While differing significantly, such proposals all rest for their claimed effectiveness on at least one of six theories of change or intervention logics:

- 1) changing the values and goals of policy-makers so that they care more about future interests;
- 2) changing the political incentives facing policymakers such that it is in their interests to give more weight to long-term considerations;
- 3) enhancing the capacity of policy-makers to exercise foresight, thereby improving their anticipatory governance;
- 4) constraining the formal decision-rights of policy-makers when long-term interests are at risk;
- 5) insulating policy-makers from short-term political pressures; and
- 6) enhancing the capacity for coordination across different tiers of government and/or policy domains.

Drawing upon and scrutinizing these six intervention logics, this paper assesses the feasibility, effectiveness and overall desirability of a selection of the proposals for combating short-termism. Based on this analysis, a reform agenda is proposed.