# 1NC vs Westridge TW

## OFF

### 1NC - OFF

Spec

#### Interp – The aff must specify the sovereign rights of tribes against the plan in a delineated text in the 1AC. To clarify, you must specify the influence and decision-making powers of tribal authorities over implementation of the plan in tribal lands – they don’t.

#### Ambiguity is a tool for settlers to define the terms of engagement with tribes. The liberal intentions of the 1AC don’t matter—absent defined standards, the policies will reproduce colonial domination.

**Steinman 12** Steinman, Erich. “Settler Colonial Power and the American Indian Sovereignty Movement: Forms of Domination, Strategies of Transformation.” American Journal of Sociology Vol. 117, No. 4, January 2012, <https://www.jstor.org/stable/10.1086/662708>. PeteZ

* Bracketed for problematic language

A traditional definition of "sovereignty" is: "The supreme, absolute, and uncontrollable power by which any independent state is governed."' 3 Questions regarding the sovereign rights of tribes are often the starting point of any federal ~~Indian~~ [indigenous] law issue. Although the whole of federal ~~Indian~~ [indigenous] law is quite complex,14 the essence of tribal sovereignty is simply the extent to which a tribe can attend to its own affairs and control its own cultural, societal, and economic development free from outside restraints. Under the current legal and political regimes, the extent of tribal control is ambiguous**.** The Handbook of Federal ~~Indian~~ [indigenous] Law lists three "fundamental principles" that demonstrate the anomalous and restricted nature of tribal sovereignty: (1) ~~Indian~~ [indigenous] tribes possess all the powers of a sovereign state; (2) conquest renders the tribes subject, however, to the legislative authority of the United States and terminates the tribes' external sovereign powers, but does not affect the internal sovereign powers of the tribes; and (3) these powers are subject to qualification by treaties and congressional legislation.' 5 Cohen's three principles demonstrate the dichotomy between internal and external sovereignty16 that pervades the concept of tribal sovereignty. Tribes are supposedly full sovereigns with respect to their own internal affairs and interests. At the same time, however, the United States government has completely extinguished their external sovereign powers.17 This state of affairs might not be problematic if defined standards for maintaining the relationship between the tribal and federal governments existed and the relationship were based upon the consent of the tribes. The history of tribal-federal relations demonstrates, however, that neither standards nor consent exist, and that the relationship is uncertain at best. Tribal-federal relations have periodically oscillated between two diametrically opposed views on the status of ~~Indian~~ [indigenous] Tribes. At one end of the spectrum is the belief that tribes are independent political communities and should control their own development.'8 At the other end lies the belief that the tribal system should be dismantled and individual ~~Indians~~ [indigenous folks] should be assimilated into the greater American society.19 While these views appear to be in extreme conflict, their implementation produces very similar results. The United States government dominates the tribal-federal relationship, allowing it to manipulate the situation to protect federal interests. The following historical background will demonstrate how the lack of definition and consent in the relationship promotes federal dominance.

#### Vote neg—

#### 1 – Critical Education – The policymaking process is not innocent. Force them to study how their practices can *themself* reproduce settler colonialism. For tribes, these details are life and death.

#### 2 – Ground – Tribal sovereignty is the first question in any debate about policies that affect natives – avoiding it is unfair, irresponsible, and bad for education.

#### 3 – Presumption – If their framing is right, then the state will always manipulate its policies to screw over tribes – you should presume no sovereignty.

#### 4 – CX doesn’t check: (A) My interp forces them to research these issues before round. (B) I can’t prep a strat against their aff until CX. (C) Footnoting DA—reduces crucial issues of sovereignty to a mere afterthought. (D) Specifying sovereignty should be the default—I shouldn’t have to ask.

#### It’s drop the debater – anything else advantages the aff by letting them shift in the 1AR. No RVIs – (A) They don’t get a cookie for proving they aren’t colonialist. (B) Guts substance—we should debate the aff whenever possible. One shell is fair—they have plenty of time in the 1AR. Competing interps – reasonability leads to a race to the bottom where debaters get away with terrible practices. Any bright line is arbitrary—you can’t be “educational enough.”

### 1NC - OFF

Consult Natives CP

#### CP: States ought engage in a prior and binding consultation with indigenous nations to adopt a binding international agreement that establishes outer space as a global commons not subject to appropriation and is enforced via a system of regulatory delimiting and global liability.

#### Normal means isn’t a consultation but it’s key to indigenous sovereignty

Hilding **Neilson &** Elena **Cirkovic** Consulting Canadians on a Framework for Future Space Exploration Activities: A Response to the Canadian Space Agency (CSA) - Part I, Völkerrechtsblog, 28.07.**2021**, doi: 10.17176/20210728-135814-0. //SR

Canada’s position of support and leadership in space exploration has a positive and impressive history. From the development of the CanadaArm and the participation in work on the International Space Station (ISS) to the new scientific contributions with respect to lunar and Martian exploration, Canada has many reasons to be proud. However, it is worth noting that Canada’s role in space exploration has traditionally neglected to include Indigenous peoples, Indigenous knowledges, and Indigenous rights. In general, the history of Canadian participation in space exploration did not have a substantial and direct impact on Indigenous peoples’ rights in Canada. With accelerating technological developments in the past twenty years, space has become more accessible for humans. With these transformations, the current and proposed future of space exploration has the potential to negatively impact Indigenous peoples across Canada. One of the emerging issues for astronomers and various traditions including traditions of Indigenous peoples in Canada and elsewhere, is the launching of so-called satellite mega constellations, such as the SpaceX’s Starlink. Increasing the number of satellites in the Lower Earth’s Orbit (LEO), impacts further research. For various human cultures, Dark Skies have, among others, navigational and spiritual significance. Finally, the objective of our post is to emphasize the need for greater scientific understanding of the universe, which is achieved through research, education and outreach, and inclusion of multiple knowledges and ontologies. Without consultation with multiple knowledges of multicultural and multinational Canada, future space activities might contribute to the ongoing culture of colonization. We present arguments for the ethical and legal requirements for the CSA to consult with and to be inclusive of Indigenous rights and concerns as Canada moves to support the Artemis Accords. The Accords trigger a variety of issues in the outer space sector, which are beyond the scope of this brief post. The authors come to this work from two perspectives: the first being a Mi’kmaw astronomer who grew up in Newfoundland and is a status member of the Qalipu Nation, and co-author, a Bosnian-Canadian legal scholar. Thereby we stress that our contribution is an opinion and has no intent to speak for Indigenous peoples in general and/or any Indigenous-led organization in Canada, or any particular group or community in Canada. Please note that we will be using the terms Indigenous, and Aboriginal interchangeably as we engage with the language of domestic (Canadian) and international documents, publications, institutions, and relevant regulatory and/or administrative bodies. The terms Indigenous and Aboriginal refers to the three different categories of Indigenous peoples in Canada – First Nation, Inuit, and Métis. We reflect upon the CSA’s obligation to consult Indigenous peoples in Canada via two lenses: Firstly, where does Outer Space Law intersect with the modern and historic treaties between the First Nations and Canada (Crown)? Do these treaties include the skies and outer space? Secondly, considering its status as an international (and bilateral) agreement, where the Artemis Accords trigger the application of the United Nations Declaration on the Rights of Indigenous Peoples. Assuming that the Artemis Accords might, and in the situations where they do, trigger any responsibilities and obligations of Canada under the UNDRIP and its domestic laws to consult the First Nations, what are the CSA’s and Canada’s obligations to First Nation, Inuit, and Métis communities and Nations? We engage with these two points considering the following: That the questions of Indigenous rights and title in Canada, including the treaty rights, have significant impacts on how Canada consults with the First Nations and other communities and nations in Canada and pursues the ongoing and future space exploration accordingly; That these questions also require a revisiting of the allegedly prevailing narrative as proposed by some scholars and members of the global outer space sector, generally speaking, which treats space exploration as an analogy of the colonization of the Americas. The legal framework of our argument is that of Canadian Constitutional obligations towards indigenous peoples. The relevant cases are discussed and listed in the rest the following sections. Brief Consideration of Indigenous Rights in Canada Canada’s obligations to Indigenous peoples under the Canadian Constitution cannot be superseded or undermined by commitments under a bilateral agreement such as the Artemis Accords. These legal obligations include those recognized and affirmed by Section 35 of the Constitution Act, 1982, and those set out in self-government agreements. We recognize that, in 1985, the Supreme Court of Canada (SCC) concluded that treaties between Indigenous peoples and the Crown were not international treaties but were sui generis treaties (Simon v The Queen, [1985] 2 SCR 387 at para 33). However, it is worth considering that ‘[f]or many Indigenous peoples, treaties concluded with European powers…are, above all, treaties of peace and friendship, destined to organize coexistence in – not their exclusion from – the same territory and not to regulate restrictively their lives…under the overall jurisdiction of non-Indigenous authorities’ (para 117). While the United Nations, in documents including the UNDRIP, has recognized the potentially international character of Indigenous Crown treaties (UNDRIP Preamble, art 37(1)), we recognize that Canadian law has yet to consider this international recognition in domestic law. Nevertheless, as Henderson argues ‘any Crown authority over First Nations is limited to the actual scope of their treaty delegations. If no authority or power is delegated to the Crown, this power must be interpreted as reserved to First Nations, respectively, and is protected by prerogative rights and the common law since neither can extinguish a foreign legal system.’. There are plural and ongoing discussions on the status of Aboriginal title in Canada, as well as treaty obligations. It is beyond the scope of our comment to address the extensive international and domestic jurisprudence on the topic. However, we stress the existence of the Crown’s fiduciary duty to Aboriginal People as an aspect of various activities, including Canada’s activities in outer space (See, Annex I). Indeed, ‘The doctrine of Aboriginal rights exists… because of one simple fact: when Europeans arrived in North America, Aboriginal peoples were already here, living in communities on the land, and participating in distinctive cultures, as they had done for centuries. It is this fact, and this fact above all others, which separates Aboriginal peoples from all other minority groups in Canadian society and which mandates their special legal status.’ (Chief Justice Lamer in R. v. Van der Peet, para 30).

#### Indigenous people say yes–appropriation goes against their values

**Young**, M. J. (**1987**). “Pity the Indians of Outer Space”: Native American Views of the Space Program. Western Folklore, 46(4), 269. doi:10.2307/1499889 //SR \*brackets for problematic language]

Because Native Americans [indigenous people] have a different perspective of the world, they can offer us alternative ways of seeing ourselves in relationship to the natural world and help us answer the question of what constitutes appropriate behavior-in outer space, as well as on earth. Furthermore, some non-Native Americans realize that, as they look to the traditions of the Native Americans, they see their own heritage with increased clarity. Although this appreciation of Native Americans comes too late in America's history and could be construed as appropriating their ideas as we did their land, a significant number of Native Americans are receptive to the potential that now exists for a dialogue between traditions, both non-Native and Native American, perhaps because they are experiencing a parallel concern, a need to come to terms with their own emerging identity.2 Both groups have begun to realize that it is only through such a dialogue that the mistakes of the past can be avoided in the future. For non-Native Americans the justification for this inquiry is that through an analysis of the difference between the two understandings of space-Anglo and Native American-we can better "see" the ideological dimensions of our own, taken-for-granted mythology that legitimizes space exploration. Native American [indigenous] attitudes towards "outer space" often conflict with the attitudes of the proponents of the U.S. space program. Rather than applying the metaphor of the "new frontier" or even the term "outer" to this aspect of the cosmos, many Native Americans regard it as encompassed in "Father Sky," part of their network of symbolic associations that integrates all elements of the cosmos. A recent commercial called "Earth Pictures," produced by TRW, a firm that specializes in "aerial views" of portions of the earth's globe from outer space, aptly illustrates these differing attitudes.3 In this commercial, TRW representatives give members of the Navajo tribe a guided tour of the TRW laboratories and conclude by showing them a satellite picture (Landsat) of the Navajo reservation from outer space. With evident humor, the Navajos respond by holding up a picture of outer space from their reservation-a dry painting of Father Sky who contains within his body the sun, moon, and constellations. The commercial thus serves to illustrate Navajo beliefs about "outer space." According to Navajo worldview, which emphasizes harmonious relations with all elements of the cosmos-a sacred kinship among all aspects of experience, natural and supernatural-Father Sky is a living being, intimately related to humans who should, therefore, treat him with appreciation and respect. This example from the Navajo is representative of the cosmology of most Native American groups, a cosmology that is shaped by a belief in the unity and sacred nature of all life, the above and the below. As Joseph Epes Brown suggests, the Native American quality of seeing is based on "a polysynthetic metaphysic of nature, immediately experienced rather than dangerously abstracted."4 He describes this vision as a "message of the sacred nature of the land, of place."5 Place in this sense extends, of course, to outer space, or Father Sky, as well as to Mother Earth. This perspective contrasts sharply with that of enthusiasts of space exploration who regard space as something "out there," beyond everyday experience, through which we should travel to reach planets and other objects that we will investigate, and, if possible, use to meet our own needs.

#### Solves the aff better

**​​Barsh 93** Russel Lawrence Barsh 1993 “Native American Sovereignty” University of Michigan Journal of Law Reform, Winter, 1993, 25 U. MICH. J. L. REF. 671 (Professor of Native American Studies at the University of Lethbridge)//Elmer

There no longer seems to be much difference in the Westernization of the Third World and of the indigenous world. Indigenous societies are usually more isolated geographically, so the process of convergence is understandably slower. But they are catching up. While world leaders lament the loss of biological diversity, which holds the key to the renewal and survival of ecosystems, our planet rapidly is losing its cultural diversity, which holds the key to the renewal and survival of human societies. Scientists and scholars search for an alternative in their theories while real alternative cultures disappear. It will be a real struggle to reassert an indigenous perspective on social justice, democracy, and environmental security. The hardest part of the struggle will be converting words to action, going beyond the familiar, empty rhetoric of sovereignty and cultural superiority. The struggle will be hardest here in the United States, where the gaps between rhetoric and reality have grown greater than anywhere on earth. This is the best place to begin, however, because this is the illusory "demonstration" that is studied by the rest of the world, including the indigenous peoples of other regions. Are American Indians ready to accept this global responsibility? The current generation of tribal leadership appears unwilling to try. It is firmly committed by its actions to the materialist path, and it is neutralized by its dependence on a continuing financial relationship with the national government and developers. The next generation of American Indians may be another matter. Disillusioned and critical, they may yet find a voice of their own that is both modern and truly indigenous, and they may have the courage to practice the ideals that their parents merely sloganize. Let us hope so. There is no alternative for Indian survival or for global survival.

### 1NC - OFF

Indigenous CP

#### Counterplan Text: The appropriation of outer space by private entities except for Viasat is unjust

#### Viasat boosts Indigenous economies.

**SBS 1/12** [Indigenous Australians to lead space industry at new Alice Springs earth ground station, <https://www.sbs.com.au/news/indigenous-australians-to-lead-space-industry-at-new-alice-springs-earth-ground-station/b35811cc-1ecb-4a90-9be2-d6c1f4486e3b>, Jan 12 2022, SBS News] [SS]

A multi-million-dollar earth ground station will be built in the Northern Territory's Alice Springs, set to be the first development of its kind on Aboriginal-owned land in Australia. Indigenous Australians will become leading participants in the global satellite and space industry, with the Real-Time Earth (RTE) facility expected to bring new jobs and economic opportunities to remote Australia. Global communications company Viasat Inc. has partnered with Aboriginal not-for-profit science and technology company Centre for Appropriate Technology Ltd (CfAT) to deliver the project, financed by Indigenous Business Australia. It will be used to track the next generation of low earth orbiting satellites for earth observation used for scientific research, environmental monitoring, and commercial applications. CfAT chairperson Peter Renehan said the facility "puts Aboriginal people at the forefront of Australia’s growing space sector". "This state-of-the-art development will provide a positive contribution to the local economy through employment opportunities for local businesses during each phase of construction as well as ongoing jobs for local Aboriginal people once operational," she said. "CfAT exists to provide people in regional and remote Australia with options for maintaining their relationship with country. "We do this by providing technologically innovative solutions to infrastructure challenges with digital connectivity as a core focus of the companies work." A KPMG report Aboriginal and Torres Strait Islander people own or have controlling interests in about 40 per cent of the Australian land mass under various forms of title and legislation. Indigenous Business Australia Chairperson Eddie Fry said the new earth ground station was important for both the Australian space industry and the Indigenous community. "Aboriginal and Torres Strait Islander people own or control significant areas of land in remote areas where there is limited economic potential," he said. "This first of its kind development on Aboriginal land gives the community both economic and social returns." He added Alice Springs was an optimal environment for this type of technology due to a large number of cloud-free days, limited radio interference and access to fibre network on the grounds. Indigenous Australians Minister Ken Wyatt said developments such as this showcased how Aboriginal and Torres Strait Islander people could continue leading roles in our nation’s innovation. "Indigenous Australians hold a powerful economic force through their connections with land, culture and community,” he said. "This exciting project is a prime example of the power of country to help deliver commercial returns through technology, employment and career opportunities."

#### Indigenous led economics solve warming.

**Swiderska ‘21** [Here's why Indigenous economics is the key to saving nature, <https://www.iied.org/heres-why-indigenous-economics-key-saving-nature>, Krystyna Swiderska, April 13 2021] [SS]

Western economics is not only destroying the environment. It is also destroying Indigenous peoples’ holistic development models that ensure balance with nature, and provide alternative paradigms for sustainable development. For many of the world’s 476 million Indigenous peoples, balance and reciprocity (PDF) with nature are fundamental principles that guide all aspects of life. Rather than privileging human economic goals and pursuing nature conservation separately, many Indigenous societies seek to achieve ‘holistic wellbeing’ or ‘Buen Vivir’, which means the wellbeing of both people and nature together. Take the Quechua and Aymara people in Peru, for example, who make up nearly a fifth of Peru’s population. According to their Andean cosmovision, the world is divided into three communities or ‘ayllus’: i) the wild or natural world, ii) the human and domesticated world, and iii) the sacred world. To achieve wellbeing (‘Sumaq Causay’), these three communities must be in balance, which requires reciprocity between them (‘ayni’). These Andean concepts come from the Incas, the largest pre-Columbian empire, and are still very much alive in the Andes. So too are barter markets (PDF), which provide people at different altitudes with access to essential nutrients and help sustain rich Andean biodiversity. Balance with nature, reciprocity and solidarity (the obligation to help those in need) are key principles embedded in many Indigenous cultures across the world, from the Americas, to China, India and Kenya. These Indigenous economies (PDF) promote sufficiency rather than infinite growth, and equity and redistribution of wealth rather than accumulation. Many subsistence economies are also characterised by circular agriculture models, which minimise waste and carbon emissions. The separation of people and nature threatens both In Peru and across the world, the nature- and people-friendly informal economies of Indigenous peoples are steadily being eroded by Western, neo-liberal economic policies that separate people and nature, and view Indigenous cultures and subsistence economies as ‘backward’ and in need of modernisation. Ironically, the same Indigenous economies that have conserved and enhanced biodiversity for millennia are now threatened by environmental policies that often fail to recognise the value of Indigenous knowledge, thus contributing to its erosion. Most of the world’s remaining biodiversity is located on lands owned or managed by Indigenous peoples. A global scientific assessment (PDF) by the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) found that “nature is generally declining less rapidly in Indigenous peoples’ lands than in other lands”. However, the IPBES assessment also found nature managed by Indigenous peoples and local communities (IPLCs) is under increasing pressure, as is the knowledge of how to manage it. Areas managed by IPLCs “are facing growing resource extraction, commodity production, mining and transport and energy infrastructure”. Negative impacts from all these pressures include “continued loss of subsistence and traditional livelihoods” and impacts on “health and wellbeing from pollution and water insecurity”. These impacts “also challenge the transmission of Indigenous and local knowledge” and “the ability of indigenous peoples and local communities to conserve and sustainably manage wild and domesticated biodiversity that are also relevant to broader society”. Mainstream economic activities on Indigenous lands have rarely benefited Indigenous Peoples, who make up 6% of the world’s population but 19% of the extreme poor. In fact, their situation has often deteriorated (PDF), due to loss of land and natural resources, and the weakening of cultural ties and social cohesion. Integration with market economies has led to social tension and conflict, limited opportunities for meaningful employment, low returns for producers and a shift towards consumerist lifestyles. The dominant approach to nature conservation through protected areas also reflects a Western worldview that separates people and nature, often excluding Indigenous people to protect biodiversity. Many state-run protected areas have resulted in negative social impacts, are losing biodiversity and are not effectively or equitably managed, as IPBES found (PDF). Bridging the divide Clearly, alternative development and conservation models that bridge the nature-people divide are urgently needed to achieve the 2030 Sustainable Development Goals. Indigenous Peoples’ holistic worldviews provide alternative development paradigms, which benefit both people and nature. For example, Indigenous Peoples’ ‘mixed economies’, which combine subsistence and market activities, sustain Indigenous values that underpin biodiversity conservation, while contributing to nutrition, health, wellbeing and climate resilience, and generating income. Local markets and short value chains are often prioritised, rather than global export markets. Indigenous Peoples have started to shape new community enterprise models that assert control over their territories and promote Indigenous traditions of sustainability and enterprise for the common good. These Indigenous enterprises have delivered multiple benefits for livelihoods, culture, social capital and biodiversity conservation. For example, in the Potato Park in Peru, a Biocultural Heritage Territory governed by six Quechua communities, collective micro-enterprises (for gastronomy, agro-ecotourism, crafts, herbal teas and so on) are guided by Andean principles and holistic wellbeing goals. Ten per cent of the revenues from each micro-enterprise is invested in a communal fund and redistributed annually to reward biocultural heritage stewards and help those in need. Thanks to their ancestral Indigenous knowledge, linked with science, the Potato Park communities have ensured food security despite severe climate change impacts and the COVID-19 pandemic. During the pandemic, the communities donated a ton of potatoes to hungry people in Cusco, in line with the principle of solidarity. The social ties and mutual care and solidarity that Indigenous communities have displayed in the pandemic, highlights the type of social relations that are core to resilient economies and an inclusive green recovery. The concept of 'biocultural heritage', which is derived from Indigenous Peoples’ holistic worldviews and traditions, recognises the inextricable linkages between nature, culture and development. The way forward A new narrative is needed which recognises the highly progressive and dynamic nature of Indigenous knowledge and economic systems that put nature and equity at the heart of development. Indigenous Peoples have a leading role to play in shaping alternative paradigms to mainstream economic models that are destroying the environment and traditional cultures. Achieving the Sustainable Development Goals (SDGs), and undoing years of racial injustice that lie at the root of poverty and inequality, requires structural reform across economic and environment sectors, from local to global levels, to put Indigenous Peoples at the heart of decision-making. This year provides an opportunity for governments and political leaders to demonstrate real commitment to achieving the SDGs and leaving no one behind. It is not too late to reform the leadership structure for the UN Food Systems Summit in September 2021, so that representatives of poor, hungry, marginalised and Indigenous Peoples play a leading role. Or to reform the proposed post-2020 Global Biodiversity Framework (PDF), to be agreed at the biodiversity convention COP15 in October, so that the knowledge and leadership of Indigenous Peoples and local communities is integrated across the targets. Indigenous Peoples have answers for many of the world’s most intractable challenges: inequality, ecocide, climate change. We cannot address these challenges without their wisdom and leadership.

**Warming causes extinction and guarantees every other impact**

Spratt and Dunplop 19, David Spratt [Research Director for Breakthrough National Centre for Climate Restoration, Melbourne, and co-author of Climate Code Red: The case for emergency action] & Ian Dunlop [member of the Club of Rome. Formerly an international oil, gas and coal industry executive, chairman of the Australian Coal Association, chief executive of the Australian Institute of Company Directors, and chair of the Australian Greenhouse Office Experts Group on Emissions Trading 1998-2000], “Existential climate-related security risk: A scenario approach,” Breakthrough - National Centre for Climate Restoration, May 2019, pg. 8-10, beckert. Brackets in original text

2020–2030: Policy-makers fail to act on evidence that the current ​Paris Agreement path — in which global human-caused greenhouse emissions do not peak until 2030 — will lock in at least 3°C of warming. The case for a global, climate-emergency mobilisation of labour and resources to build a zero-emission economy and carbon drawdown in order to have a realistic chance of keeping warming well below 2°C is politely ignored. As projected by Xu and Ramanathan, by 2030 carbon dioxide levels have reached 437 parts per million — which is unprecedented in the last 20 million years — and warming reaches 1.6°C.18 2030–2050: Emissions peak in 2030, and start to fall consistent with an 80 percent reduction in fossil-fuel energy intensity by 2100 compared to 2010 energy intensity. This leads to warming of 2.4°C by 2050, consistent with the Xu and Ramanathan “baseline-fast” scenario.19 However, another 0.6°C of warming occurs — taking the total to 3°C by 2050 — due to the activation of a number of carbon-cycle feedbacks and higher levels of ice albedo and cloud feedbacks than current models assume. [It should be noted that this is far from an extreme scenario: the low-probability, high-impact warming (five percent probability) can exceed 3.5–4°C by 2050 in the Xu and Ramanathan scheme.] 2050: By 2050, there is broad scientific acceptance that system tipping-points for the West Antarctic Ice Sheet and a sea-ice-free Arctic summer were passed well before 1.5°C of warming, for the Greenland Ice Sheet well before 2°C, and for widespread permafrost loss and large-scale Amazon drought and dieback by 2.5°C. The “**hothouse Earth**” scenario has been realised, and Earth is headed for another degree or more of warming, especially since human greenhouse emissions are still significant.20 While sea levels have risen 0.5 metres by 2050, the increase may be 2–3 metres by 2100, and it is understood from historical analogues that seas may eventually rise by more than 25 metres. Thirty-five percent of the global land area, and 55 percent of the global population, are subject to more than 20 days a year of **lethal heat** conditions, beyond the threshold of human survivability. The destabilisation of the Jet Stream has very significantly affected the intensity and geographical distribution of the Asian and West African monsoons and, together with the further slowing of the Gulf Stream, is impinging on life support systems in Europe. North America suffers from devastating weather extremes including wildfires, heatwaves, drought and inundation. The summer monsoons in China have failed, and water flows into the great rivers of Asia are severely reduced by the loss of more than one-third of the Himalayan ice sheet. Glacial loss reaches 70 percent in the Andes, and rainfall in Mexico and central America falls by half. Semi-permanent El Nino conditions prevail. Aridification emerges over more than 30 percent of the world’s land surface. Desertification is severe in southern Africa, the southern Mediterranean, west Asia, the Middle East, inland Australia and across the south-western United States. Impacts: A number of **ecosystems collapse**, including coral reef systems, the Amazon rainforest and in the Arctic. Some poorer nations and regions, which lack capacity to provide artificially-cooled environments for their populations, **become unviable**. Deadly heat conditions persist for more than 100 days per year in West Africa, tropical South America, the Middle East and South-East Asia, contributing to **more than a billion people being displaced** from the tropical zone. **Water availability decreases sharply** in the most affected regions at lower latitudes (dry tropics and subtropics), affecting about **two billion** people worldwide. Agriculture becomes nonviable in the dry subtropics. Most regions in the world see a significant drop in food production and increasing numbers of extreme weather events, including heat waves, floods and storms. Food production is inadequate to feed the global population and food prices skyrocket, as a consequence of a one-fifth decline in crop yields, a decline in the nutrition content of food crops, a catastrophic decline in insect populations, desertification, monsoon failure and chronic water shortages, and conditions too hot for human habitation in significant food-growing regions. The lower reaches of the agriculturally-important river deltas such as the Mekong, Ganges and Nile are inundated, and significant sectors of some of the world’s most populous cities — including Chennai, Mumbai, Jakarta, Guangzhou, Tianjin, Hong Kong, Ho Chi Minh City, Shanghai, Lagos, Bangkok and Manila — are abandoned. Some small islands become uninhabitable. Ten percent of Bangladesh is inundated, displacing 15 million people. Even for 2°C of warming, more than a billion people may need to be relocated and In high-end scenarios, the scale of destruction is beyond our capacity to model, with a **high likelihood of human civilisation coming to an end**.21 National security consequences: For pragmatic reasons associated with providing only a sketch of this scenario, we take the conclusion of the ​Age of Consequences ‘Severe’ 3°C scenario developed by a group of senior US national-security figures in 2007 as appropriate for our scenario too: Massive nonlinear events in the global environment give rise to ​massive nonlinear societal events.​ In this scenario, nations around the world will be ​overwhelmed by the scale of change and pernicious challenges, such as pandemic disease. The internal cohesion of nations will be under great stress, **including in the United States**, both as a result of a dramatic rise in migration and changes in agricultural patterns and water availability. The flooding of coastal communities around the world, especially in the Netherlands, the United States, South Asia, and China, has the potential to challenge regional and even national identities.​ **Armed conflict** between nations over resources, such as the Nile and its tributaries, is likely and **nuclear war** is possible. The social consequences range from increased religious fervor to ​outright chaos.​ In this scenario, climate change provokes ​a permanent shift in the relationship of humankind to nature​’.22 (emphasis added) DISCUSSION This scenario provides a glimpse into a world of “outright chaos” on a path to the end of human civilisation and modern society as we have known it, in which the challenges to global security are simply overwhelming and political panic becomes the norm. Yet the world is currently completely unprepared to envisage, and even less deal with, the consequences of catastrophic climate change.23 What can be done to avoid such a probable but catastrophic future? It is clear from our preliminary scenario that dramatic action is required this decade if the “hothouse Earth” scenario is to be avoided. To reduce this risk and protect human civilisation, a massive global mobilisation of resources is needed in the coming decade to build a zero-emissions industrial system and set in train the restoration of a safe climate. This would be akin in scale to the World War II emergency mobilisation. There is an increasing awareness that such a response is now necessary. Prof. Kevin Anderson makes the case for a Marshall Plan-style construction of zero-carbon-dioxide energy supply and major electrification to build a zero-carbon industrial strategy by “a shift in productive capacity of society akin to that in World War II”.24 Others have warned that “**only a drastic, economy-wide makeover within the next decade**, consistent with limiting warming to 1.5°C”, would avoid the transition of the Earth System to the Pliocene-like conditions that prevailed 3-3.3 million years ago, when temperatures were ~3°C and sea levels 25 metres higher.25 It should be noted here that the 1.5° goal is not safe for a number of Earth System elements, including Arctic sea-ice, West Antarctica and coral reefs.

#### Extinction outweighs.

--- must preserve infinite lives and generations.

--- question of intergenerational equity.

--- existential threats are underestimated: global public good, intergenerational, unprecedented, scope neglect.

GPP 17 (Global Priorities Project, Future of Humanity Institute at the University of Oxford, Ministry for Foreign Affairs of Finland, “Existential Risk: Diplomacy and Governance,” Global Priorities Project, 2017, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>, Accessed 7/22/2017, Kent Denver-jKIM)

1.2. THE ETHICS OF EXISTENTIAL RISK In his book Reasons and Persons, Oxford philosopher Derek Parfit advanced an influential argument about the importance of avoiding extinction: I believe that if we destroy mankind, as we now can, this outcome will be much worse than most people think. Compare three outcomes: (1) Peace. (2) A nuclear war that kills 99% of the world’s existing population. (3) A nuclear war that kills 100%. (2) would be worse than (1), and (3) would be worse than (2). Which is the greater of these two differences? Most people believe that the greater difference is between (1) and (2). I believe that the difference between (2) and (3) is very much greater. ... The Earth will remain habitable for at least another billion years. Civilization began only a few thousand years ago. If we do not destroy mankind, these few thousand years may be only a tiny fraction of the whole of civilized human history. The difference between (2) and (3) may thus be the difference between this tiny fraction and all of the rest of this history. If we compare this possible history to a day, what has occurred so far is only a fraction of a second.65 In this argument, it seems that Parfit is assuming that the survivors of a nuclear war that kills 99% of the population would eventually be able to recover civilisation without long-term effect. As we have seen, this may not be a safe assumption – but for the purposes of this thought experiment, the point stands. What makes existential catastrophes especially bad is that they would “destroy the future,” as another Oxford philosopher, Nick Bostrom, puts it.66 This future could potentially be extremely long and full of flourishing, and would therefore have extremely large value. In standard risk analysis, when working out how to respond to risk, we work out the expected value of risk reduction, by weighing the probability that an action will prevent an adverse event against the severity of the event. Because the value of preventing existential catastrophe is so vast, even a tiny probability of prevention has huge expected value.67 Of course, there is persisting reasonable disagreement about ethics and there are a number of ways one might resist this conclusion.68 Therefore, it would be unjustified to be overconfident in Parfit and Bostrom’s argument. In some areas, government policy does give significant weight to future generations. For example, in assessing the risks of nuclear waste storage, governments have considered timeframes of thousands, hundreds of thousands, and even a million years.69 Justifications for this policy usually appeal to principles of intergenerational equity according to which future generations ought to get as much protection as current generations.70 Similarly, widely accepted norms of sustainable development require development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs.71 However, when it comes to existential risk, it would seem that we fail to live up to principles of intergenerational equity. Existential catastrophe would not only give future generations less than the current generations; it would give them nothing. Indeed, reducing existential risk plausibly has a quite low cost for us in comparison with the huge expected value it has for future generations. In spite of this, relatively little is done to reduce existential risk. Unless we give up on norms of intergenerational equity, they give us a strong case for significantly increasing our efforts to reduce existential risks. 1.3. WHY EXISTENTIAL RISKS MAY BE SYSTEMATICALLY UNDERINVESTED IN, AND THE ROLE OF THE INTERNATIONAL COMMUNITY In spite of the importance of existential risk reduction, it probably receives less attention than is warranted. As a result, concerted international cooperation is required if we are to receive adequate protection from existential risks. 1.3.1. Why existential risks are likely to be underinvested in There are several reasons why existential risk reduction is likely to be underinvested in. Firstly, it is a global public good. Economic theory predicts that such goods tend to be underprovided. The benefits of existential risk reduction are widely and indivisibly dispersed around the globe from the countries responsible for taking action. Consequently, a country which reduces existential risk gains only a small portion of the benefits but bears the full brunt of the costs. Countries thus have strong incentives to free ride, receiving the benefits of risk reduction without contributing. As a result, too few do what is in the common interest. Secondly, as already suggested above, existential risk reduction is an intergenerational public good: most of the benefits are enjoyed by future generations who have no say in the political process. For these goods, the problem is temporal free riding: the current generation enjoys the benefits of inaction while future generations bear the costs. Thirdly, many existential risks, such as machine superintelligence, engineered pandemics, and solar geoengineering, pose an unprecedented and uncertain future threat. Consequently, it is hard to develop a satisfactory governance regime for them: there are few existing governance instruments which can be applied to these risks, and it is unclear what shape new instruments should take. In this way, our position with regard to these emerging risks is comparable to the one we faced when nuclear weapons first became available. Cognitive biases also lead people to underestimate existential risks. Since there have not been any catastrophes of this magnitude, these risks are not salient to politicians and the public.72 This is an example of the misapplication of the availability heuristic, a mental shortcut which assumes that something is important only if it can be readily recalled. Another cognitive bias affecting perceptions of existential risk is scope neglect. In a seminal 1992 study, three groups were asked how much they would be willing to pay to save 2,000, 20,000 or 200,000 birds from drowning in uncovered oil ponds. The groups answered $80, $78, and $88, respectively.73 In this case, the size of the benefits had little effect on the scale of the preferred response. People become numbed to the effect of saving lives when the numbers get too large. 74 Scope neglect is a particularly acute problem for existential risk because the numbers at stake are so large. Due to scope neglect, decision-makers are prone to treat existential risks in a similar way to problems which are less severe by many orders of magnitude. A wide range of other cognitive biases are likely to affect the evaluation of existential risks.75