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LONGVIEW PHILANTHROPY

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# What if the 1% gave 10%?

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Natalie Cargill's TED Talk given in Vancouver in **April 2023**.



## Overview

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Imagine that the global 1% started giving (the higher of) 10% of their income or 2.5% of their net worth to philanthropic projects. In just the first year, this would result in an increase of at least \$3.5 trillion ↗ over and above what already goes to charity each year. If these resources were strategically deployed to solve some of the world's most pressing problems, in year one alone we could:

- Ensure no one in the world lives in extreme poverty for that year ↗ (\$260 billion);
- Massively reduce the risk of another pandemic ↗ (\$300 billion);
- Double global spending on clean energy R&D until 2050 ↗ (\$840 billion);
- Quadruple philanthropic funding for nuclear risk reduction in perpetuity ↗ (\$2 billion);
- Increase the funding for AI safety tenfold ↗ (\$1 billion);
- Fund a 13-year plan to ensure everyone has access to clean water and sanitation, once and for all ↗ (\$1.03 trillion);
- End hunger and malnutrition (\$336 billion);
- Give women control over their reproductive health by funding universal contraception, maternal care, and newborn care for all women for at least 5 years ↗ (\$173 billion);
- At least halve factory farming by 2050 ↗ (\$290 billion);
- Massively suppress or eradicate all 20 neglected tropical diseases ↗ (\$46 billion); and
- Massively suppress or eradicate tuberculosis, malaria, and HIV ↗ (\$228 billion).

Adding this all up, we could solve or massively suppress many of the world's problems for just \$3.5 trillion. Imagine what we could do in year two.



## Ensure no one lives in extreme poverty this year

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One in 12 people currently live below the international poverty line of just \$2.15 a day.

These people face a severe lack of resources (Hasell et al., 2022). They cannot afford the cost ↗ of a basic but healthy diet (Ritchie, 2021). They often go without enough food and can't access clean drinking water, electricity, basic education, and healthcare. This is deeply unjust—no one should have to live like this.

There are many strong approaches to reducing extreme poverty. But the most obvious, simple, and direct way is to just give cash to the poorest people in the world.

Over 300 studies have shown that cash transfers *work*.

People don't spend the money on tobacco, alcohol, or gambling ↗ (Evans & Popova, 2016). Instead, a detailed review ↗ of 15 years of peer-reviewed papers indicates that cash transfers reduce poverty, increase school attendance, and reduce child labour (Bastagli et al., 2016). They help recipients meet their basic needs and invest in themselves. Cash transfers do not solve all problems; for instance, higher school attendance does not always result in better education where schools are of particularly poor quality. But it is clear that giving money really does materially and substantially improve people's lives.<sup>1</sup>

What's more, cash transfers don't seem to promote reliance on aid. In fact, cash transfers in low- and middle-income countries tend to encourage people to work more and harder ↗, excepting parents and the elderly (Bastagli et al., 2016). Studies find a significant increase in investment and savings, especially into livestock and agricultural assets. One study in particular found that those who received cash transfers earned more than those who didn't, functionally doubling the effect of the initial transfer over the following decade ↗ (Blattman et al., 2020).

GiveDirectly ↗ runs the leading cash transfer programme. They usually identify a particularly poor village and give every household in that village mobile money, which can be received on a SIM card and taken out as cash at participating locations, such as shops, petrol stations, and supermarkets. They let the household decide who gets the money, and they provide a SIM card if needed. They typically give \$1,000 as a one-off transfer. Recipients are told in advance when and how much their instalments will be. Often, this represents a doubling of the income of a family of 5. It's enough to buy 5 years of secondary schooling, a year's worth of food for 5 adults, or metal roofing for 4 houses.

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<sup>1</sup> There are mixed and uncertain results about the effect of cash transfers on those who don't receive them. However, giving money to more people can help combat these side-effects. A sophisticated plan could likely avoid many of the drawbacks of cash transfers by supporting more people. Our final estimate will include 50% extra coverage.



## \$259 billion budget

How much would it cost to completely eliminate extreme poverty for one year? The Brookings Institute estimates <sup>1</sup> that \$100 billion in the hands of the right people would bring everyone out of extreme poverty (Kharas & Dooley, 2021). The true costs are higher, because to do it for \$100 billion you would need to identify the exact incomes of a billion people and give them exactly the right amount without incurring any additional costs.

With the help of GiveDirectly, we estimated that for \$259 billion we could end extreme poverty for one year. We arrived at this calculation by making a number of adjustments to the \$100 billion figure given by Brookings:

- GiveDirectly's overheads have been around 12% historically, so we conservatively assume overheads would be 15%.
- Given that it will be hard to identify the incomes of individuals precisely, we can assume that we include 50% extra people and make payments that are 50% higher than the absolute minimum amount to help people over the international poverty line.
- Finally, we adjusted for inflation in the years since the report was written.

## Preventing the next pandemic

Covid-19 killed over 6 million people and brought economies to a standstill.<sup>2</sup> We shouldn't have been surprised.<sup>3</sup> In 1918 the Spanish Flu killed over 25 million people, and since then millions have died every 17 years from a new pandemic.<sup>4</sup> There is no law that says the next pandemic has to wait till 2036. Will it surprise us too?

While all pandemics are deadly, the most extreme risks stem from synthetic biology. Today, it is possible for someone with the right type of experience in bioengineering to go on the internet, order the DNA needed to reconstruct the smallpox virus, make that smallpox in a lab, and release it into the world. And it's getting cheaper and easier to synthesise DNA every year.<sup>5</sup>

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<sup>2</sup> For more data, see "Coronavirus (COVID-19) Deaths," from Our World in Data.

<sup>3</sup> There were a handful of warnings from scientists, virologists, and experts on infectious disease. For example, see Smil (2008), Webster (2019), and Osterholm & Olshaker (2017). Bill Gates even gave a [TED Talk](#) in 2015 arguing that we needed to prepare for the next epidemic.

<sup>4</sup> Between 1918 and 2018 we saw [6 pathogens](#) that killed over a million people each: Spanish Flu in 1918, Asian Flu in 1957, the Seventh Cholera pandemic in 1961, Hong Kong flu in 1968, Russian flu in 1977, HIV/Aids in 1981 (Cambiero, 2023).

<sup>5</sup> It cost hundreds of millions to sequence a human genome for the first time 20 years ago, but today it costs just \$1,000 (Wetterstrand, 2021).



And this isn't just something that malicious actors might do—many countries are actively developing gain-of-function research to create even-more-deadly variants of the most dangerous pathogens, such as smallpox and the plague.<sup>6</sup>

Even prior to modern biotechnology, the Soviet biological weapons programme attempted to weaponise plague, the pathogen which caused the Black Death.<sup>7</sup>

In the past, the United States and Japan also had extensive biological weapons programmes (Carus, 2017). Infectious diseases that are used as weapons can kill civilians and soldiers alike—and are difficult to control once released. And the agency in charge of ensuring that no country is breaking the treaty on bioweapons has less funding than an average McDonalds.<sup>8</sup>

To defend against these risks we could build systems to detect a pandemic early, deliver vaccines to everyone quickly and protect essential workers in the meantime, and prevent the spread in major hospitals and airports. Just \$300 billion would avoid worst-case pandemics and nearly end all pandemics for good.

### **\$300 billion budget**

A screening programme could monitor DNA in our wastewater and sound the alarm early on. A comprehensive plan might cost hundreds of billions,<sup>9</sup> but focused monitoring on only the 328 ports of entry to the U.S. would give the world most of the benefits, since pandemic pathogens cross national borders with ease. MIT biologist and CRISPR pioneer Kevin Esvelt estimates that this minimal version would cost around \$500 million upfront and \$300 million per year (personal conversation). Funding this project for the next decade would cost less than \$3.2 billion upfront.

Second, we could upgrade all lab facilities worldwide so they can get new vaccines to everyone who needs them within 6 months of a new vaccine discovery. During a pandemic, each day of delay causes exponentially more people to catch the disease, and another day of disrupted services, overcrowded hospitals, and death. We could retrofit factories to produce 16 billion doses of vaccine in just 3 months, using plans ↗ from the Coalition for Epidemic Preparedness Innovations (CEPI) (Hatchett, 2021). It would cost around \$3.19 billion ↗ to retrofit facilities to be able to produce 8 billion vaccine doses in 6 months (Kis & Rizvi, 2021), and we would need about 4 times this capacity. In total, this would cost around \$13 billion.

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<sup>6</sup> For more information, see Jackson et al. (2001), Bussey et al. (2010), Cotter et al. (2014), and Tsetsarkin et al. (2007).

<sup>7</sup> For more information, see Tucker (1999).

<sup>8</sup> The international body responsible for the continued prohibition of bioweapons has a budget of \$1.4 million (BWC ISU, 2019) compared to an average \$2.8 million to run a McDonalds (McDonald's Corporation, 2018, pp. 14, 20).

<sup>9</sup> Based on a report by Kevin Esvelt, comprehensive monitoring of the wastewater and waterways of every major U.S. town and city, and most international airports would cost around \$330 billion. Esvelt estimates that it would cost around \$18 billion to set up a nucleic acid observatory, and that an additional \$10 billion per year would be required to run one (The Nucleic Acid Observatory Consortium, 2021).



Third, we could stockpile enough next-gen, maximally effective PPE to provide every essential worker in the world with near-perfect protection against pandemic pathogens in a worst-case outbreak. Air-purifying respirators would be key to protecting them from airborne viruses. Currently, they cost around \$120 per system ↗ (Nagel et al., 2021). Prof. Kevin Esvelt estimates that we could create, stockpile, and distribute *upgraded* versions of these respirators for \$250 per system (personal conversation). With 40 million essential service workers in the U.S., it would then cost around \$10 billion to provide these systems to all essential service workers in the U.S. and \$230 billion for the whole world. Insofar as prices are likely to be lower in other countries, this estimate is conservative, and we could likely provide protection for more than a billion essential workers globally.

Finally, we could invest in the development of germicidal light and other technologies that could literally kill viruses in the air before we breathe them in. The developed world effectively ended waterborne diseases with filtration systems and chlorination. With germicidal light and better ventilation systems, we may be able to *end airborne disease* just as we did waterborne disease.

Recently, we have discovered a variant of the light used to sterilise hospitals called far-UVC. This light is unable to penetrate human eyes or skin, but can still eliminate 90% of viruses every 8 minutes—better than any existing ventilation system. All available evidence shows safety for human exposure (Buonanno et al., 2020). We could install far-UVC lights in every hospital and 100 international airports for around \$22 billion.<sup>10</sup>

With these investments combined, we could kill airborne diseases with modern germicidal light even before they take root, detect a pandemic in the first weeks through wastewater monitoring, protect essential workers in even the worst cases, and produce enough vaccines for everyone in the world within 6 months of having the first vaccine. There are further investments that could reduce risks and burdens even more, but these investments combined would reduce most pandemic risk and save millions of lives and trillions of dollars.

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<sup>10</sup> MIT Professor and CRISPR pioneer Kevin Esvelt estimates that it currently costs \$10 per square foot protected using this germicidal light (personal conversation). Data from The World Bank (n.d.) indicate around 23.2M hospital beds worldwide, each requiring around 75 square feet of space (Excel Medical, 2022). International airports tend to have around 5M square feet of indoor space. Beijing's Daxing International Airport is 7.5M (McGregor, 2019) and London's Heathrow Airport is 4M (Heathrow, n.d.), amounting to about 2.2 billion square feet overall.



## Double spending on clean energy R&D until 2050

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Addressing climate change is one of the grand challenges of our time, yet it is hard to imagine ↗ our achieving the emissions reductions required to meet the stretch goal of the Paris Agreement, to limit global warming to 1.5 degrees Celsius (Ritchie & Roser, n.d.). Even to meet the main goal of 'well below 2' degrees, the world would need to reach zero net emissions by about 2050, but total emissions are still increasing ↗ (Ritchie et al., 2020), and the fraction of our energy coming from low-carbon energy sources is growing too slowly ↗ to meet that goal (Our World in Data, n.d.-c).

The worst risks are from extreme warming. The Intergovernmental Panel on Climate Change (IPCC) focuses heavily on median projections, yet what they do say about tail risks implies approximately a 1% chance of 6 degrees Celsius warming by 2100 (Halstead, 2022). Despite progress on climate change, there remains an unacceptable level of extreme risk, and we do not know what kind of world we will pass on to the next generation if this happens.

Humanity could reduce these risks with further investment in adaptation or by developing techniques to radically alter the climate in ways that partly counteract the radical alteration we are already making (i.e. geoengineering).

However, the best way to reduce risks from extreme warming is likely the most obvious one: reduce the amount of greenhouse gases in the atmosphere.

One effective way to reduce greenhouse gases in the atmosphere is with green energy research and development. This has been highly effective so far; over the last 10 years, the price of wind energy is down by 70%, and the price of solar is down by 90% ↗. We can build on this and start a clean energy sprint: improve solar energy, wind energy, nuclear energy, geothermal energy, better energy storage, and better ways to remove carbon from the air as soon as it's emitted.

### **\$840 billion budget**

According to the international energy commission, we spend about \$30 billion ↗ each year on clean energy R&D (IEA, 2020). For \$840 billion dollars we could match this spending on clean tech R&D until 2050, and speed up progress to end climate change.



## Quadruple nuclear security funding

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A nuclear war, whether initiated through accident, miscalculation, or deliberate use, could result in fatalities in the first few days on the scale of World War I or World War II ↗ (Rodriguez, 2019). Billions more could be threatened by crop devastation from climate effects. The ensuing chaos could irrevocably destabilise civilization and leave us more vulnerable to other existential risks.

Russia's nuclear threats ↗ over Ukraine are a reminder that nuclear weapons are not a thing of the past (Sanger & McKinley, 2022). Many experts believe ↗ we've entered a new nuclear age marked by greater geopolitical conflict and rapid technological change (Narang & Sagan, 2022).<sup>11</sup>

Risk of nuclear use has increased since Russia's invasion, with some analysts arguing ↗ this is the most dangerous moment since the Cuban Missile Crisis of 1962 (Haltiwanger, 2022).

The United States, Russia, and China account for over 90% of global nuclear stockpiles. Each is developing new nuclear capabilities, though the pace and outcome of this arms race are yet to be determined. The existing nuclear order has successfully limited the spread of nuclear weapons to 9 states and enabled reductions from 60,000 warheads during the Cold War to 10,000 today ↗, but it is at risk (Roser et al., 2019).<sup>12</sup>

### \$2 billion budget

Given the stakes, it may be surprising that nuclear weapons policy is neglected by philanthropy. The Peace and Security Funders Group (PSFG) estimates ↗ that all non-government philanthropic spending on nuclear weapons policy was less than \$50 million in 2020 (PSFG, n.d.), about half of 1% as much as we spend on climate change ↗ (Desanlis et al., 2022). For a one-time endowment of \$2 billion, we could quadruple all philanthropic spending on nuclear security *in perpetuity*, to significantly reduce nuclear risk.<sup>13</sup>

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<sup>11</sup> Several technological advances complicate strategic stability. Digital technologies have improved missile accuracy. Under certain scenarios, manoeuvrable hypersonic weapons increase speed and ambiguity of attack. Digitised [command and control systems](#) promise improved reliability, but may also open new vulnerabilities to cyber attack. Technological uncertainties relate to missile defences, space and anti-space capabilities, and integration of artificial intelligence into surveillance, planning, and advising systems.

<sup>12</sup> Nine countries have nuclear weapons: the United States (acquired 1945), Russia (1949), the United Kingdom (1952), France (1960), China (1964), India (1974), Israel (estimated 1979), Pakistan (1998), and North Korea (2006). Iran and Syria are pursuing or considering nuclear weapons. In total, there are 13,000 warheads in the world, with 3,000 of these designated as "retired."

<sup>13</sup> We assume the endowment would achieve 7.5% annualised returns, a few percentage points lower than the average returns of the S&P 500.





## Increase AI safety funding tenfold

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Artificial intelligence (AI) is rapidly improving. We took AI from an amateur chess player in 1957 to a superhuman level in 1997 (Bernstein & de V. Roberts, 1958; IBM, 2011). That was 40 years of progress, but in the past few we have seen chatbots that can write college-level essays, write their own computer programmes, pass the bar exam with better results than 90% of lawyers, create photorealistic images, and beat most players at the board game Diplomacy ↗, centred around negotiation with other players. Top AI researchers think ↗ that over the next 37 years, there is a 50% chance that we will develop machines that can autonomously accomplish every task better and more cheaply than human workers (AI Impacts, 2022).

More likely than not, advanced artificial intelligence will radically alter the world we live in during our lifetimes. But these systems are not well understood, and even the people who make them don't know much about how they work until they deploy them. We have already seen harmful bias in algorithms used to predict reoffense rates. Current systems can spread misinformation and attempt to manipulate their users. As we increasingly rely on increasingly powerful AI systems, the problems will continue to grow.

Even the people building these systems think that successfully building human-level AI is 14% likely to be “extremely bad (e.g. human extinction)” ↗ (AI Impacts, 2022). By comparison, *no one* would get on an aeroplane with even a 1% chance of crashing.

To protect our future from risks of advanced AI systems, we need to ensure that AI systems are safely, robustly, and provably aligned with human goals, so that machines more powerful than us will not run roughshod over the entirety of civilisation.

As the famous physicist Stephen Hawking once said ↗, “You're probably not an evil ant-hater who steps on ants out of malice, but if you're in charge of a hydroelectric green-energy project and there's an anthill in the region to be flooded, too bad for the ants. Let's not place humanity in the position of those ants.”

The good news is that researchers are already working on trying to mitigate the biggest risks. The bad news? To ensure the safety of AI systems we likely need to solve massive open problems, and this could take hundreds of millions of dollars, thousands of people, and possibly decades of careful work. Currently, just a few hundred safety researchers receive a tenth of 1% as much funding as the companies attempting to build AI as fast as possible.<sup>14</sup>

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<sup>14</sup> Globally, we invest around [\\$100 billion per year into AI](#) (McKendrick, 2022). Less than \$100 million is spent on AGI safety—the biggest funder, Open Philanthropy, [gives around \\$50 million per year](#) (Sempere, 2022), and other funders such as the [Survival and Flourishing Fund](#) and the [Long-Term Future Fund](#) give single digit millions.



### **\$1 billion budget**

In all, the group of scientists focused on ensuring that advanced AI systems are aligned with human values receive less than \$100 million in funding each year.

Philanthropic investment could create a more prudent and balanced approach, where we invest appropriately in ensuring that emerging, world-altering technologies are managed safely and fairly, for the benefit of humanity. For just \$1 billion, we could multiply by 10 the current funding that goes towards scientists ensuring that advanced AI systems are aligned with human values.

Many other approaches are necessary, such as governance approaches to ensure coordination between frontier labs and minimise races to the bottom. We also need work to prepare for the radically new world to come if humanity can safely transition to human-level AI systems. But all of these approaches rely on the differential development of safety technology that is fast enough to keep up with developments in AI capabilities.



## Ensure everyone has access to clean water and sanitation, once and for all

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Around 1 in 3 people do not have safe drinking water ↗ and half also lack access to sanitary toilets (UNICEF & WHO, 2019).

The world is on track to provide vital access to basic water, sanitation, and hygiene services, but investment into infrastructure can get us there sooner.

This problem is not complicated to solve. Funding can be used to build and maintain the infrastructure that connects every household to clean drinking water, toilets and plumbing that can safely manage faecal waste, and handwashing stations with soap.

### **\$1.03 trillion budget**

Universal water and sanitation would cost around \$1.03 trillion. The World Bank's Water and Sanitation Program estimates that ensuring universal access to water and sanitation would cost about \$114 billion per year ↗ for 13 years, of which around 31% is already funded (Hutton & Varughese, 2016).

## End hunger and malnutrition

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750 million ↗ people have gone without food for a day or more in the past year (FAO et al., 2020). That's around 1 person in 10. Globally, around 50 million children under 5 are severely underweight, malnourished, and 12x more likely to die than other children ↗ (FAO, 2022), all because their families do not have enough food.

This problem could be solved by buying food directly, giving families the money they need to buy food, and training for and investing in farming to grow more food and ensure reliable access for everyone.

### **\$336 billion budget**

Ceres2030 ↗ provides a comprehensive estimate of the cost of preventing hunger (Laborde et al., 2020). Private and public investment totalling \$33 billion per year for 10 years would be enough to end hunger. In total, this would cost \$336 billion upfront, when adjusted for inflation and investment returns.<sup>15</sup>

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<sup>15</sup> Their model indicates that this philanthropic investment would result in additional private investment of \$52 billion a year. If this cost was paid with philanthropic dollars instead, the total would rise to \$865 billion.



## Give women control over their reproduction and reproductive health

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800 mothers ↗ and 15,000 children ↗ die every day (Roser & Ritchie, n.d.; Roser et al., 2019), most of them from complications with childbirth and neonatal health issues.

Progress on this issue has been slow but steady over the past two centuries. Mothers are about 4 times ↗ more likely to survive pregnancy and childbirth than they were in 1800 (Roser & Ritchie, n.d.). We can make this progress go much faster.

There is an enormous opportunity to save the lives of mothers and children. If everywhere was like the European Union, only 30 mothers would die each day ↗ (Roser & Ritchie, n.d.). Comprehensive funding could provide contraception, pregnancy-related and newborn care, and STI treatments in lower- and middle-income countries.

### **\$173 billion budget**

The Guttmacher Institute (2019) estimates ↗ the costs of providing these services. Ideal care would cost \$68.8 billion per year, of which \$37.6 billion is already funded. Filling the funding gap for the next 5 years would cost \$172.35 billion when adjusted for inflation. This would prevent more than 60% of newborn and maternal deaths, unintended pregnancies, and HIV infections among babies.

## Massively suppress or eradicate the 20 “neglected tropical diseases”

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Over 1 billion people ↗ are affected each year by neglected tropical diseases such as Leprosy, Guinea-Worm, and Chagas (WHO, 2023). Twenty neglected tropical diseases pose an enormous health burden, but their treatment is underfunded and stigmatised (WHO, 2023 ↗).

Victims of these diseases tend to live in low- and middle-income countries, which contributes to their neglect. But the diseases are preventable and manageable through simple interventions like access to clean water, sanitation, and medications.

### **\$46 billion budget**

Total cost: \$46 billion. In 2015, the World Health Organization estimated that ending NTDs by 2030 would cost \$34 billion ↗ excluding donated medicines, which would primarily fund vector control. Policy Cures Research suggests that funding has recently been only around \$350 million per year ↗, leaving an expected shortfall of almost \$29 billion (\$37 billion adjusted for inflation) (Chapman et al., 2019). Disease Control Priorities, 3rd edition, estimates that donated medicines add at least \$7.3 billion ↗ to the true cost (\$9 billion adjusted for inflation) (Fitzpatrick et al, 2017).



## Massively suppress or eradicate tuberculosis, malaria, and HIV

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Tuberculosis ↗, HIV ↗, and malaria ↗ together kill approximately 2.5 million people each year (Our World in Data, n.d.-a,b; Roser & Ritchie, 2019). In 2021, tuberculosis killed more people than any other infectious disease except COVID-19 ↗ (WHO, 2022).

Despite claiming the lives of millions each year, we know how to treat ↗ and ↗ prevent ↗ all three (WHO, 2022; Feachem, 2019; UNAIDS, 2021). Since 2,000 we have saved over 74 million people ↗ from tuberculosis (WHO, 2022). Since 2010 we have halved the number of people with HIV ↗ (UNAIDS, 2021). And since 1900 we have eradicated malaria on half of the earth's surface ↗ (Roser & Ritchie, 2022). We are now within striking distance of complete elimination.

### **\$228 billion budget**

The World Health Organization (2022) estimates that we need an additional \$13 billion for 12 years to reduce tuberculosis deaths by 90% ↗. The Joint United Nations Programme on HIV and AIDS estimates that we can end HIV as a public health threat for \$29 billion (UNAIDS, 2021). The Lancet Commission on malaria eradication estimates that malaria can be eradicated with an extra \$2 billion per year for 30 years (Feachem et al., 2019).

## Halve factory farming by 2050

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If you were reincarnated into any animal alive today, you'd be 6 times more likely to live your next life as a farmed chicken than as a human.

The majority of chickens alive today are raised in factory farms, confined to cages that are smaller than a standard sheet of paper ↗ (Ometer, 2010). Billions more cows, pigs, and fishes face lives of minimal freedom before being slaughtered for food (Humane Society International, n.d.). Animal agriculture is also responsible for roughly one-third of carbon emissions (Crippa et al., 2021 ↗), and increases the risk of a zoonotic pandemic.

### **\$290 billion budget**

It will likely cost around \$290 billion to create alternative proteins that are as tasty and cheap as animal protein. The Global Innovation Needs Assessment (ClimateWorks Foundation, 2021 ↗), supported by the UK Foreign, Commonwealth, and Development Office, estimates that such an investment into the development and production of alternative proteins would replace about 50% of animal agriculture by 2050. But once we have achieved perfectly flavoured and cheap alternatives, there is no obvious reason why these products could not take close to 100% of market share.



## \$3.5 trillion

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If the global 1% started giving (the higher of) 10% of their income or 2.5% of their net worth to philanthropic projects, this would result in an increase of at least \$3.5 trillion over and above what already goes to charity each year.

### Income

The World Bank's World Inequality Database [↗](#) estimates that the top 1% of the world's individuals by income earn slightly more [↗](#) than 19% [↗](#) of the total world income (in 2019–2021). The World Bank estimates Gross World Product at \$96.5 trillion [↗](#), and the World Inequality Report estimates \$122 trillion [↗](#).

Together, this data implies that the world's wealthiest 1% have an income of between \$18 trillion and \$23.8 trillion. This further implies that 10% of the income of the wealthiest 1% is between \$1.8 trillion and \$2.38 trillion.

### Wealth

The Credit Suisse Global Wealth Report 2022 [↗](#) states that the wealthiest 1% own 46% of the world's wealth. The world's wealth is around \$520 trillion, per McKinsey's report "The Rise and Rise of the Global Balance Sheet" [↗](#).

Together, these data implies that the wealthiest 1% own \$234.6 trillion, which is similar to Oxfam's estimate [↗](#) that the wealthiest 1% own \$211.5 trillion. This further implies that 2.5% of the wealth of the wealthiest 1% is between \$5.29 trillion and \$5.87 trillion.

### Charitable giving each year

There is no general information on how much money goes to charity each year. However, U.S. philanthropy is about \$485 billion [↗](#). Because the U.S. represents 31% [↗](#) of the world's wealth and dominates global philanthropy, with higher rates of giving than most other countries. That suggests that global charitable giving is certainly less than \$1.5 trillion.

### Conclusion

From the fact that 2.5% of the wealth of the wealthiest 1% is more than \$5 trillion, we learn that if the global 1% gave *the higher of* 2.5% of their wealth or 10% of their income to philanthropic work, this would amount to more than \$5 trillion. And since global charitable giving is less than \$1.5 trillion, this would represent an increase in charitable giving of over \$3.5 trillion.



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