Policy Paper by the Effective Altruism Foundation.


www.ea-foundation.org

"Psilocybe pelliculosa mushrooms" photo by Scott Darbey. Public domain license CC BY-SA 3.0.
Effective Drug Policy: An Evidence-based Approach

Executive Summary

Each year, vast amounts of resources that could be used to tackle poverty, epidemics, and other urgent world problems are spent on fighting the war on drugs—a war which, even by its own standards, is a catastrophic failure. By denying people their human rights to privacy, health, and spiritual pursuit, the war on drugs (i.e. drug prohibition) has resulted in a wide range of humanitarian crises. Supplying the ever-present drug market has been left entirely to organized criminals, creating a black market of staggering proportions. With a combined annual turnover exceeding the GDP of most countries, organized drug smugglers have obtained the means to exert considerable political leverage, and are increasingly doing so in a number of developing countries. Meanwhile, the world’s quarter of a billion drug users live under a constant threat of mandatory jail sentences, degrading drug courts, and forced rehabilitation. In some countries, users face life imprisonment, corporal punishment, or even the death penalty. As a result, vulnerable users are increasingly pushed into high-risk environments away from police and health authorities, placing them at much greater risk of harm.

In contrast to many global crises, the war on drugs does not stem from technological limitations or scarce resources; rather, it is the result of ideology and ill-devised policy. Because of its political basis, drug prohibition and its negative consequences could be avoided if a new international drug policy were implemented. While political problems are not easier to solve than medical or technological ones per se, the global movement to reform drug policy has made considerable headway in recent years. Accumulating evidence from several national experiments on alternative drug policies—most notably in the United States, the birthplace of prohibition—is now putting considerable pressure on the UN to revise their drug control treaties. The current level of progress suggests that drug policy initiatives undertaken over the next few years may lead to several UN member states reforming their drug legislation in quick succession, forcing the UN to change their own position on the matter. Backing drug policy reform may thus present a uniquely cost-effective opportunity to simultaneously address a wide range of medical, judicial, military, and social crises affecting the world. Furthermore, because the majority of damage inflicted by the war on drugs takes place in developing countries—where the political and economic risks of challenging international convention are high—we consider it a special duty of stable, developed countries to pioneer drug policy reform in their own jurisdictions, thereby clearing a regulatory path that other countries may follow.

We thus call on politicians and legislators worldwide to take the following actions in their respective states:

**Decriminalize** the consumption and possession of all drugs for personal use.

**Legalize** and regulate the distribution of low-risk recreational drugs.

**Expand** harm-reduction services for drug users within the public health system.

**Facilitate** research into the therapeutic uses of currently illicit drugs.

**Urge** the United Nations to update their position on international drug policy.
Problems with Prohibition

Flawed from the Start

Legitimate concern: At the core of prohibition lies an understandable concern about the dangers of drug use. Among the 250 million people who use illicit drugs each year, around 10% suffer from high-risk drug use (HRDU).¹ This is a debilitating condition that often requires professional treatment, and we should thus do our best to prevent individuals from acquiring it. However, the majority of drug users—around 9 in 10—do not experience any problems with their use.¹ Criminalizing all drug users is not an effective way to curb the prevalence of HRDU, nor is it fair to the 90% of drug users who are not negatively affected by their use.

Ignoring human rights: It is the job of the UN to ensure that prohibition enforcement efforts uphold the values outlined in the Universal Declaration of Human rights. Despite this, there is no clear mention of them in any of the UN drug conventions.²–⁶ While the UN General Assembly clearly reaffirms their “unwavering commitment” to uphold “all human rights and fundamental freedoms” in the context of enforcing drug control,¹⁷ they do not address the elephant in the room: namely, that the drug conventions’ broad, sweeping “duty to prevent and combat the evil of drug addiction” makes it difficult to uphold drug prohibition without violating human rights.⁵,⁶ This effect can be seen in Mexico, where the drug war militia is facing accusations of torture, rape, and detainment without trial from human rights groups in the area.⁹ In the Philippines, government-backed vigilantes and police death squads have massacred over 3,000 drug users upon orders by president Rodrigo Duterte, who likens himself to Adolf Hitler in his efforts to “slaughter” the country’s “three million drug addicts.”¹⁰,¹¹ Compared with its usual response to government-led atrocities of a similar scale, the UN have not taken major steps to curb the Philippine drug user genocide.¹²–¹⁵

Ignoring crucial evidence: The drug conventions and their schedules are central to legitimizing the use of police and military power in enforcing prohibition. At the time of signing, the World Health Organization (WHO) was given the responsibility of ensuring that all scheduled drugs undergo a scientific review of their harm profile.²,³,⁵ However, it appears that some of the most heavily controlled substances in the schedules of the 1961 and 1971 drug conventions, including cannabis, heroin, and coca leaf, were never scientifically assessed by the WHO in the first place;¹⁶ others were last evaluated in 1969, when scientific assessment methods and criteria were far less developed than today.¹⁷ Moreover, it is now known that several Schedule I drugs, including cannabis, MDMA (ecstasy), LSD and psilocybin, are significantly less harmful than they were believed to be at the time of scheduling.¹⁷,¹⁸

Ignoring the causes of addiction: Around 10% of drug users worldwide are so-called high-risk drug users (HRDU) or “addicts;”¹ that is, they are not in control of their drug use and suffer negative physical, psychological and social consequences as a result. The strongest known predictor of HRDU is in fact severe psychological trauma—especially a lack of parental love¹⁹,²⁰—during childhood, followed closely by (and causally linked to) social isolation during adulthood.²¹,²² Despite the prevailing belief that substances themselves are the primary causes of HRDU, the evidence now suggests that so-called “chemical hooks” in certain drugs play only a minor role in this regard.²²–²⁴ It is thus not surprising that restricting access to drugs and punishing users, while largely ignoring the leading causes of HRDU, is such a counter-productive approach to reducing its prevalence.

Criminalizing human nature: Our species clearly shows a profound interest in drugs. Despite the near-universal illegality of drug use, there are roughly as many drug users in the world today as there are expatriates,¹,²,⁵,¹⁵ clearly demonstrating that people are willing to use drugs even when faced with (often severe) potential punishment. In fact, human societies have been using drugs for many thousands of years—longer than they have been farming food, building cities, and writing laws.²⁶ Even today, shamanistic rituals involving hallucinogens play a central role in the religious practices of many traditional societies across the globe.²⁷–³⁴ Given how many other animal species also consume drugs,³⁵,³⁶ it appears that drug-seeking behavior is an instinct older than Homo sapiens itself.³⁷,³⁸

Disproportionate punishment: All humans have a right to freedom of thought, spiritual pursuit, and mental health—all of which are attainable in part through responsible drug use.⁶,³⁹,⁴⁰ It is also a fundamental principle of liberty that individuals should be allowed to do as they please with their bodies, provided it does
not inflict harm on other people.\textsuperscript{41} It is absurd that people should lose their fundamental rights for the simple, nonviolent act of using drugs.\textsuperscript{42,44} Nevertheless, nonviolent drug users continue to make up the vast majority of drug-related arrests worldwide, and punishments are often wildly disproportionate to the supposed offense.\textsuperscript{43–45}

**Unintended Consequences**

**Funding organized crime:** By prohibiting the production and distribution of commodities in high demand, the war on drugs has created a black market of staggering proportions. Estimates of the total market value of the drug trade range between US$45 billion and $439 billion (with high variance stemming from the secretive nature of the market itself), averaging at $242 billion.\textsuperscript{46,47} If it were a nation, the illicit drug market would rank as the 42\textsuperscript{nd} wealthiest in the world in terms of nominal GDP, placing it well within the top quarter of all countries ranked by the International Monetary Fund (IMF).\textsuperscript{48} Rather than being taxed and re-invested in the improvement of society, these vast fortunes are instead pocketed by organized criminals—many of whom are also involved in human trafficking, terrorism, and other crimes against humanity.\textsuperscript{46}

**Breeding a culture of terror:** Because the illicit drug industry is supplied entirely by organized crime gangs, there is a tendency for extreme and often sadistic violence norms to develop among the criminals involved. Constant struggles for control over trade routes, production sites, and customer markets—all taking place outside of the rule of law—provides strong incentives for gangs to showcase their power and spread fear among locals, rivals, and law enforcement.\textsuperscript{49} For example, a gang whose members are willing to kill their opponents will quickly gain a reputation for ruthlessness, thereby scarifying off competitors; soon, however, other gangs adopt the practice, raising the bar for what is considered extreme violence. Cartel violence thus grows increasingly sadistic as new, more violent acts are introduced and then rapidly become the norm.\textsuperscript{49,50} This "culture of terror" has reached staggering proportions in Mexico, where cartels routinely torture, kill, and display the dismembered bodies of their opponents and suspected informants in broad daylight.\textsuperscript{49,50–52}

**Undermining political stability:** Combating organized crime is very expensive, leading to a selection effect in which only developed countries are successful in preventing large-scale organized crime within their borders.\textsuperscript{46} Traffickers, therefore, relocate to less developed countries that lack the resources to enforce prohibition on a large scale.\textsuperscript{53,54} Once established, the crime gangs are then able to use their considerable financial means to bribe officials, terrorize the local population into compliance with their wishes, and in some cases even fund elections directly.\textsuperscript{46,55} The most powerful of these gangs subsequently avoid prosecution by sabotaging the development of a democratic government with the means to enforce prohibition, leading to high state fragility in developing countries located in and around major drug production centers and trade routes.\textsuperscript{46,53,56} Tragic examples of this effect can be seen in Afghanistan and Myanmar (opiate production), Thailand and Pakistan (opiate trafficking), Colombia and Bolivia (cocaine production), and Mexico and Guinea-Bissau (cocaine trafficking).\textsuperscript{1,46,53–55,57–59} Significant levels of corruption are also evident in developed countries situated on major drug trade routes, notably Spain, Argentina, and Italy.\textsuperscript{1,53}

**Billions wasted on ineffective enforcement:** While organized criminals are making an average of $160 billion a year supplying drugs, world governments are collectively spending at least $100 billion a year trying to stop them. The United States alone is estimated to have spent over $1 trillion on drug law enforcement over the past 40 years.\textsuperscript{60,61} And yet, prohibition has never been farther from its goal of creating a "drug-free world." Both the prevalence of drug use and the size of the illegal drugs market are currently at an all-time high,\textsuperscript{1,46,52,60,62} and countries with strict drug laws have been shown to have similar rates of drug use as those without.\textsuperscript{63} From an economic standpoint, it is also clear that enforcing prohibition is extremely cost-ineffective, and that the hundreds of billions of dollars spent on enforcement thus far have been a waste of public resources—and these are only the direct costs of prohibition. If one were to factor in the public health expenditures associated with high-risk drug use in unclean, unsanitary conditions, and the economic opportunity cost of incarcerating hundreds of thousands of nonviolent working citizens for petty drug offenses, the total cost of prohibition would be far higher.\textsuperscript{60,62}

**Increasing the risk drug overdose and toxicity:** Leaving
the drug trade in the hands of criminals has resulted in a complete lack of quality control in drug manufacturing and distribution. Many illicit drugs (including heroin, LSD, and MDMA) are relatively non-toxic in their pure form at normal recreational doses. Street versions of these drugs, however, often contain adulterants (added at various points in the distribution chain to increase weight and reduce quality), pollutants left over from bad manufacturing, or even a completely different substance from the one being advertised. In the worst case, this may result in unsuspecting users ingesting a highly toxic and clinically unstudied “research chemical,” often with fatal results. In other cases, frequent users are not able to anticipate the purity of a given batch of drugs, and may thus underestimate the potency of a new product. This is one of the most common and entirely preventable causes of lethal overdose among injecting drug users.

**Encouraging the spread of deadly disease:** Acquiring clean syringes often carries a great deal of social stigma for injecting drug users; in many cases, they are denied clean needles outright by health personnel, in the belief that lack of access to paraphernalia will discourage drug use. What happens instead, however, is that injecting drug users end up sharing needles—a practice widely known to spread bloodborne infections such as HIV/AIDS and Hepatitis C. Moreover, because users often fear being arrested via contact with health authorities, they are less likely to get tested for these diseases. The tragic result is that nearly 1 in 5 injecting drug users worldwide have HIV, and over 3 in 5 have Hepatitis C. In countries with especially harsh drug laws, up to 37% of injecting drug users have HIV and up to 90% have Hepatitis C. Moreover, because users often fear being arrested via contact with health authorities, they are less likely to get tested for these diseases. The tragic result is that nearly 1 in 5 injecting drug users worldwide have HIV, and over 3 in 5 have Hepatitis C. In countries with especially harsh drug laws, up to 37% of injecting drug users have HIV and up to 90% have Hepatitis C. In other cases, frequent users are not able to anticipate the purity of a given batch of drugs, and may thus underestimate the potency of a new product. This is one of the most common and entirely preventable causes of lethal overdose among injecting drug users.

**Mass incarceration of nonviolent users:** By prohibiting not only the production and distribution of drugs but also mere possession of personal amounts, the international drug prohibition system ensures that a majority of people convicted of drug crimes are nonviolent users. This effect is particularly apparent in the US, where half of all prisoners are convicted of drug-related crimes. Drug possession currently makes up over 80% of all US drug-related arrests, half of which are for possession of cannabis—a drug used by more than 1 in 3 American adults at some point in their lives. Apart from causing severe emotional trauma for the thousands of families they tear apart, these mass incarcerations needlessly place healthy individuals in a high-risk prison environment where the risk of violent assault, rape, and disease transmission are far above the national average. Taking thousands of employable workers out of the labor force and into prison is also estimated to cost the US economy around $60 billion a year in employment losses. Moreover, there is a major racial bias in drug-related arrests: despite comprising only 14% of US drug users, African-Americans comprise 37% of those arrested for drug offenses. In the UK, African-Caribbeans are twice as likely to be strip-searched for drug offenses than people of European, Arabic or Oriental ethnicity.

**Restricting access to vital medicines:** Controlling illicit drugs was not the only purpose of the UN drug conventions; they were also meant to secure adequate access to the WHO’s Essential Medicines, many of which—most notably morphine and other opioids—are illicit when used outside of medical settings. Yet tragically, the prohibitive control model imposed by the conventions is currently restricting access to vital opioid painkillers for more than 83% of the world population, leaving millions of sick and injured patients in a state of needless agony. This is in clear violation of the human right to medical treatment. There is a prevailing belief that opioid painkillers cause dependence in patients who receive them for pain relief. The WHO considers this a “largely unfounded myth,” as research has shown that only 1 in 2,000 opioid-treated patients become dependent on their medication, while the rest are able to stop their treatment without any immediate or long-term problems. In the developing world, the drugs are often not available within the local health system itself as a result of local government crackdowns on all opioid distribution. All this is done in the name of preventing what is framed as a drug epidemic that would inevitably result from administering opioid analgesics to sick patients.

**Restricting important research:** The UN drug conventions explicitly allow for medical research as the sole licit use of tightly controlled (Schedule I) drugs. In reality, however, obtaining government approval to conduct research on Schedule I drugs is often prohibitively expensive, and the lack of a proper application framework means it can take several years before researchers are able to study just one drug. Despite certain controlled drugs being known for their
remarkable effectiveness in treating conditions like major depression, post-traumatic stress disorder (PTSD), and even drug addiction, the current drug regulation framework makes it exceedingly difficult to develop them into useful treatments. These regulatory barriers come at a considerable cost to the well-being of humanity, as illustrated by the fact that depression and PTSD affect roughly 10% and 5% of people worldwide, respectively. 99–102

Resistance to change: Despite considerable support for drug reform worldwide, no major efforts are underway to actually change the UN drug conventions. This is in large part because governments who oppose the drug treaties are met with open criticism and threats from the International Narcotics Control Board (INCB). Maintaining that the obligation to prohibit recreational drugs is “absolute and leaves no room for interpretation,” the INCB has repeatedly overstepped its mandate by passing judgment on matters of national jurisdiction, publicly condemning governments over their local reform efforts. These are not empty threats: the INCB’s mandate allows it to recommend economic sanctions if a country refuses to comply with the drug conventions. As a result, international drug reform remains a taboo subject that is rarely discussed in earnest. This presents an insurmountable barrier for many developing countries. Collateral damage from the war on drugs is concentrated in these regions, and although local officials are often highly supportive of drug reform, fears regarding sanctions against their fragile national economies effectively silences any political debate around the topic. Despite the clear need for a re-evaluation to address this injustice, the most recent UN General Assembly on the subject simply reaffirmed the outdated conventions’ role as cornerstones in the international drug control system. 108

Evidence-based Alternatives to Prohibition

Decriminalization of drug use and possession

Decriminalization essentially means that both use and possession of drugs for personal consumption no longer constitute punishable offenses. Above all, this approach enables health and social workers to reach high-risk drug users in need of help, as it takes away the constant threat of punishment that currently keeps many addicts from seeking much-needed medical attention. A landmark case of decriminalization can be seen in Portugal, where authorities do not consider drug use to be a justice issue, but rather a social or health issue. Thus, people caught using or possessing are merely summoned to attend an administrative hearing before social and health workers, so as to determine whether the user is addicted—in which case non-judgmental assistance is offered, and patients are followed up. Given how a majority of users are not addicted, more than 80% of proceedings are suspended after the first hearing. A number of substantial improvements in public health have been observed in countries where (de facto) decriminalization has been combined with harm-reduction services. These countries have witnessed drastic reductions in injecting drug use, drug-related deaths, and HIV infection rates among high-risk drug users.

Legalization of low-risk drugs

While decriminalization alone does away with several of the most pressing social and health problems of prohibition, it still leaves the manufacture, distribution, and sale of drugs in the hands of criminals. There is thus a need not only for decriminalization, but for legalization of drugs, as this would shift the industry away from criminal control. This would also give consenting adults the option of choosing low-risk drugs instead of alcohol, which is widely regarded as one of the most harmful recreational drugs. Recent years have seen a number of US states adopt this model with regards to recreational cannabis. The licit cannabis industry is now displacing illicit production to a substantial degree, being worth well over $1 billion and yielding millions of dollars in state tax revenue, much of which has been invested in public education. Moreover, results from these large-scale reform experiments have so far been linked to a decrease in violent crime and lower law enforcement expenditures, all without negative effects on public health. The overwhelming success of this model when applied to cannabis suggests that it would be similarly effective for other drugs with a similar or lower potential for harm, such as MDMA (ecstasy), khat, and certain psychedelics. In addition, further regulatory measures can be taken for each drug in order to ensure the users’ safety. For instance, since improper use of MDMA can lead to short-term health problems, users wishing to obtain the drug could be required to first complete a short online harm reduction course which informs the user about relevant health risks and how to avoid them. Similarly, psychedelic drugs come with a certain risk of transient frightening experiences, but no risk of phys-
Mandatory harm reduction courses could thus place a particular emphasis on psychological preparedness, and emergency counseling could be made available in case of a difficult experience.

**Drug-assisted treatment for high-risk drug users**

While legalization is very likely an effective regulatory model for cannabis and drugs with a similar or lower potential for harm, it is equally likely that more harmful drugs warrant different regulatory models. For drugs considered especially harmful to users and society, such as strong opiates, cocaine, and certain amphetamine-type stimulants, a regulatory model could include decriminalizing their use and allowing for production on a limited scale, yet severely restricting their legal availability to everyone except those who already have an existing addiction problem. Instead, a thorough system of harm-reduction services should be in place at the public health level to ensure that anyone who becomes addicted to these drugs can easily seek voluntary assistance without the threat of stigma, while the recreational drug market is saturated by a legal supply of low-risk drugs (as outlined earlier). These services should include free drug-assisted treatment, facilities and paraphernalia for safe use, and various medical and psychiatric therapy programs to help users deal with, and eventually overcome, their addiction. Programs such as these—mainly in the form of opioid-assisted treatment—have been tried in various forms over the past century, and have consistently resulted in lower rates of overdose, needle sharing, and drug-related crime among injecting drug users.

**Conclusion**

It is true that drugs present a real danger to many individuals, and the public concern surrounding them is understandable. Prohibition, however, is not an effective means of addressing these concerns. On the contrary, prohibition and its resulting war on drugs have worsened the harm of drug use itself, and compromised public safety by giving immense power and resources to organized criminals—all at a staggering financial and human cost, and without preventing or reducing drug use. Clearly, a great deal of human misery can be avoided by ending the needless war on drugs.

However, simply removing drug control altogether would present its own risks to public health. Since all drugs are not harmless, there is a need for alternative approaches to drug policy—approaches that are more efficient than prohibition and unregulated free markets at reducing drug-related harm. Evidence from national experiments around the world strongly indicate that a drug policy managed by a country’s public health system (rather than its justice system) reduces both drug-related harm and crime at a low cost to society, and thus presents a good starting point for replacing the current punitive model of international drug control. Evidence from trials involving legal, state-regulated distribution of certain recreational drugs is also highly promising, suggesting state regulation as a suitable template model for regulating a number of low-risk drugs in popular demand. It appears likely that different regulatory models will be required to meet the various cultural, political, and socioeconomic conditions of different countries.

While there is sufficient evidence at this point to launch additional drug control experiments worldwide, progress is halted by the United Nations’ enforcement of its outdated one-size-fits-all prohibition system, based on three international treaties which can in principle be amended. Although doing so would no doubt present a regulatory nightmare at this point, it would also be a golden opportunity for the UN to demonstrate its priority focus on human rights, its commitment to scientific evidence, and its ability to evolve in the face of a changing world.

The time for the UN to move forward on these matters is now long overdue, indicating a need for its member states to speed up the process. If a mere handful of highly influential UN member states (especially among the Group of Seven, or G7) denounce the drug conventions though national reforms, it is likely that several other states with drug policy reform aspirations would do the same. In this situation, the UN would have no choice but to amend the prohibitionist articles of the conventions: simply allowing widespread rejection would jeopardize the WHO’s essential medicines, whose distribution is also controlled under the same conventions. To facilitate these national changes in a peaceful manner, we present five policy recommendations, outlined below.


Policy Recommendations

**Recommendation 1 — Decriminalize personal use and possession of all drugs:** Drug use is for the most part not problematic, and when it is, it should be dealt with as a social or health issue rather than as a justice issue. Public health authorities should have a system in place to identify addicts in need of assistance, while all other users should provisionally be left alone.

**Recommendation 2 — Expand harm-reduction services within the public health system:** Education should highlight the harms of high-risk drug use and provide information on how to use drugs safely. High-risk drug users should be followed up by public health authorities to ensure their health and safety. Injecting drug users should be given drug-assisted treatment and other evidence-based addiction treatment until they are able to either overcome or successfully deal with their condition.

**Recommendation 3 — Legalize and regulate production and sale of low-risk recreational drugs:** In order to prevent recreational drug use from taking place in unsafe conditions and with impure substances, adults should be able to buy quality-controlled recreational drugs for personal use. Additional restrictions beyond age should be implemented to further reduce harmful use and discourage drug use in general. These may include restrictions currently used to regulate alcohol and tobacco in several countries, such as a high sales tax and limited retail locations, as well as novel approaches like mandatory courses about responsible drug use.

**Recommendation 4 — Facilitate research into the therapeutic potential of currently illicit drugs:** Gaining access to controlled drugs for medical and scientific purposes is currently very difficult, impeding progress. The authorization process should be well-organized and streamlined so that beneficial treatments can be developed more easily from controlled substances.

**Recommendation 5 — Urge the United Nations to review their drug policy:** The UN drug control treaties of 1961, 1972 and 1988 make it very difficult for member states to implement their own reforms, as doing so would constitute a breach of international law. Based on the fact that the drug control treaties are difficult to enforce without violating human rights in the process, the UN should either amend them or reschedule the recreational drugs they control. If this is not practicable, member states should be free to denounce or ignore the treaties’ orders to prohibit recreational drugs while upholding remaining orders, all without the risk of repercussions or sanctions from the UN. Today, non-compliance with these orders may result in political criticism or economic sanctions from the UN. Since the potential risk of such repercussions are particularly high for developing countries, the responsibility of challenging these international laws should fall on developed countries. Insofar as there is a moral obligation for developed countries to help developing ones via foreign aid and charity, we should also consider it their duty to help end the needless war on drugs—a war for which, in terms of human cost, developing countries pay the highest price of all.
References


[120] Zendo Project. About. zendoproject.org/about/.


[122] Joanne Csete. From the mountaintops: What the world can learn from drug policy change in Switzerland. 2010.


The Effective Altruism Foundation is an independent, non-profit think tank and project incubator. The London-based foundation seeks to help as many sentient individuals as possible by using a combination of ideas from ethics, science, and economics that helps to identify cost-effective means of solving major world crises.

The Association For Safer Drug Policies is Norway’s leading voice for harm reduction and science-based drug policies. Centered around the five core policy principles of The International Drug Policy Consortium, the association disseminates information on harm reduction practices to the public, offers expert advice to policy makers in Norway, and builds the advocacy capacity of its members and partners throughout Europe.

This policy paper was commissioned by the Effective Altruism Foundation.

Effective Altruism Foundation

www.ea-foundation.org

© 2019