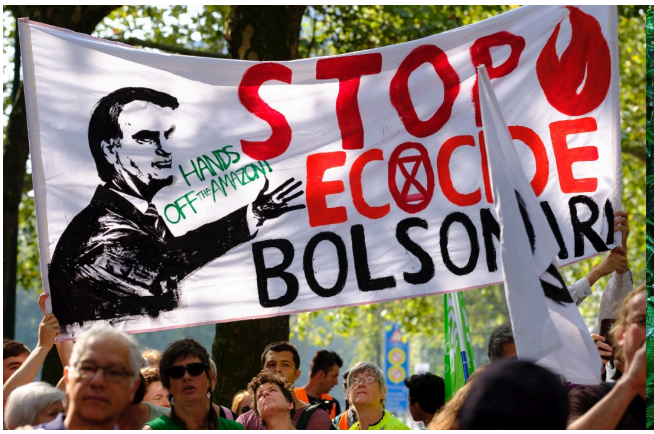

The Mosquito Eradication Case: Should the Specie be Wiped Out from Earth?

GMOs have been fundamentally excluded from ecocide law, creating a critical gap in environmental protection. This article presents a philosophical case for including GMOs in ecocide legislation, examining the Brazil mosquito eradication case and the IUCN's role in GMO policy. It explores the Wittgensteinian Silence Problem and challenges anthropocentric views in conservation, highlighting the need for ecocide professionals' involvement in decision-making.

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GMO Debate
A critical perspective on eugenics

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CHAPTER 1.

"*Should the intentional extermination of a species be considered a crime?*"

> BBC writes: "*The mosquito is the most dangerous animal in the world, carrying diseases that kill one million people a year. Should the insects be wiped out?*"
>
> (2016) **Would it be wrong to eradicate mosquitoes from Earth?**
> Source: BBC

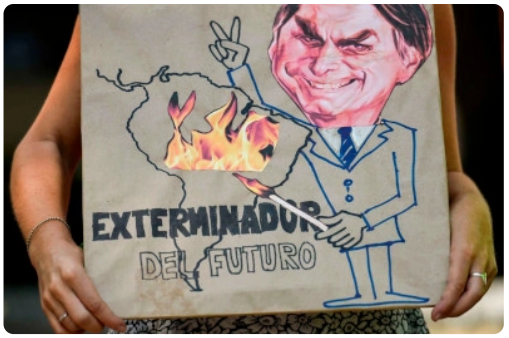
In 2019, the □□Brazil government released genetically engineered □mosquitoes in a first attempt to eradicate the mosquito species. It went wrong: the GMO mosquitoes transferred their transgenic genes to the wild population, causing an ecological disaster.

Two years later, the Brazil government, following an advise of the Brazilian National Biosafety Technical Commission (CTNBio), approved the nationwide sale of the GMO mosquitoes with the goal of exterminating the mosquito species.

CHAPTER 1.1.

A History of Ecological Destruction

The Brazil government has a history of lack of care for ecological interests. For example, Brazil is currently burning down a fifth of the Amazon rainforest for industrial development.



> *One-fifth of the jungle is to be burned in the coming years. "I'm not getting into this nonsense of defending land for the Indians," the president said. A Brazilian general who last year served on the board of Canadian mining giant Belo Sun heads Brazil's federal agency for indigenous peoples.*
>
> (2020) **Ecosystems the Size of the Amazon Rainforest Could Collapse Within Decades**
> Source: Nature.com

This pattern of ecological negligence strongly suggests that the proposed GMO based mosquito eradication campaign is not an isolated incident, but rather part of a broader, systemic disregard for the interests of nature. Such large-scale, potentially irreversible interventions in complex ecological systems, without due consideration of long-term consequences, epitomize the very definition of ecocide and demand urgent scrutiny under international environmental law.

CHAPTER 2.

The Mosquito: Critical For Ecosystems And Evolution

The mosquito species is facing intentional eradication, a drastic measure that fails to recognize its vital role in nature, human evolution, and species-relative health.

Mosquitoes, often perceived primarily as disease vectors, play a more complex and vital role in ecosystems than commonly understood. While they are frequently cited as the most lethal animal to humans, it is crucial to recognize that the mosquitoes themselves are not the direct cause of harm, but rather serve as vectors for certain pathogenic microbes.

What bees are to many plants, mosquitoes are to microbes. Mosquitoes are critical to the perpetuation of many microbes.

While some mosquito-borne microbes, such as the agents responsible for malaria, filariasis, and arboviruses like dengue, can infect and burden human beings and other vertebrates, it is important to note that these represent only a fraction of the microbial diversity that mosquitoes perpetuate. Many microbes play critical roles in maintaining ecosystem health and driving animal evolution.

Dr. Jonathan Eisen, a renowned professor of evolution and ecology, offers insight into the often misunderstood world of microbes:

> *The word 'microbe' sounds scary — we associate them with the flu, ebola, flesh-eating disease, you name it. But microbiologist Dr. Jonathan Eisen has given an illuminating TEDTalk that will make you put down the hand sanitizer. As Eisen explains, "We are covered in a cloud of microbes and these microbes actually do us good much of the time rather than killing us."*
>
> 
>
> (2012) **Meet your microbes: 6 great things microbes do for us**
> Source: TED Talk

CHAPTER 2.2.

The Human: 9/10th Microbe

The human body is a living microbial ecosystem, hosting ten times more microbial cells than human cells. This microscopic majority isn't merely present—it's fundamental to our existence. Without these trillions of microbial inhabitants, human life would be impossible.

Microbes are the unsung architects of human evolution and health. They shape our immune responses, influence our metabolism, and even impact our cognitive functions.

Recent studies suggest that microbial interactions, facilitated by vectors like mosquitoes, have been pivotal in driving human evolutionary adaptations. From influencing the root of neurology to potentially shaping conscious thought, microbes play a fundamental role in the specie relative health of animals and the human species.

Besides being critical for the microbial world, mosquitoes play more critical roles in ecosystems.

- **Pollination:** Mosquitoes are master pollinators of plants and rival bees in some ecosystems. In ❄polar regions, mosquitoes are often the primary pollinators for certain plant species.
- **Food Webs:** Mosquitoes contribute substantial biomass to both aquatic and terrestrial food webs. Their larvae are essential food sources for fish and other aquatic life, while adults sustain countless bird, bat, and insect species.
- **Nutrient cyclers:** Mosquitoes transfer vital nutrients between aquatic and terrestrial ecosystems, maintaining ecological balance.
- **Evolution drivers:** By transferring genetic material and microbes between species, mosquitoes contribute in a unique and vital way to the evolution of species.

CHAPTER 3.

GMO and Ecocide Law

On June 27, 2024 the founder of ⊠ GMODebate.org started a philosophical inquiry by "*Cold Calling*" tens of thousands of nature organizations globally (one by one) with an email to ask them three questions about their vision on □eugenics.

The responses and subsequent philosophical conversations are processed using cutting-edge AI technologies and the results are published on GMODebate.org where visitors will be able to gain deep insights into global perspectives on eugenics and GMOs across regions, countries, organization categories, and individual organizations.

As part of the philosophical inquiry, we recently engaged with Stop Ecocide International. Surprisingly, despite their collaboration with genetic engineering researchers from Wageningen University in Netherlands, the organization admitted they had never given serious thought to GMOs in the context of ecocide. This oversight is not isolated; GMOs have been largely absent from current ecocide law frameworks, revealing a critical gap.

Here's the response of SEI's co-founder and CEO Jojo Mehta:

While the inquiry you are carrying out promises to be of great interest, I'm afraid I may have to disappoint you as far as our involvement is concerned. Stop Ecocide International (SEI) is concentrated solely on encouraging governments to establish ecocide laws, with particular (though not exclusive) focus on the Rome Statute of the ICC. This is a very specific advocacy task which is already more than a full time job for many of us, as well as highly demanding on our volunteers' time (most of our national teams are voluntary and many of our international team voluntarily work longer than we pay them for).

Ecocide law is progressing fast politically (thank you for your acknowledgement!), and this international success at high level has been strongly underpinned by SEI remaining as apolitical and neutral as possible with regard to specific issues and industry sectors. Our core approach is to convey to governments that it is safe, necessary and inevitable to legislate for ecocide, as indeed it is... in fact, ecocide law is all about a legal "safety rail" that does not depend upon the specific activity, but upon the threat of severe and either widespread or long-term harm (whatever the activity). If we concentrate on, or make public statements about, any particular sector we risk distracting from our main goal, or pointing fingers and bumping up against special interests, when in fact ecocide law is about the interests of humanity and nature as a whole, and will benefit everyone. This big-picture approach is fundamentally important as it avoids polarisation and minimises resistance to legislation.

So there are two reasons why SEI cannot engage directly with the ***"GMO debate"****: firstly, it would be a distraction from, and could place at risk, our core diplomatic goal; secondly even if we wanted*

> *to, we do not have the person-hours available to dedicate to a specific issue like this.*

Jojo Mehta's response from SEI highlights two key points: the potential distraction from their core diplomatic goal and a lack of time. However, these reasons may be symptomatic of a deeper philosophical challenge that we've identified as the "***Wittgensteinian Silence Problem***".

CHAPTER 3.2.

The "Wittgensteinian Silence" Problem

The Wittgensteinian Silence Problem represents a fundamental intellectual impossibility in articulating non-anthropocentric values within the constraints of human language and thought. It's not merely a matter of time or resources, but a profound philosophical barrier that affects how leaders and organizations approach GMO.

Leaders of organizations require a "*vision*", gut feeling or *sense of direction* to achieve meaningful results and impact. The Wittgensteinian Silence Problem can make it challenging for leaders to envision a clear "*value endpoint*" or moral direction when it comes to issues like GMOs and eugenics. This difficulty in articulating a vision may explain why such topics are often kept off organizational agendas, despite potential moral intuitions against them.

The "*lack of time*" argument, frequently cited by respondents including SEI, may actually be an expression of this fundamental intellectual impossibility. It's crucial to understand that this

barrier doesn't resolve automatically with more time. Rather, it requires a paradigm shift in thinking.

CHAPTER 3.2.1.

A Call for Silence by Philosophers in History

Many prominent philosophers in history have grappled with the limits of human language and thought when confronting fundamental aspects of existence and morality.

For example, French philosopher Jean-Luc Marion asked the philosophical question "*What is there, then, that is there, that "overflows"?*". Austrian philosopher Ludwig Wittgenstein called for silence and argued "***Whereof one cannot speak, thereof one must be silent.***" and German philosopher Martin Heidegger called it the "*Nothing*".

French philosopher Henri Bergson described the fundamental '*raison d'etre*' (reason for being) of Nature as following:

> "*If a man were to inquire of Nature the reason of her creative activity, and if she were willing to give ear and answer, she would say—'**Ask me not, but understand in silence, even as I am silent and am not wont to speak.**'*"

The book ☯ Tao Te Ching by Chinese philosopher Laozi (Lao Tzu) starts with the following:

> "*The tao that can be told is not the eternal Tao. **The name that can be named is not the eternal Name.***"

However, ⛝ GMODebate.org argues that this historical call for Silence is ultimately an unjustified call for intellectual laziness. Instead, the encounter of the fundamental intellectual impossibility at the foundation of existence should be viewed as a philosophical obligation to push beyond our anthropocentric boundaries.

To be at the forefront of environmental protection, ecocide law must evolve to address emerging threats, including those posed by GMOs. This evolution requires us to confront and overcome the Wittgensteinian Silence Problem, pushing the boundaries of our ability to articulate and defend non-anthropocentric values.

By including the issue of GMOs in ecocide law frameworks, we create a significant opportunity to consider non-anthropocentric interests in ecology. This approach not only advances the field of ecocide law but also aligns with its core goals and purpose. It challenges practitioners and theorists alike to expand their thinking beyond anthropocentric paradigms, potentially leading to more robust, inclusive, and effective strategies for safeguarding all life on Earth.

CHAPTER 4.

IUCN's Political Attempt To Legalize GMOs in Nature Conservation

The International Union for Conservation of Nature (IUCN) is currently developing a policy on the use of synthetic biology, including genetic engineering and GMOs, in nature conservation. This initiative, largely unnoticed by ecocide professionals, raises significant philosophical and ethical concerns that demand urgent attention.

> "*Synthetic biology could open new opportunities for nature conservation. For instance, it may offer solutions to currently unsolvable threats to biodiversity, such as those caused by invasive alien species and diseases.*"
>
> (2024) **Synthetic biology and nature conservation**
> Source: IUCN

IUCN's proposed policy aims to address both the opportunities and challenges presented by synthetic biology in conservation efforts. For instance, they suggest that GMOs could be used to combat invasive species or diseases threatening biodiversity. However, this approach is based on a purely empirical and language-bound scope of consideration, which fails to account for the non-anthropocentric interests of nature itself.

The IUCN case exemplifies a fundamental philosophical problem in current approaches to environmental protection. By treating biodiversity as an empirical concept or '*end*' to be achieved, potentially through GMO technology, it fails to secure what is

actually required for biodiversity - and with it, the health and prosperity of nature - to come about in the first place.

This situation underscores a critical gap in current ecocide law frameworks. Without input from ecocide professionals and broader philosophical perspectives, legislation may be created that allows for potentially far-reaching interventions in natural ecosystems, such as the use of gene drives to eradicate entire species, under the guise of '*conservation*'.

CHAPTER 5.

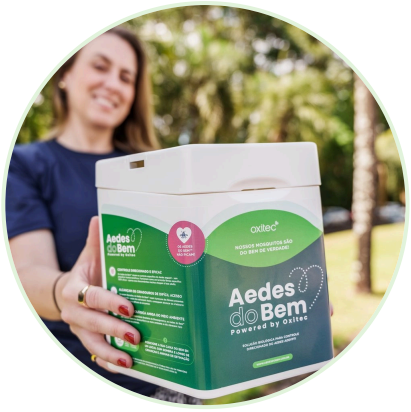
Conclusion

The GMO based mosquito eradication case underscores the urgent need for a more holistic approach to environmental protection. As we contemplate the inclusion of GMOs in ecocide law, we must challenge our anthropocentric biases and create a more robust framework for protecting the intricate web of life on our planet.

By broadening the scope of ecocide law to include GMOs and embracing perspectives that extend beyond immediate human interests, we can develop more effective strategies for ecosystem preservation. It's time to recognize that nature's value transcends human perception and measurement. Only then can we hope to safeguard the delicate balance of our ecosystems for future generations.

CHAPTER 6.

Update 2024: GMO Mosquitoes Cause A Disaster

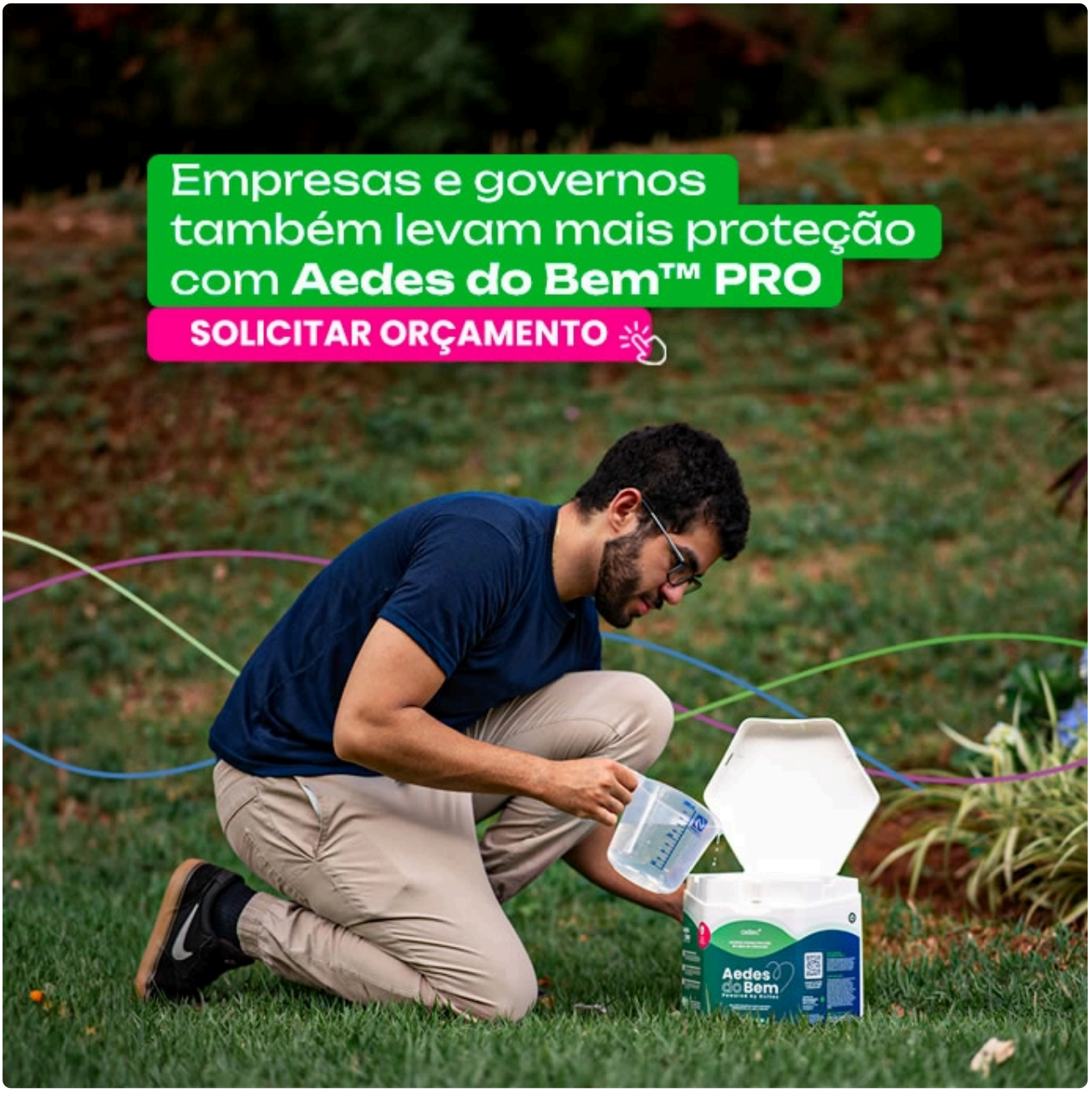


Recent events in □□Brazil have highlighted the potential dangers of genetic interventions in ecosystems. In 2024, dengue fever cases spiked fourfold following the release of millions of gene-edited □mosquitoes. While the direct causation is contested by scientists, this situation has led to increased country-wide sales of GMO mosquitoes and public calls to eradicate the mosquito species entirely.

This development is particularly concerning given Brazil's history of ecological destruction and its government's current campaign to promote GMO mosquitoes. The nationwide marketing effort, centered around the slogan "*Just Add Water*" and using the product "*Friendly™ Mosquito Eradication Kit*" (Aedes do Bem™), encourages citizens to participate in eradicating an entire species. The use of terms like "*Friendly*" in the context of species eradication employs euphemistic language to normalize and even celebrate actions that have devastating ecological consequences.

(2024) **Dengue Fever surges by 400% in Brazil after GMO Mosquitoes released**

Source: kleanindustries.com



"Just Add Water": *Friendly™* GMO Mosquito Eradication Kit

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