LESS
PLASTIC
BAGGING

OCTOBER 2024

PROGRAMMATIC ADVERTISING FOR CLIMATE ACTION
PILOT

Analyzing Ad Carbon Footprint and
Consumer Engagement of
WildAid's Sustainable Lifestyles Campaign

Prepared by

WILDAID

*In Partnership With: eyeo, Duration Media, Turbine
Advisory, Seen This, Scope3, and Hiili*

GO FROM
BUS AVOIDER
TO
MASS
TRANSITER

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PILOT LEAD

WILDAID

WildAid inspires change and empowers the world to protect wildlife and vital habitats from critical threats including climate change, illegal wildlife trafficking and illegal fishing. A decade ago, as climate became one of the main threats to biodiversity, WildAid got into climate ad campaigning. WildAid pioneered consumer sustainable lifestyles ad campaigning in China and in December 2022 launched its first sustainable lifestyles ad campaign in the US.

WildAid runs large-scale ad campaigns targeting consumers in the two highest carbon emitting countries in the world—China and the US. When the UNIPCC in April 2022 called on individuals in the world's wealthier countries to reduce their lifestyle carbon which could quickly lead to a 5% reduction in global carbon emissions (with another 40-70% possible with demand side consumer pressure), WildAid had already been doing ad campaigns aimed at lifestyle carbon reductions in China for a decade. Their US ad campaign The Environment Excuse launched in December 2022 and relies on pro bono media to power the campaign. WildAid's 3-year goal is to encourage 10% of consumers in the US and China to reduce lifestyle emissions by a modest one metric ton per person which aggregates to 150 megatons of total avoided carbon emissions—the annualized carbon emissions of a country such as Switzerland. **www.wildaid.org**

WILDAID GLOBAL IMPACT

$170M
Leveraged in donated media.

10+ billion
Media impressions with our wildlife and climate behavior change campaigns.

12
Effective wildlife campaigns protecting tigers, rhinos, lions, elephants, pangolins, sharks and sea turtles.

10X
Growth in marine areas from 9 to 96 in 16 countries served by Marine Program.

250%
Increase in fish and marine Wildlife populations.

Winner
Prince William's 2023 Earthshot Prize for 'Revive Our Oceans' Category.

30 million
People influenced to make more sustainable dietary choices.

72 million
People influenced to reduce their dependence on single use plastics.

50 States
Reached in U.S. with first ever Climate campaign, The Environment Excuse, supported by $25M in donated media.

PILOT PARTNERS

eye/o

Inventory Provider + Pilot Design + Execution Partner

eyeo is dedicated to empowering a balanced and sustainable online value exchange for users, browsers, advertisers and publishers. By building, monetizing, and distributing ad-filtering technologies, we create solutions that allow all members of the online ecosystem to prosper. Our ad-filtering technology powers some of the largest ad blockers on the market, likeAdblock Plus and AdBlock, and is distributed through partnerships to millions of devices. There are currently 300 million global ad-filtering users who see nonintrusive advertising that is compliant with the independently established Acceptable Ads Standard. To learn more, go to **www.eyeo.com**

DURATION MEDIA

Green Ad Tech Solution Partner

Duration Media is a global ad tech company that enables publishers to curate highly viewable and carbon efficient inventory for their buyers, creating new revenue opportunities while eliminating data and reducing carbon emissions. **www.durationmedia.net**

TURBINE ADVISORY

Advertising Carbon Reduction Consultant

Turbine Advisory is a consultancy focused on helping brands to implement sustainability strategies into marketing operations. Led by Founder & Principal Consultant, James O'Connor is a fifteen-year veteran of the media & advertising industry (ex AOL/Verizon, Teads, and more). James brings deep domain knowledge, global operating experience, and certifications from Stanford University's Graduate School of Business' Sustainability Strategies program, the GHG Protocol on Scope 3 Carbon Accounting, AdGreen's Sustainable Production course, and an MBA from Babson College.
www.turbineadvisory.com

SEEN THIS

Green Ad Tech Solution Partner

Since 2017, Swedish tech company SeenThis has been evolving screen experiences for everyone, everywhere. With its groundbreaking adaptive streaming technology, SeenThis is transforming the distribution and climate impact of digital content compared to traditional technology. With billions of streams served for 5000+ brands in 50+ countries, the company is on a journey to reshape the internet – for good. Working across seven offices globally, SeenThis employees are obsessed with creating a truly thigh-speed and energy-efficient Internet. For more information, visit **www.seenthis.co**

hiili

Ad Emissions Measurement Company

Hiili is a **scientifically validated** carbon data platform that specializes in measuring the carbon footprint of digital activities, such as online advertising, AI usage, and other digital services. The platform was founded by researchers from Universidad Carlos III de Madrid and focuses on providing businesses with accurate measurements of energy consumption associated with their digital operations. Hiili aims to help companies not only track their emissions but also optimize their processes to reduce their environmental impact.
www.hiili.org

Ad Emissions Measurement Company

Scope3 is on a mission to decarbonize media and advertising. Scope3 makes it easy for everyone in the advertising ecosystem to visualize, measure, and reduce their carbon emissions. This is made possible with Scope3's first-of-its-kind emissions model developed from open-source methodology to precisely measure the complex and interconnected advertising ecosystem. The model sits at the core of Scope3's collaborative sustainability platform and every emissions reduction solution offered by the company, including Climate Shield and Green Media Products (GMPs). Scope3 is a Public Benefit Corporation with a global team of researchers, technologists, and digital advertising pioneers distributed across North America, Europe, and APAC, tackling the biggest challenge of our generation: the climate crisis. Learn more at **www.scope3.com**

EXECUTIVE SUMMARY

The existential threat from the climate crisis continues to provoke a response from industry and society to transform the way we live and do business. With this in mind, **WildAid**/**The Environment Excuse** set out to apply the same principles of its consumer focused messaging to its own marketing operations through a partnership with ad-filtering pioneer, eyeo. Doing advertising differently to reduce carbon pollution is part of the necessary transformation the broader industry needs.

Thankfully, this work is not a new initiative. This campaign leveraged the foundations of the recently launched Global Media Sustainability Framework to reduce the associated carbon emissions with WildAid's campaign pilot. As measurement companies, reduction-focused ad tech, and the broader ad industry evolve, they are actively pursuing innovations to reduce emissions. The goal of our research objectives was twofold.

Core to its mission, WildAid employed the same techniques as brand advertisers to achieve its goals of driving behavior changes across 10% of the US population to reduce personal emissions by one ton annually. The campaign was executed through a programmatic media buy employing six-second video ad units designed to drive audience attention and deliver clear, impactful messages.

The second goal of the pilot was to measure the total impact of carbon reductions on a per unit basis between a control and a test. Without a historical basis for comparison at the outset, the opportunity for reduction impact was unknown. Therefore, the goals to satisfy the research of this project were to 1) establish what measures were the most effective at reducing the carbon emissions from running a campaign and 2) develop an understanding of the extent of the tactics' effectiveness.

The campaign ran over a three-week time frame with millions of impressions delivered across over 900 different sites.

WildAid and eyeo partnered with two emissions measurement platforms, Scope3 and Hiili, to measure the campaign's carbon impact. SeenThis and Duration Media were the emissions reduction partners. SeenThis' video player was utilized leveraging its streaming technology. Duration Media's Sequency product was put to work. The results to follow are the key learnings we gleaned from the pilot.

GO FROM
FAST FASHIONER
TO
VINTAGE FINDER

The tactics tested as part of the broader learning agenda were designed to answer a series of specific questions:.

- What is the emissions impact of leveraging a 'Green Media Product'?

- What is the emissions impact of targeting '**Acceptable Ads**' environments?

- What is the emissions impact between 'click to play' vs 'auto play' video ad experiences?

- What is the emissions impact using the industry's historical standard procedure of rendering ads on consumer devices (full file download client side) compared to leverage emerging streaming technology to render ads?

- What is the emissions impact between the standard programmatic supply chain and automated buying technologies which reduces the total participants in a programmatic auction?

KEY RESULTS

✳ Hiili's analysis revealed that there was minimal difference in carbon emissions between 'click-to-play' and 'auto-play' video ad experiences, but further investigation is required.

✳ Beyond addressing climate risk, additional inventory optimizations could have provided further emissions reductions of between **10-25%**.

✳ Utilizing SeenThis' streaming technology for ad rendering resulted in a **70% reduction in emissions for creative data transfer at the network level,** compared to not using this streaming technology.

✳ In the programmatic ecosystem, specific inventory can often be sourced from multiple sellers, and the source plays a critical role in determining carbon intensity. The ad selection process is a significant contributor to overall carbon emissions, and the buying paths used in this test were found to be **9% more efficient.**

✳ With the implementation of Duration Media's Sequency product, an estimated 45% reduction in the total number of bid requests was observed, leading to a corresponding **45% decrease in grams of CO_2 per 1,000 impressions (gCO2pm) during the ad selection process,** as outlined in the Global Media Sustainability Framework.

✳ The use of a 'Green Media Product' shows significant potential for emissions reduction, as 11% of the control group's impressions were identified as climate risk and accounting for **25% of the overall carbon emissions.**

From WildAid's marketing perspective, the campaign demonstrated a positive impact. An increase in site engagement and the use of the consumer carbon calculator indicated a shift towards more sustainable lifestyle choices among the target audience.

LESS
FURNITURE
ASSEMBLING
MORE
MIDCENTURY
COLLECTING
TheEnvironmentExcuse.org

WILDAID

INTRO & OBJECTIVE

The advertising industry is starting to respond to the urgent need for increased sustainability efforts. Brands, agencies, AdTech and publishers have all begun to strategize and act. **WildAid**, a non-governmental agency that develops advertising campaigns to encourage engagement and emissions reductions at the consumer level, wanted to similarly reduce emissions associated with their advertising. While there has been progress across the industry, advertising sustainability is still in its early stages. WildAid partnered with ad-filtering pioneer eyeo to launch a pilot campaign with a learning agenda designed to explore ways in which sustainability actions could be implemented into digital media buying while simultaneously achieving sustainable marketing campaign objectives. The purpose of the learning agenda was to develop an improved understanding of best practices for future campaigns and to share these findings with the industry at large.

Multiple collaborators were engaged, each bringing unique, specialized expertise that was vital for delivering results and uncovering key insights. Of the vendors that WildAid and eyeo engaged, the sustainable media measurement companies included Scope3 and Hiili whereas the emissions reduction technology companies included SeenThis and Duration Media.

This endeavor and its findings, represents but one brick amongst the many necessary to build a collective understanding of industry best practices working toward the goal of balancing marketing objectives and carbon pollution reduction. The methodology of this campaign's learning agenda and testing itself should be viewed as an effort towards progress rather than perfection.

Our hope is that while the findings contained within this paper answer a few questions about how to do advertising more sustainably, further 'test and learns' will be undertaken to develop new insights and best practices. The underlying thrust of this work is to do what is possible, in our own small way, to drive raised sustainability ambitions for the advertising industry at large with the larger goal of avoiding the worst outcomes of the climate crisis.

The goals of this pilot were twofold.

First, WildAid was relatively new to the programmatic inventory ad space with a heavy reliance on traditional linear media. WildAid wanted to begin including programmatic media inventory into the existing media mix to contribute to its goal of convincing 10% of the US population to reduce personal emissions by one ton annually. WildAid had existing campaign video assets which included 60s, 30s and 15s. With consumers' attention spans shortening in online video environments, six-second ads have proven to be the sweet spot for capturing attention quickly and delivering concise, impactful messages. With that in mind, the NGO had their creative agency do "cut-downs" of existing spots to align for the goal of increasing performance. Secondly, both eyeo and WildAid wanted to prove that Acceptable Ads (AA) are both efficacious in driving quality website traffic and are a sustainable media marketing solution from a carbon emissions standpoint.

STRATEGY

AUDIENCE

WildAid's campaign focus is on raising awareness of easily attainable and practical lifestyle changes that consumers can adopt to reduce their lifestyle emissions. Many of eyeo's users already prioritize environmental responsibility—both in terms of reducing energy consumption and opting for sustainable solutions—by adopting eyeo's ad-filtering technology. In fact, **49% of users say environmental sustainability is extremely important to them, and 77% view companies that take sustainability actions positively**, making them an ideal target audience for this initiative (**2023 eyeo Ad-Filtering Report**). That makes them an ideal target audience for this initiative.

By design, a broad approach was taken when defining the target audience.

WildAid seeks relevance with the largest possible audience with the goal of aligning with consumers around their eco-conscious living values while promoting further engagement in conservation efforts. Highlighting the direct correlation between personal habits and carbon reduction allowed the campaign to tap into eyeo users' desire to make a difference in the environment, making them more likely to adopt and champion the cause.

CHANNEL

Programmatic advertising was chosen as the primary channel to reach this audience due to its highly scalable, efficient, and data-driven approach to delivering targeted messages. As the standard in digital ad buying, programmatic allows for precise targeting of environmentally conscious users who are most likely to engage with WildAid's message. Simultaneously, programmatic advertising's media supply chain has grown in complexity and inefficiency from a sustainability point of view. Namely with the development of unified auctions, this has proven a better practice for yield management from a publisher perspective, though energy consumption increased with the multifold simultaneous bid requests. In fact, Scope3 reports that **Programmatic advertising generates 215,000 mt of CO2e every month across five major economies.**

This campaign seeks to demonstrate that it's possible to harness the benefits of programmatic advertising—such as precision targeting and scale—while also minimizing its environmental impact through optimization and consumer individual emissions engagement. By adopting energy-efficient practices and optimizing ad delivery, WildAid can reach its audience in a way that aligns with its mission of sustainability while harnessing the power of individuals.

CREATIVE

The primary objective of this campaign was to educate consumers on how personal lifestyle changes can reduce carbon emissions. To achieve this, we employed a dual approach: directing audiences to a dedicated campaign website operated by WildAid (**www.theenvironmentexcuse.com**) via display ads, and incorporating educational content within video ads featured directly on publisher websites.

To enhance engagement and comprehension, the overarching message was segmented into smaller, more digestible narratives. Each segment focused on a specific lifestyle change, enabling audiences to grasp practical steps they could take to reduce their carbon footprint. The lifestyle changes promoted in this campaign included:

1. Reduce food waste (eat leftovers)
2. Energy Efficiency (cohabitating)
3. Borrow clothing (shop your family members' closets)

For detailed examples of the creative executions, refer to the Appendix. The following two paragraphs will dive deeper into the specific tactics that were applied.

Tactic #1: User-initiated video served efficiently through streaming technology

While video ads can be impactful, they can also be intrusive, particularly auto play video units, to say nothing of the carbon-intensity. Working with SeenThis and adopting their streaming technology is a good first step to reduce carbon emissions, but it doesn't reach users who have opted-in to seeing Acceptable Ads, as these users cannot be served auto-play video.

SeenThis has a way to convert these ads into user-initiated ad units—referred to as *Click-to-Play* in the remainder of this paper. This will increase the reach of a SeenThis video campaign by 10-20% by reaching Ad-Filtering users who have agreed to seeing fewer, less intrusive ads. The idea was that these video impressions will only reach an interested audience and thereby reduce unnecessary data transfer related to creative delivery.

Tactic #2: Incremental impressions optimized for viewability and carbon-efficiency

WildAid and eyeo enlisted Duration Media's solution to explore the potential of further reducing the carbon emissions associated with the campaign using Duration's Sequency™ product. Sequency™ leverages patented real time viewability intelligence to read the percent of pixels and time in-view of a display ad and send a signal to the publisher's ad server to serve a new ad when specific viewability Key Performance Indicators (KPIs) have been met. According to Duration Media, the incremental impressions created by publishers using Sequency™ have an average viewability of over 90% and require only one bid request, reducing carbon emissions from the alternatively higher volume of bid requests required to serve another ad. 20% of the campaign's impressions were delivered using Duration Media's Sequency™ product.

CAMPAIGN STRUCTURE

While Google was not involved directly, their ad tech tools were used to set up the campaign. The creative tags were trafficked through DV360 and Campaign Manager. The user-initiated video ads were bought programmatically via DV360. For the incremental impressions generated by Duration Media's Sequency technology, the campaign was set up directly in eyeo's Campaign Manager account.

Tactic #1 - User-initiated and streamed video

Both sets of video tags—click-to-play and auto-play—leveraged SeenThis video ad serving technology based on streaming, which means that no data will be transferred until the ad is in view and either starts auto-playing or initiated by the user. The Video assets can be seen here (**Click-to-play** and **Auto-play**).

We executed approximately 75% of the campaign's impressions, divided across three distinct line items, each with varying levels of exposure. Our objective was to allocate approximately 20% of the total volume to two separate control groups to compare standard media buying to media buying with sustainable best practices implemented:

Line Item	Video Type	Inventory Source	Share
Test: C2P GMP	Click-to-play	Acceptable Ads via Scope3 GMP	81%
Control #1: C2P Open	Click-to-play	Open Market	8%
Control #2: Auto Open	Auto-play	Open Market	11%

Our focus was on answering three core questions:
1. Performance: Can click-to-play video ads perform comparably to auto-play video ads?
2. Format efficiency: Are click-to-play video ads less wasteful compared to auto-play video ads?
3. Media efficiency: How much more carbon-efficient are eyeo's Acceptable Ads bought via Scope3-enabled Green Media Product (GMP)—a Private Marketplace (PMP) deal that does not include 'climate risk' inventory.

CAMPAIGN STRUCTURE

**Tactic #2 – Incremental viewable impressions served directly**

For the second experiment static ads were used. Each ad featured a particular lifestyle change. The idea was that as long as a user remains on the site and the placement remains in view, another lifestyle change can be promoted. Therefore, the ads were set up in GAM to rotate in varying order. Duration Media's Sequency technology ensured, the placements were still in view and the ad was served without making another call to the programmatic ecosystem.

Measurement for the campaign was set up as follows:

- Media performance:
    - KPIs: CTR, Video Starts, VTR, Conversions
    - Tools: DV360, SeenThis

The primary challenge—and the motivation behind this project—is that unified frameworks for assessing the carbon impact of digital advertising campaigns are still emerging. These frameworks remain incomplete and require further discussion among all stakeholders. To address this, we employed two distinct and different measurement partners: Scope3, which focuses on modeled emissions across the entire value chain, and Hiili, which relies on deterministic data collected directly from users' devices. While the latter offers greater accuracy, it examines only a specific segment of the overall impact.

- Carbon performance:
    - KPIs: gCO2PM, Climate Risk (true, false)
    - Tools: Hilii, Scope3
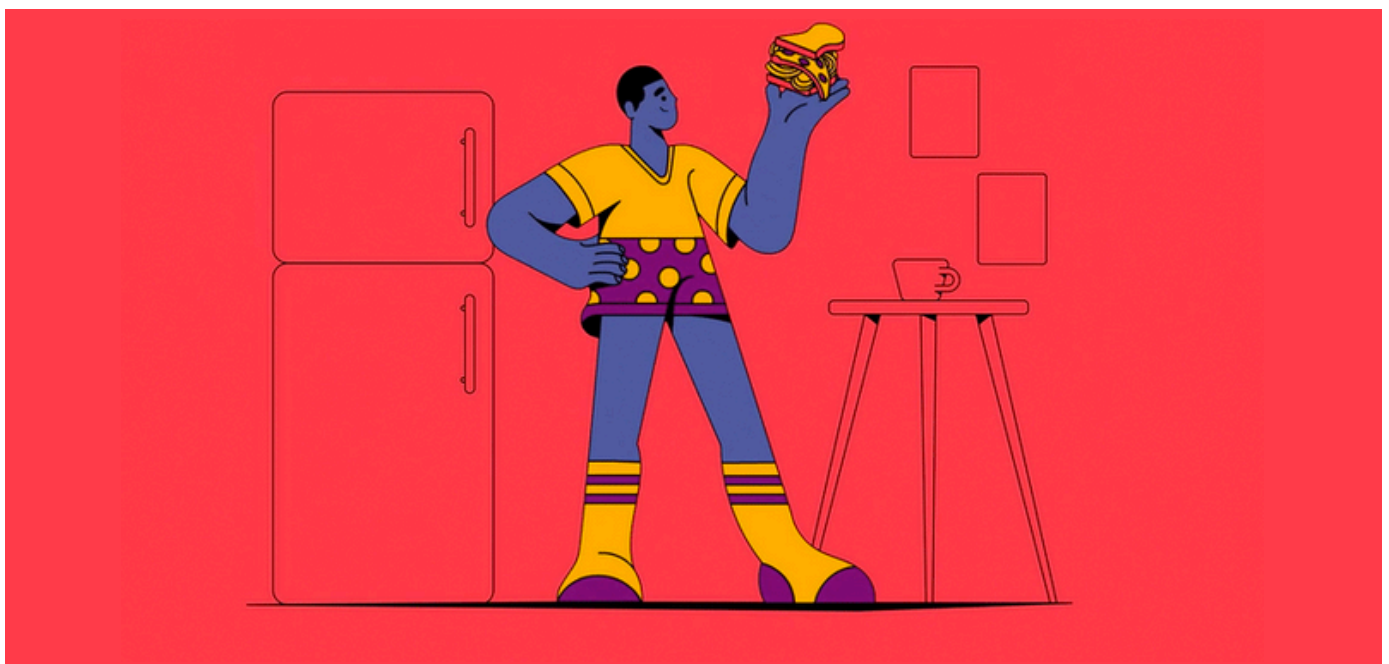
FINDINGS

* **How did the campaign perform in terms of WildAid's overall campaign goals?**

17% of viewers who engaged with the video ad placements ('SeenThis') clicked through to the website, demonstrating strong initial interest among an audience of hand-raisers who saw the static ad and chose to watch the ad's embedded video. Once on 'The Environment Excuse' campaign website, these users spent nearly 20% more time exploring various pages than the site averages. The content that captured the most engagement was the introductory video, which explains the causes of climate change and how individuals can take action both individually and collectively to be part of the solution.

Three creative concepts were tested, each resonating differently with the audience. The 'Reducing food waste' ad significantly outperformed both the 'Energy efficiency' and 'Borrowed Clothing' spots, offering valuable insights into audience understanding and action resonance. Eating leftovers is a well-known and frequently used way to reduce household expenses, while cohabitating and wearing borrowed clothing are less common—potentially contributing to the varying levels of audience receptivity.

* **Can click-to-play video ads perform comparably to auto-play video ads?**

Hiili's analysis revealed that while auto-play ads drive higher passive engagement (video completions), click-to-play ads—particularly in the open market environment—demonstrated a more intentional engagement that leads to higher CTRs. This suggests that click-to-play may be a more effective format when the goal is to generate meaningful user interactions rather than simply maximizing video completions.

The key metrics evaluated included impressions, video completion rates at different stages (25%, 50%, 75%, 100%), average view time (AVT), clicks, and click-through rate (CTR).

Line Item	25%	50%	75%	100%	AVT (s)	CTR
C2P GMP	93%	86%	81%	77%	5.29	0.006%
C2P Open	68%	67%	63%	58%	5.18	0.014%
Auto Open	91%	84%	80%	76%	5.31	0.011%

Video engagement (completion rates) shows that while Auto Open had high completion rates (76%), this may not reflect intentional engagement. By contrast, C2P GMP maintained a similarly strong completion rate (77%), which suggests that viewers who actively choose to engage with click-to-play ads may offer more meaningful attention. C2P Open, however, underperformed, with only 58% of viewers reaching 100% completion, indicating weaker retention.

In terms of click-through rate (CTR), C2P Open stood out with the highest CTR (0.014%), suggesting that users in this format were more likely to take action after viewing. This contrasts with Auto Open and C2P GMP, which had lower CTRs (0.011% and 0.006%, respectively). These results suggest that while auto-play ads might passively draw viewers to complete videos, click-to-play ads, particularly in the open market, foster a more deliberate and action-oriented interaction.

Finally, **average view time (AVT)** was consistent across formats, with Auto Open leading slightly at 5.31 seconds. The minor difference between auto-play and click-to-play view times indicates that once viewers begin watching, they engage similarly across both formats, though the method of engagement—whether passive or active—appears to affect their likelihood to click. We acknowledge that the length of the videos (six seconds) is not very long and it would be beneficial to run another study with slightly longer video ads.

✳ Can streaming technology reduce carbon emissions for video ads?

According to the data from Scope3, streaming technology like the one applied from SeenThis in this experiment can reduce carbon emissions associated with creative delivery. The data shows a 70% decrease in emissions from data transfer related to creative distribution, with SeenThis producing just 16 gCO2PM compared to 53g if these ads would have been delivered with traditional video ad serving technology. This reduction contributes to an 18% decrease in total emissions, as the relative impact of ad selection emissions becomes more pronounced resulting in 164 gCO2PM compared to 200 gCO2PM for this particular experiment.

✳ Are click-to-play video ads less wasteful compared to auto-play video ads?

According to both Scope3 and Hiili, the click-to-play ads that were tested here did not have as much of an effect as was expected. Chances are that this is related to the short length of the videos (6 seconds) which is something that would need to be validated in subsequent studies.

Looking at data from Scope3, control group #2 (Click-to-play, Open Market) had almost the same amount gCO2PM as Control group #1 (Auto-play, Open Market). While the main test line item was between 59-62% lower in gCO2PM (164g vs. 397-439g), we attribute this back to higher carbon domains due to higher share of climate risk inventory and more efficient ad selection processes due to leaner supply paths.

Hilii proposes that one possible explanation is that the video content itself represents only a portion of the overall ad creative. Other elements, such as tags and the video player, are loaded regardless of whether the ad is auto-play or user-initiated.

Hilii also highlighted that energy consumption is highly dependent on the device's network connection. Slower connections cause ads to take longer to load, thereby consuming more energy. From brands' media buying perspectives, this is an opportunity to reduce carbon emissions by opting for lighter creatives for users' whose connections are weak. This represents a significant carbon emissions reduction opportunity that at this point in time is largely untapped.

What difference did the choice of inventory make?

Both **Scope3's methodology** and the GMSF take several factors into account that go beyond the specific ad and its context. An example would be the ad selection process, i.e. the number of demand partners that are requested to bid. So the choice of inventory and its distribution were expected to have an effect.

For the main test line item, Scope3 GMP was used to ensure that the inventory of the C2P GMP line item excluded any domains classified as climate risks. However, some domains were reclassified as climate risks after the campaign concluded, accounting for the remaining 1% of climate risk associated with the GMP line item.

Line Item	Climate Risk	Avg gCO$_2$PM
C2P GMP	1%	164g
C2P Open	10%	397g
Auto Open	11%	430g

Taking a closer look at the line item running auto-play video ads in an open market environment with 11% climate risk impressions shows that these 11% of impressions accounted for 24% of the carbon emissions with 983 gCO2PM on average. Therefore, our first conclusion was that climate risk should be taken into account and excluded when choosing inventory.

## Does Acceptable Ads Inventory make a difference?

Acceptable Ads allows fewer ads per page, thereby reducing emissions inherently. Additionally, the standard limits certain ad types known for their higher creative load, such as auto-play video or animated ads. Although this aspect was outside the scope of our study, previous research conducted by the Acceptable Ads Committee (**here**) and IPG's Magna (**here**) has demonstrated these effects.

In this experiment, we aimed to assess whether eyeo's programmatic arm, Blockthrough, provides an efficient supply path for purchasing ads on publisher domains. Analyzing the top 25 domains by volume, data from Scope3 revealed that eyeo achieved a 9% reduction in emissions compared to the average for these websites (i.e., without a specific seller defined).

✳ Are further inventory optimizations useful?

By examining carbon emissions at the domain level and suggesting a reallocation of budgets towards more efficient domains, Hiili uncovered significant optimization potential. Their analysis revealed the disparity in how much each publisher contributed to the overall campaign volume and their respective carbon intensity, allowing for a more strategic and environmentally conscious distribution of advertising spend. This approach not only enhances performance but also reduces the carbon footprint of digital advertising. See here for the Top 25 publishers:
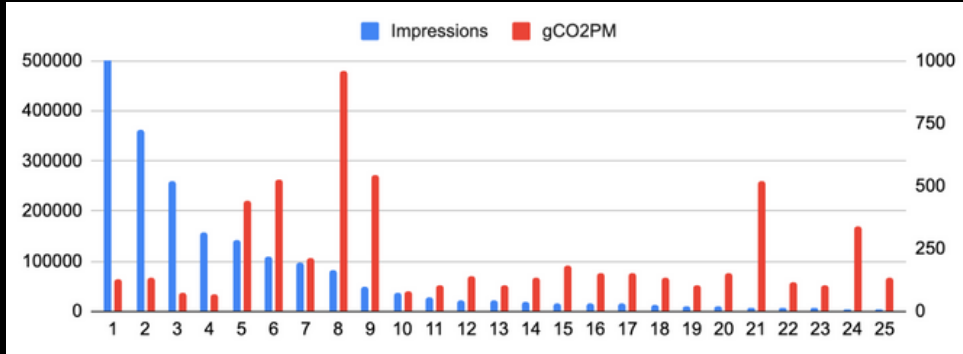
The top 25% of the highest-emitting domains averaged 1,021 gCO2PM. If impressions had been shifted to the remaining domains, which averaged 193 gCO2PM, this would have resulted in a carbon saving of 94 kg, equivalent to approximately 6,206 smartphone charges, as per EPA data (**here**). Implementing a cap at 200 gCO2PM would have led to an even greater reduction of 230 kg, or 15,184 smartphone charges.

✳ How did Duration Media's Sequency™ product help to reduce emissions?

At the time of our post campaign analysis, while not accounted for in the measurement methodologies of Scope3 or Hiili, Duration Media's emissions can be estimated with the below considerations.

According to Jounce Media, each digital display impression requires an average of 135 bid requests. According to the Scope3 Sustainable Advertising Report Q3 2023, 255.1 gCO2 are emitted with every 1,000 digital display impressions. Based on these metrics, Duration Media estimates that WildAid and eyeo were able to reduce the carbon impact of the impressions delivered via Sequency™ by 45%.

To illustrate the point, the below data table shows a hypothetical delivery of 1M impressions. In a baseline scenario of a standard programmatic activation where 135 requests are generated for each 1M impressions delivered, the result is 135M requests and 255k of gCO2. Comparatively, the WildAid campaign leveraged Duration Media's Sequency tool which reduced bid requests by an estimated 45%, the result is 73.7M requests and 139.4k gCO2.

REDUCTION	Baseline	WildAid Campaign	Delta	% Reduction
Total Impressions delivered	1,000,000	1,000,000	0	0%
Est. Bid Requests*	135,000,000	73,776,797	61,223,203	45%
Est. gCO2**	255,100	139,411	115,689	45%

*Assumes 255.1 gCO2 per 1,000 impressions (source: Scope3 Sustainable Advertising Report, 2023)
** Assumes 135 average bid requests per display impressions (source: Jounce Media)

LIMITATIONS

Performance Data: Our goal was to compare carbon emissions in relation to performance by tagging the WildAid website to measure more than just clicks. However, due to the website's setup, tagging wasn't fully effective, leaving clicks—as imperfect as they are—as the primary success indicator. Moving forward, we would emphasize measuring carbon reduction opportunities alongside business objectives to drive real change.

Video Length: In hindsight, using longer videos might have been more beneficial. While short-form videos work well in auto-play formats, longer videos could be more effective when users actively show interest by clicking. This approach would also allow for more significant differences in view-through rates and carbon reductions.

Unit of Measurement: Most models and solutions we encountered, including those used in this pilot, focus primarily on the marketer's perspective, measuring carbon emissions per ad impression rather than per page view. While these models provide insights into emission reduction, they often overlook the publisher's role. Ad-filtering removes unseen, unwanted, and wasteful ads, creating more sustainable media inventory—an aspect not systematically accounted for in current models. A study by the Acceptable Ads committee found that browsing the web in a traditional, non-filtered manner emits 2.4 times more emissions due to more cluttered ad environments (**Source**).

Model Limitations: No single approach captures every aspect perfectly. Some approaches aim for comprehensiveness but rely on estimates, which may reduce accuracy. Others focus on specific aspects, offering precision but lacking a broader view. Looking more broadly, the Global Media Sustainability Framework represents a strong step forward in helping the industry begin to wrap its arms around the highly complex concept of emissions from digital media's supply chain. Yet, for the average industry practitioner, the framework is still a lot to digest and put into an actionable approach for vendor consideration.

Non-Standard Solutions: New technologies like SeenThis streaming and Duration Media's Sequency pose challenges as they need to be reflected in measurement models as non-standard solutions. Not everything can be accurately accounted for immediately, underscoring the need for critical evaluation of results and a broader scope of measurement purview. Custom format support in Scope3's platform has been helpful during this pilot.

CONCLUSIONS

Click-to-play video ads were not yet proven to be a better alternative to auto-play video ads
Our experiment could not definitively prove that click-to-play ads perform as effectively as auto-play video ads in terms of business results. More testing will likely be needed to determine if, and how, this format can create a meaningful impact. From a carbon reduction perspective, the results were similarly inconclusive; the technical aspects of video ads, such as buffering and the data transfer caused by the video player itself, may limit the potential for emissions savings. However, it was encouraging to see that users who actively engaged with the ad and visited the advertiser's website demonstrated higher levels of engagement. This suggests that click-to-play is a more user-friendly and responsible ad format, supporting our belief in its potential value.

Several of the additional tactics implemented led to significant reductions in emissions
Despite the mixed results for click-to-play, there are other proven methods to optimize digital ad campaigns for sustainability. Scope3's data revealed that video streaming technology, such as the one used by SeenThis, reduced carbon emissions from creative data transfer by up to 70%. When factoring in media distribution and the ad selection process, this still contributed to an 18% overall reduction in emissions. Additionally, excluding climate risk inventory led to the removal of 11% of impressions that accounted for 24% of total emissions. Further optimization, such as replacing the most carbon-intensive 25% of domains from the PMP or setting a cap at 200 gCO2PM, could have resulted in reductions of 92 kg and 230 kg of carbon, equating to 10% and 25% reductions, respectively. Lastly, supply chains play a critical role; Scope3 data showed that the ad selection process for the 25 largest properties in this test was 9% more efficient than on average. One area further needing further exploration are the impacts of using more direct paths of programmatic media buying. Demand Side Platforms (DSPs) have begun offering direct paths to media owners' inventory as well as various alternative buying methods like programmatic guaranteed for example. These types of activations, on their face, present an opportunity to sustain or improve marketing outcomes while reducing the associated carbon emissions.

Carbon reduction in media demands a common-sense approach & broader measurement strategies
Carbon measurement in media is still in its early stages, and a common-sense approach is crucial to driving meaningful reductions for a particular business or solution. While frameworks can be helpful, they should not distract us from applying the Pareto principle and focusing on the areas with the greatest impact. Using more comprehensive models or frameworks has allowed us to identify these key areas. From there, we sought to fully understand those aspects to make the right decisions. For example, we learned through Hiili that consumer device emissions for click-to-play video ads versus auto-play may not be as efficient as we initially thought and that the user's network connection makes a big difference which could become a target criteria. Generally speaking, the industry should consider a broader application of emissions measurement for non-standard and creative sustainability solutions to capture as many aspects as possible.

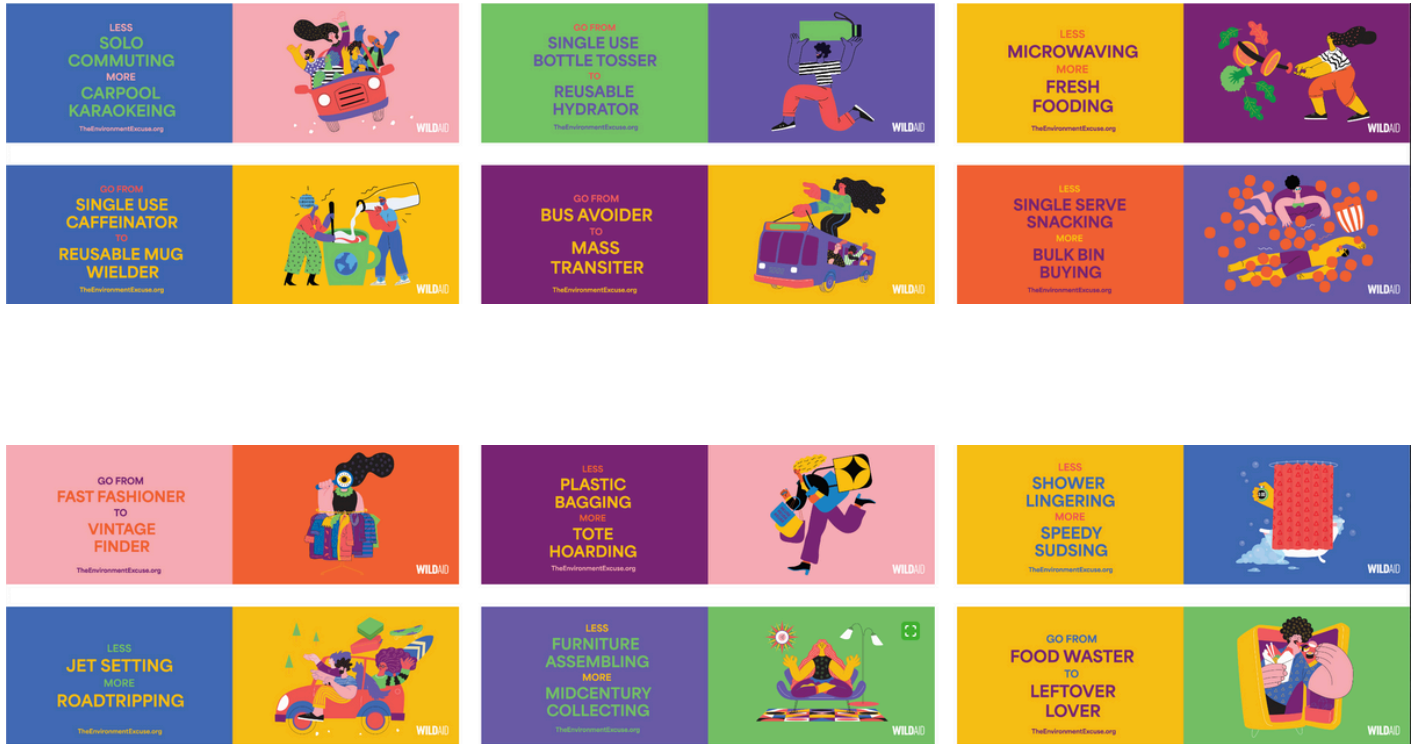**Collaboration is key to solve the climate crisis**
To move at the pace required, collaboration between measurement partners, emissions reduction ad tech providers, inventory owners, brands, agencies, and NGOs is essential for expanded testing. The results from these tests should be made open source, allowing everyone to benefit from the findings. We are at a pivotal point in a critical decade, and our collective well-being relies on decarbonizing much faster than our current pace. All readers of this white paper should feel comfortable contacting the team responsible for this pilot with clarifying questions if it will aid in their own emissions reduction efforts.

CAMPAIGN
ASSETS

ADDITIONAL STATIC CREATIVE

LESS
SOLO COMMUTING
MORE
CARPOOL KARAOKEING
TheEnvironmentExcuse.org

GO FROM
SINGLE USE BOTTLE TOSSER
TO
REUSABLE HYDRATOR
TheEnvironmentExcuse.org

LESS
MICROWAVING
MORE
FRESH FOODING
TheEnvironmentExcuse.org

GO FROM
SINGLE USE CAFFEINATOR
TO
REUSABLE MUG WIELDER
TheEnvironmentExcuse.org

GO FROM
BUS AVOIDER
TO
MASS TRANSITER
TheEnvironmentExcuse.org

LESS
SINGLE SERVE SNACKING
MORE
BULK BIN BUYING
TheEnvironmentExcuse.org

GO FROM
FAST FASHIONER
TO
VINTAGE FINDER
TheEnvironmentExcuse.org

LESS
PLASTIC BAGGING
MORE
TOTE HOARDING
TheEnvironmentExcuse.org

LESS
SHOWER LINGERING
MORE
SPEEDY SUDSING
TheEnvironmentExcuse.org

LESS
JET SETTING
MORE
ROADTRIPPING
TheEnvironmentExcuse.org

LESS
FURNITURE ASSEMBLING
MORE
MIDCENTURY COLLECTING
TheEnvironmentExcuse.org

GO FROM
FOOD WASTER
TO
LEFTOVER LOVER
TheEnvironmentExcuse.org

WILDAID

CONTACT
US

WILDAID

CONTACT
Stephanie Hill
Climate Marketing Strategy Lead

Email
Hill@wildaid.org

eye/o

CONTACT
Felix Derkum
Director Advertiser Growth

Email
F.derkum@eyeo.com