

Briefing Note: Digital Footprint of Agribusiness, Fossil Fuel and Mining Companies in Brazil



Summary

This report analyzes how fifteen of the largest and most influential agribusiness, mining, and fossil fuel companies operating in Brazil communicate climate and sustainability narratives across websites, social media, and paid advertising channels.

The frequency and visibility of sustainability-related content vary widely between companies, with some heavily emphasizing ESG themes and others mentioning them only occasionally or not at all.

Common sustainability narratives include promoting company-led environmental projects, framing operations as essential for global food security or energy supply, and presenting their sectors as part of the solution to the climate crisis.

Signs of greenwashing were identified, including the use of vague language, green imagery, and sustainability claims not clearly supported by substantial actions or investments.

Some companies, especially Petrobras, Vale, Ambev and Shell, use targeted digital advertising and influencer partnerships to amplify sustainability messaging.



Context

The goal of this report is to analyze the online communications strategies of the top agribusiness, mining, and fossil fuels companies operating in Brazil, concerning climate and sustainability narratives.

In total, fifteen companies were selected for analysis based on revenue and presence in the Brazilian market. The selection was made based on Forbes' Agro100 list for agribusiness companies, and on the Ranking Valor 1000 list provided by Valor Econômico for energy, fossil fuels, and mining companies. The following are the selected companies to be analyzed under the scope of this report:

Top 15 Agribusiness, Mining and Fossil Fuel Companies in the Brazilian market based on revenue and presence

Company name	Sector	Revenue (2023-2024)
JBS	Agribusiness	R\$ 363,82 billion
Marfrig	Agribusiness	R\$ 136,49 billion
Cargill	Agribusiness	R\$ 126,4 billion
Bunge	Agribusiness	R\$ 81,7 billion
Ambev	Agribusiness	R\$ 79,74 billion
BRF	Agribusiness	R\$ 53,62 billion
Vale	Mining	R\$ 31,59 billion
Petrobras	Oil & Gas	R\$ 511,99 billion
Raizen	Energy	R\$ 220 billion
Vibra	Oil & Gas	R\$ 162 billion
Cosan	Oil & Gas	R\$ 149 billion
Ultrapar	Oil & Gas	R\$ 126 billion
Shell	Oil & Gas	R\$ 52 billion



Petrogal	Oil & Gas	R\$ 14,16 billion
Total Energies	Oil & Gas	R\$ 11,9 billion

For the analysis, manual searches were conducted on the companies' websites, social media profiles and profiles on the Meta Advertising library.

Overview of the volume of sustainability

communications

The presence of sustainability topics in these companies' communications strategies varies from company to company – from some that rarely touch the topic, to others that have branded themselves as sustainability–focused operations. Below is a comparison of how many of the articles/press releases published by those companies in the past year were labelled as "sustainability" or "ESG". Those marked with an asterisk had no dedicated newsroom page on their websites, and so the volume of Facebook posts was instead searched.

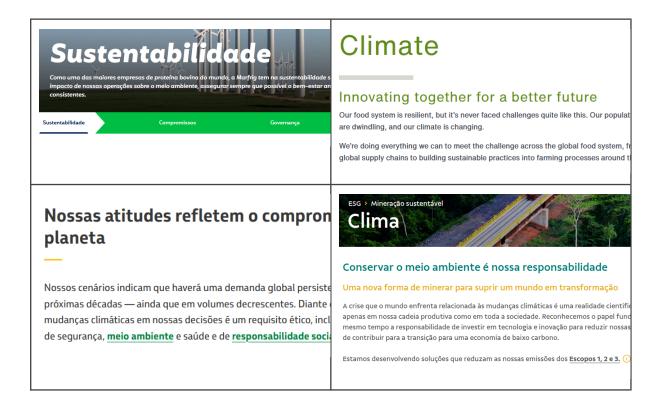
Company name	Volume of articles/posts in the past year	Volume of articles/posts related to sustainability	% articles/posts related to sustainability
JBS	114	22	19.3
Marfrig	14	9	64.3
Cargill	41	11	26.8
Bunge	13	8	61.5
Ambev*	70	1	1.4
BRF	67	14	20.9
Vale	213	41	19.3
Petrobras	536	8	1.5
Raizen	14	0	0.0



Vibra	72	14	19.4
Cosan	70	9	12.9
Ultrapar*	43	7	16.3
Shell	59	16	27.1
Petrogal	50	0	0.0
Total Energies	39	1	2.6

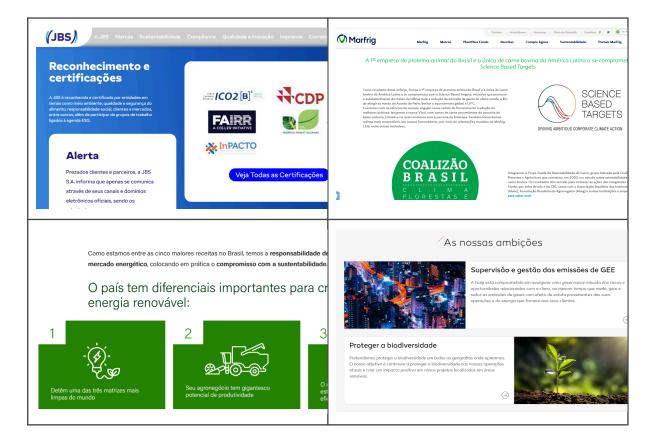
Overview of sustainability narratives

Overall, all of the analyzed companies recognize, either on their sustainability pages or social media posts, the threat of climate change - or at the very least, the importance of sustainability within their operations.



Narratives related to sustainability focus on advertising each company's actions, goals, certifications, and projects that promote socio-environmental sustainability. These include reforestation efforts, decarbonization, waste and oil recycling, use of renewable energy or biofuels, participation in carbon markets, and water saving.





Companies also frequently highlight the contribution of their sectors to a more sustainable future and the energy transition. In the agribusiness sector, this often includes an emphasis on the role of their operations in carbon capture and food security, particularly in the context of global markets and export revenues. Similarly, fossil fuel companies tend to underscore the importance of their activities in meeting the growing global demand for energy, while also framing their involvement as part of the broader energy transition.

The next sections of this report detail particular narratives/communications strategies found most often.

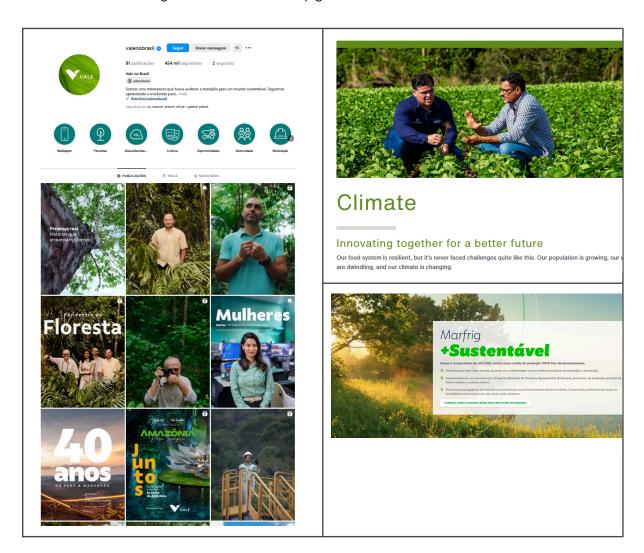


Greenwashing

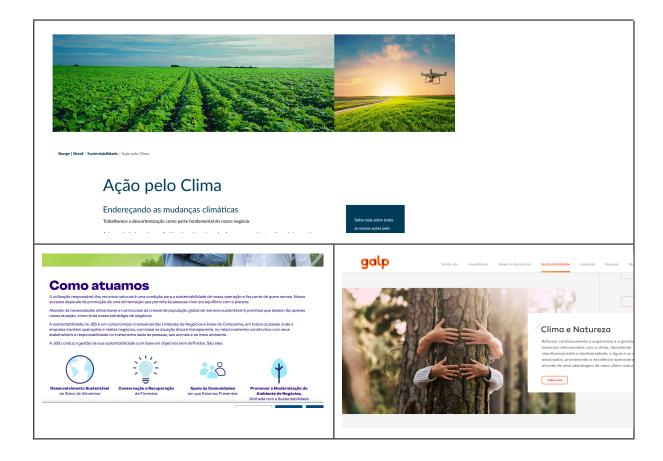
The most common issue found in the analyzed companies' communications strategies was signs of greenwashing, with apparent overstatements of the companies' sustainability efforts, and understatements of their activities' impact on the environment and climate. Below are some examples that could be identified.

Green Imagery and Vague Statements

Some of the analyzed companies frequently use imagery associated with nature, such as trees, leaves, and green colours, to create a perception of environmental friendliness. Furthermore, sustainability claims typically include vague statements, with little detail and evidence on their targets and sustainability goals.



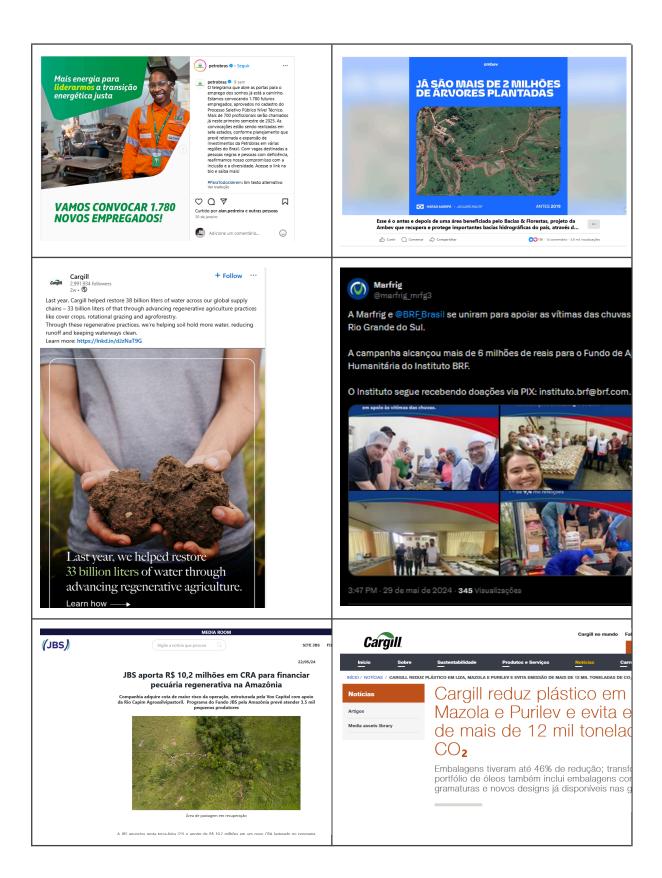




Actions and projects in socio-environmentalism

Among the articles and posts about sustainability from the analyzed companies, the most common theme is promoting their socio-environmental sustainability efforts. These are more often than not actions that have a low impact and investments compared to the companies' revenue and environmental impact.







Despite these communications efforts, third-party sources suggest highly negative environmental impact by those companies. For instance, <u>JBS faced a lawsuit by the state of New York (USA)</u> for greenwashing.

Another notable example is Vale, which is one of the companies with the most usage of green imagery and branding, and has yet to <u>fully pay the fines related to the 2019</u>

<u>Brumadinho dam collapse</u>. The collapse released millions of tons of toxic mining waste into the surrounding area, claiming 270 lives and being considered the worst industrial accident in Brazil's history. Brumadinho was not an isolated incident: just four years earlier, in 2015, Vale—alongside BHP—was also involved in the Mariana dam collapse, which devastated the Doce River basin, displaced entire communities, and caused long-term environmental damage.

Vale, alongside others with extensive sustainability branding, Petrobras and Shell, is among the top 10 Brazilian companies with the <u>most fines from Ibama</u> (the Brazilian Institute of Environment and Renewable Natural Resources) in the past 25 years, with Petrobras of particular note.

Company	Fines between 2000-2025	
Petrobras	2,705	
Sanepar	333	
Departamento Nacional de Infraestrutura e Transportes	211	
Shell Brasil	120	
C Gasparato Comércio e Representações	109	
WMS Supermercados do Brasil (Walmart)	104	
Petro Rio Jaguar	103	
Vale	100	
Vimex Vitória Exportação de Madeiras	100	
Tradelink Madeiras	92	



"We are part of the solution"

Another common narrative identified is one where companies claim their activities and projects are part of the solution for the climate crisis.

In agribusiness companies, this narrative is commonly carried by an emphasis on the importance of agribusiness for food security. Some, such as JBS, Cargill and Marfrig, also communicate the potential agribusiness has in fighting climate change through <u>carbon</u> <u>capture and efforts related to climate action</u>.





Marcella Molina, membro do Comitê de Sustentabilidade da Marfrig, participou ontem (12) do painel "O Futuro do Agro", durante a COP29, em Baku. O evento foi organizado pela APEX (Agência Brasileira de Promoção de Exportações e Investimentos) e pela ABAG (Associação Brasileira do Agronegócio).

No painel, Marcella enfatizou que o agro é uma potência e que o futuro está sendo feito agora, de forma cada vez mais sustentável, ajudando a garantir a segurança alimentar de milhares de pessoas em todo o mundo.

Ela reforçou os compromissos da Marfrig para garantir uma cadeia de fornecimento 100% rastreada e livre de desmatamento até 2025, com o apoio de investimentos em tecnologias de monitoramento por satélite. Além disso, mencionou o Consórcio Biomas, um projeto colaborativo entre grandes empresas brasileiras, que visa restaurar e proteger 4 milhões de hectares de florestas no Brasil.

A sustentabilidade é um pilar fundamental para a Marfrig, e a presença na COP29 oferece a oportunidade de compartilhar nossas iniciativas com o mundo, contribuindo para um futuro mais sustentável para todos. Ver menos



Estudo comprova eficiência da pecuária em capti carbono da atmosfera

Levantamento analisou 103 propriedades do Programa Fazenda Nota 10, da JBS, e co que um terço das propriedades removem Gases do Efeito Estufa (GEE)

Um estudo com participação da JBS comprovou como a pecuária nacional contribui para a captura de Efeito Estufa (GEE) da atmosfera. O trabalho analisou o volume de emissões de carbono de 103 prop fornecedoras da Friboi, em 12 estados brasileiros. O resultado revelou que 31% das fazendas a removem mais que emitem carbono na atmosfera. Práticas adequadas de manejo de solo, como a rec de pastagens, eficiência produtiva e desmatamento zero estão entre as principais razões para alcançar o

Conduzido por pesquisadores do Observatório de Conhecimento e Inovação em Bioeconomia da FGV FGV), da consultoria Fauna Projetos e do Instituto Inttegra, o levantamento foi realizado entre agosto d maio de 2024. Os 46% das fazendas mais eficientes emitem menos GEE para cada tonelada de carcaça. \(^1\) \(^2\) \(^2\) \(^2\) will m dos maiores j\) realizados sobre o tema no mundo.

Climate change: 5 ways we're combatting it through agriculture

③ Read Time: 7 minutes

PARTNERING SUSTAINABLY RESPONSIBLE BUSINESS

September 20, 2024

Healthy soil. Resilient beef production. Wind-powered ships.

What do these have in common? They are all ways Cargill is helping fight one of the world's biggest problems; climate change.

Climate change and agriculture are linked. Agriculture, food and transportation together account for 37% of total global greenhouse gas (GHG) emissions, according to the Intergovernmental Panel on Climate Change (IPCC)

In fossil fuel companies, a similar narrative takes shape in highlighting the growing energy demand worldwide, a persistent demand for oil, and their role in providing this resource. Some, such as Petrobras, also argue that the fossil fuel industry is key for the energy transition, to meet energy targets and raise funds for investment in new technologies.

Nossas atitudes refletem o compromis: planeta

Nossos cenários indicam que haverá uma demanda global persistente próximas décadas — ainda que em volumes decrescentes. Diante disso mudanças climáticas em nossas decisões é um requisito ético, incluído

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Nossas atitudes refletem o compromis



Cenários da Shell traçam possíveis caminhos para o Brasil atingir metas climáticas

20 de jun. de 2024

Estudo fornece contexto para decisões políticas estratégicas antes da reunião do G20 este ano e da COP30 em 2025

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"Olhar em profundidade para o Brasil apresentou à equipe um desafio fascinante, dada a riqueza de oportunidades que o país tem e a capacidade de gerenciar o carbono em u



It is also important to note that some of the oil companies, particularly Raízen, tend to focus on the emissions from scope I and 2 (directly related to their production activities), and view Scope 3 emissions, the ones originated from the use of their product, as a separate challenge beyond their direct responsibility.

PERFIL DE EMISSÕES

Desde 2022, o nosso Inventário de Emissões de GEE leva em consideração as atividades da Raízen no Brasil, na Argentina e no Paraguai e é construído seguindo a versão brasileira de uma metodologia do Programa Brasileiro GHG Protocol. Nessa metodologia, as emissões são divididas em três escopos:

Escopo 1

Emissões derivadas de atividades produtivas da Raízen, das quais a empresa tem responsabilidade direta. (Exemplos: aplicação de insumos agrícolas em áreas da Raízen, consumo de diesel em maquinário, transporte de cana Raízen em rodovia, queima de bagaço em caldeira, as emissões relacionadas ao aquecimento de óleo cru na refinaria da Raízen na Argentina, entre outros).

Escopo 2

Emissões associadas ao consumo de energia elétrica da Raízen.

Escopo 3

Emissões relacionadas às atividades Raízen, mas que não são de responsabilidade direta. (Exemplo: uso de produtos vendidos, referente às emissões da queima do combustível pelos consumidores que o compram nos postos Shell, bem como, transporte e distribuição terceirizados de combustível e funcionários, viagens a negócios, entre outros).



Solutions for Sustainability and the Energy Transition

Lastly, a significant portion of the analyzed companies' sustainability-focused communications focus on projects and solutions they hold for the environmental and climate crisis. The most common themes identified for their sustainability projects were:

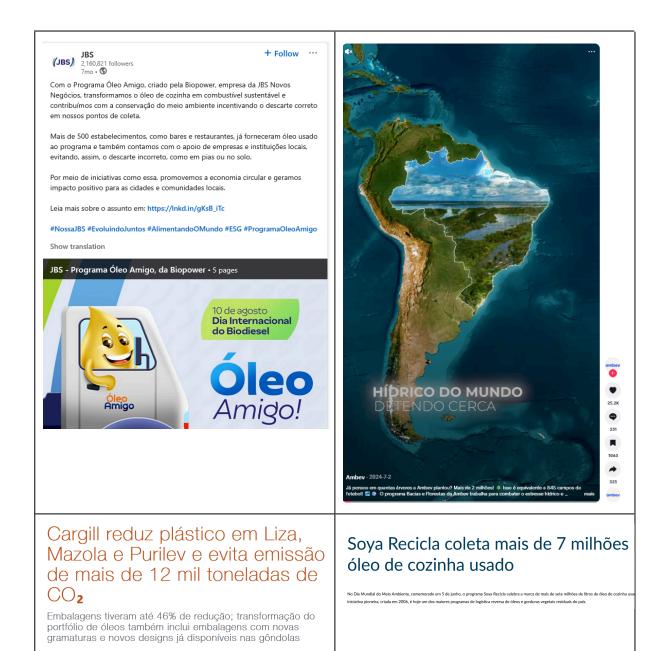
- Biofuels (e.g. ethanol, hydrogen) and renewables: Most common with fossil fuel companies, but also found in JBS, which are investing in research and promoting biofuels, particularly ethanol and biodiesel, common in Brazil for the high supply of sugarcane;
- Recycling: Particularly oil recycling for biodiesel, most common in agribusiness companies;



- Water saving: Most common in agribusiness companies;
- Deforestation mitigation and reforestation: most common in fossil fuel companies, with the only agribusiness operations mentioning deforestation being Bunge and Ambev.
- Amazon rainforest and other biomes conservation: Particularly present in Vale's communications.





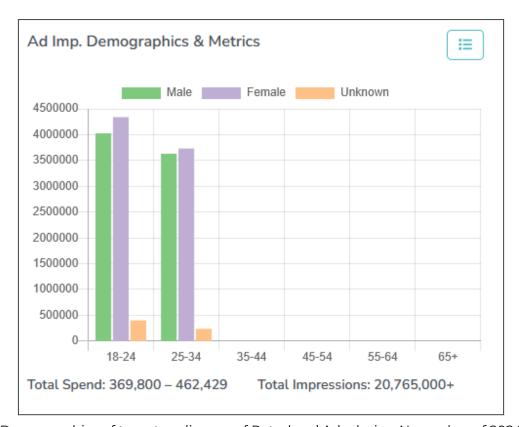




Advertising and influencers

Apart from general searches on the companies' websites and social media profiles, the Meta advertising library was also utilised to find advertisements paid for by the analyzed companies across Facebook, Instagram and the rest of Meta's advertising network.

There was no significant presence of direct Meta advertising from most companies, with most not showing ads, and some with between 3–5 ads in the past year. The company with the highest amount of ads found was Petrobras, with 393 ads between March 2024 – March 2025, 42 of which mentioned "climate" or related terms. Out of all ads, 72 were published during the month of COP29, with a particular target on younger audiences. In total, it is possible to estimate US\$1,111,900 – US\$1,401,608 spent on Meta Ads during the analyzed period.



Demographics of target audiences of Petrobras' Ads during November of 2024

Another important advertising strategy is the use of influencers on social media profiles. Shell, Vale, Ambev, and Petrobras were the ones utilising this strategy the most. Posts on



Instagram and TikTok frequently feature well-known influencers, notably including some well-known scientific communicators, in the case of Shell and Petrobras.

Since March of last year, Shell's Instagram had 125 posts featuring influencers, Petrobras had 63, Vale had 4 (with 14 more on TikTok), and Ambev had 16.

