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Evidence from Latin America

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Environmental Damage News and Stock Returns: Evidence from Latin America

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Abstract

This paper studies the interplay between environmental performance and financial valuation of firms in Latin America and the Caribbean. We provide insights into how environmental considerations are integrated into financial decision-making and investor behavior by analyzing the stock market reaction to environmental news of firms with different levels of carbon emission intensity. We find that high emission intensity firms tend to underperform after the release of environmental damage news. Our baseline estimates indicate that, after the release of such news, firms at the 75th percentile of the distribution of emission intensity experience stock returns that are 17% lower than those of firms at the 25th percentile of the distribution of emission intensity. These results suggest that investors care about and price carbon risk, but only when this risk is salient.

JEL classifications: G12, G14, G18, G32, G38, Q54

Keywords: Carbon emissions, Climate change, Environmental news, Stock returns

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1 Introduction

We investigate the impact of environmental damages news on the stock returns of firms in Latin America and the Caribbean. We focus on how this impact varies with firm-level carbon emission intensity. We find that high emission intensity firms underperform after the release of environmental damage news and show that this result is principally driven by domestic news. Our findings indicate that environmental factors play an important role in firms' financial performance and investors' decision-making.

There is near unanimity on the anthropogenic origin of climate change and a better understanding of the link between carbon emissions and financial performance is key for devising policies aimed at creating incentives for reducing emissions. Firms, particularly in certain sectors, are significant contributors to releasing greenhouse gas (GHG).¹ These emissions are key drivers of global warming and climate change, phenomena that are altering the earth's natural systems at an unprecedented rate.

We focus on environmental damages because GHG emissions contribute to the intensification of extreme weather events, such as hurricanes, floods, and droughts, which have devastating ecological and economic consequences (see, for example, Min et al. (2011)) Moreover, rising global temperatures result in melting polar ice caps, rising sea levels, and destroying habitats. This cascade of effects disrupts biodiversity and poses substantial risks to wildlife, marine life, and natural ecosystems. The alteration in climate patterns also has profound implications for agriculture, water resources, and human health, creating a domino effect of environmental challenges. Even though environmental damages are not necessarily related to climate change (think of an oil spill), media coverage of such events can make the climate change discourse salient and impact investment decisions, either through a preference shift towards greener assets or heightened public awareness of environmental risks, affecting firms' perceived future financial performance. In fact, there is evidence that investors perceive firms with higher carbon emissions as less environmentally responsible (Dahlmann et al., 2019), and this perception can lead to a more negative reaction after the release of environmental damage news, even if the specific piece of news is not directly directly related to climate change (Lee et al., 2015).

To study the relationship between stock market performance, environmental damage news, and carbon emission intensity, we combine firm-level emission intensity data with daily stock return data and a specifically constructed high-frequency dataset of environmental damage news. Our analysis includes a sample of 840 firms based in 16 countries across Latin America and the Caribbean, covering a period of 13 years (2009-2022). By using an econometric specification that builds on Hengge et al. (2023), we find that the release of environmental damage news negatively impacts the stock market performance of firms with high emission intensities. We observe that firms at the 75th percentile of emission intensity distribution experience stock returns that are

¹In the rest of the paper, we will use carbon emissions and green house gas (GHG) interchangeably.

17% lower compared to those at the 25th percentile. Our findings are primarily influenced by the extensive margin (i.e., the presence of at least one piece of news) and are mostly associated with the release of domestic rather than regional or global news. Additionally, our results are not attributed to a specific country, nor do they capture a spurious relationship driven by firm characteristics such as size, profitability, or sector of operation, which could be correlated with both carbon emission intensity and stock returns.

Our paper is related to two strands of literature. The first strand focuses on on the link between carbon emissions and stock returns. Two influential papers by Bolton and Kacperczyk (2021, 2022) find that the level of carbon emissions is associated with higher stock returns in a cross-section of firms. According to Bolton and Kacperczyk (2021, 2022), this negative association is driven by the presence of a carbon risk premium: investors require higher returns to hold stocks of companies that are exposed to carbon pricing and regulation risk. This result has been challenged by Zhang (2023), who suggests that researchers should focus on lagged emissions, and by Aswani et al. (2023), who suggest that carbon emission intensity (instead of the level of emissions) should be the appropriate measure of carbon risk (for a rebuttal, see Bolton and Kacperczyk, 2023).

Three papers that, like us, use high-frequency stock prices are Bolton et al. (2022), Millischer et al. (2022), and Hengge et al. (2023). These authors study the impact of carbon price on stock returns within the European Union Emission Trading Scheme (EU ETS). Bolton et al. (2022) and Millischer et al. (2022) show that firm-level availability of carbon allowances is an important driver of the link between carbon price and stock returns. These results indicate that, within the EU ETS, carbon price affects stock returns through an input cost channel. Hengge et al. (2023) use carbon policy surprises and show that transition risk also plays a role because tight carbon policy affects the performance of firms that do not participate in the EU ETS. The presence of a transition risk is also supported by research showing that carbon pricing shocks have a negative effect on stock returns of brown firms (Berthold et al., 2023). This strand of the literature highlights the different effect of carbon emission in equilibrium and in the aftermath of shocks. In equilibrium, green assets are expected to have lower return because they make it possible to hedge climate risk. However, green assets are expected to outperform brown assets in the aftermath of shocks that reveal the risk associated with the latter (for a theoretical model that clarifies this difference see Pástor et al., 2021).

The second strand is related to the effect of news, especially environmental news, on stock returns. Research that analyzes the link between news and stock returns goes back to at least Cutler et al. (1989), who cast doubts on the idea that stock price movements are fully driven by news about future cash flows and discount rates. More recent work uses sentiment analysis of news to show that media tone has an impact on stock prices and that the impact is generally larger for negative news (see, among others, Garcia, 2013, Zhang et al., 2016, Fraiberger et al., 2021). Jeon et al. (2022) show that the sensitivity of stock returns to news has been increasing

over time and it is stronger for firms with high media visibility.

More closely related to our work are studies that focus on environmental news. Capelle-Blancard and Laguna (2010) study stock market reactions to industrial disasters by using data on 64 explosions in chemical plants and refineries. They find that petrochemical firms experience a sharp drop in market value in the two days that follow the report of an explosion. Along similar lines, Carpentier and Suret (2015) use New York Times reporting to study how equity markets respond to 161 major environmental and non-environmental accidents. Contrary to previous studies, they do not find a long-lasting effect of environmental accidents on stock returns. Flammer (2013) uses corporate news related to environmental issues to conduct an event study and finds a positive association between the stance of environmental reporting and stock returns. She also documents that this relationship has become asymmetric over time, with a decreasing positive effect for eco-friendly behavior and an increasingly negative effect for eco-harmful behavior. Faccini et al. (2023) use textual and narrative analysis of climate change-related news and show that climate risk associated with government interventions has an effect on equity returns in the United States. Engle et al. (2020) use text analysis of newspaper coverage of climate change to build climate change risk-hedged portfolios. Ardia et al. (2020) build a climate change concern index based on news published in US newspapers and find that stock returns of firms exposed to this index are associated with firm-level carbon emission intensity. El Ouadghiri et al. (2021) use data on climate-related disasters together with US news on climate change and pollution and Google searches on these terms to show that public attention is positively associated with returns of sustainability-focused stock indices and negatively associated with returns of conventional stock indices. Bessec and Fouquau (2022, 2024) also focus on environmental news coverage in US newspapers and use textual analysis to classify these news items along different measures of tonality and uncertainty. They find that news releases about the environment with either a negative or uncertain tone lead to lower and more volatile stock returns for carbon-intensive firms.

To the best of our knowledge, we are the first to study how carbon emission affect the link between environmental news and stock returns in the context of Latin America and the Caribbean, a region that is highly vulnerable to the negative impacts of climate change and environmental degradation.

The rest of the paper is organized as follows. Section 2 describes the data, with special focus on our purpose-built and novel series of climate damage news. Section 3 describes our empirical strategy and presents our baseline estimations together with a battery of robustness checks. Section 4 focuses sources of heterogeneity across types of news and countries. Section 5 discusses an alternative approach (based on the event study methodology) for estimating how carbon emission intensity affects the relationship between environmental damage news and stock returns. Section 6 concludes.

2 Data

To study the link between environmental damage news and stock returns we merge four types of data: i) firm-level yearly financial data from Refinitiv Datastream; ii) firm-level daily stock returns, also from Refinitiv Datastream; iii) firm-level yearly data on carbon emission intensity from Urgentem; and iv) country-level daily count data on news related to environmental damage from the Factiva Snapshots API.

The Urgentem dataset provides firm-level annual data on emissions categorized under the Greenhouse Gas Protocol's scopes 1, 2, and 3. Scope 1 emissions measure direct emissions from sources controlled by the firm. Scope 2 emissions measures indirect emissions associated with the purchase of electricity, steam, heat, or cooling. Scope 3 emissions encompass indirect emissions in a firm's upstream and downstream value chain. Firm emissions are reported annually. Our key variable of interest is firm-level emission intensity, which is defined as the sum of scopes 1 and 2 emissions expressed in tons of carbon dioxide equivalent (tCO2e) per million dollars of revenue (tCO2e/\$m revenue). Emissions data span the 2009-2022 period and cover 841 publicly-listed firms across 18 sectors in 16 countries in Latin America and the Caribbean (Figure 1). As emissions are disclosed with a one-year lag, our empirical analysis uses lagged emissions.

The Factiva Snapshots Application Programming Interface (API) retrieves specific historical articles and news based on user-defined criteria interfaced with the Dow Jones premium publication archive of over 8,500 licensed news sources. Queries are formulated using Factiva's code identifiers, which categorize articles into 2,012 regions (i.e., countries, states/provinces, municipalities, cities, economic or political unions, etc), 1,182 industries, 32 languages, 9,363 news sources, and 1,230 subjects. We use version 12.0 (updated on November 8, 2022) of the Dow Jones Intelligent Identifiers (DJID). DJID is a system developed by Dow Jones that uses a proprietary classification and taxonomy system to classify and tag the content of the Factiva business intelligence platform. Thanks to its internal consistency and standardized classification, DJIS allows us to search and retrieve data from sources that contain a vast amount of information. The identifiers are applied to Factiva using a mix of automated technologies (including Artificial Intelligence) and are then manually checked by Dow Jones' coding specialists, who ensure that the identifiers are accurate and consistent in 28 languages.

We targeted news classified under the subjects "Corporate Crime/Legal Action" and "Natural Environment." The first subject focuses on corporate crimes, legal investigations, lawsuits, and court rulings. It includes cases in which a company is either the defendant or the plaintiff. Natural environment is defined as wildlife, climate, and natural resources. The news stories we examine are about activities affecting the environment and health hazards related to environmental issues. In order to reduce the risk of picking up positive environmental news, we exclude news items which are part of the two subjects mentioned above but are sub-classified under the subjects "carbon sequestration," "energy efficiency," and "environmental protection."² The search parameters also included country code, language code, and source codes for each country of interest.

After the subject classifications were set, the queries were further refined to encompass all news related to these subjects published between January 1, 2009, and December 31, 2022, at a daily frequency. We filtered for national news outlets that are constantly updated, have a daily frequency during trading days, and are categorized within Factiva as "websites: newspapers," "wires: newswires," "websites: news," or "print editions: newspapers."

After collecting data from national news outlets for the 16 countries included in the sample, we turned to regional and international outlets. To collect news from regional outlets, we used the same news producers used at the national level but included mentions of a given country in outlets of another country (for instance, we assigned to Argentina a piece of news about an Argentinean firm published in a Chilean newspaper). Our list of international outlets includes a total of 18 sources and covers four countries: the United States (Associated Press, USA Today Online, The Wall Street Journal, and The Washington Post), the United Kingdom (The Daily Express, The Daily Telegraph, The Guardian, The Independent, and The Times), Spain (ABC, El Mundo, El País, La Razón, and La Vanguardia.com), and Germany (Die Welt, Frankfurter Rundschau, Handelsblatt, and Süddeutsche Zeitung).

Before using the API for large-scale querying, we verified the precision of the queries by reading snapshots of articles extracted from the query. Factiva Professional displays 15 news articles per page. For each country, we checked that the titles and first paragraphs of the news articles on at least the first page of results accurately represented the query's intent. Next, we randomly selected 8 full articles per country from the API's news counts and carefully read them. Both exercises confirmed that our news counts captured discussion of environmental damages caused by, attributed to, or related to firm's activities, as defined in our query (see Appendix B for examples).

Note that we structured queries based on subject classifications rather than by using a keyword-search approach. This choice is dictated by the fact that keyword-based searches can yield news articles that are not directly related to environmental damages caused by firm actions.

Figure 1 plots the distribution of firms by country. As one may expect, Brazil accounts for more than one-third of the 840 firms included in our sample. The second and third largest contributors are Mexico and Chile (the top three countries account for 71% of firms), followed by Peru and Argentina. The remaining 11 countries included in our sample account for 13% of firms included in the sample.

 $^{^{2}}$ News on carbon sequestration focuses on the removal, capture, or sequestration of carbon dioxide from the atmosphere with the goal of mitigating climate change. News on energy efficiency includes actions and measures taken to promote more efficient energy use, along with tips and strategies for reducing energy consumption and research related to energy efficiency and its environmental impact. Environmental protection news concerns the protection, preservation, and conservation of the natural environment, species, and ecosystems, including efforts toward environmental restoration.

Figure 1: Number of Firms by Country



Table 1 reports summary statistics for our main variables of interests. Average daily returns are about 1.4 basis points. Average carbon emission intensity is close to 400 tons per \$ million of revenues. However, the distribution is skewed, and the median value is about one-tenth of the average value. We consider two measures of News. The first is a dummy that takes value one if in a given day there is at least one news about a given country. This measure has an average value of 0.08. This indicates that the typical country has, on average, at least one environmental damage news item every 12 days. The second is the actual count which indicates that in the typical country there are about 4 environmental damage news items per month. The last three rows of the table show that the overall news count is dominated by domestic news. Tables A1-A4 in the Appendix report country-by-country summary statistics for all news, domestic news, regional news and global news.

3 Empirical Strategy and Baseline Estimations

There are two empirical challenges related to assessing whether carbon emission intensity affects the relationship between stock returns and news related to environmental damages by private corporations (henceforth, ED News).

The first challenge has to do with the source of variation of the data. While stock-returns vary across firms and are available at daily frequency, the other two key explanatory variables have more limited sources of variation. Information on ED News is available at daily frequency

Table 1: Summary Statistics

This table reports summary statistics for the main variables used in the paper. The summary statistics used the relevant source of variation. Thus, 2,595,717 observations for daily returns; 3,355 observations for carbon intensity (there are 3,355 firm-year in the sample); and 5,294 observations for news (this is the number of days in the sample).

	Mean	Median	St. Dev.	P25	P75	N. Obs.
Daily returns (basis points)	1.41	0	178.63	-32.27	29.51	2,595,717
Carbon Emissions	387.84	44.12	2806.82	10.86	282.44	3,355
News All (Dummy)	0.08	0	0.27	0	0	5,294
News All (Continuous)	0.13	0	0.53	0	0	5,294
News Domestic (Continuous)	0.1	0	0.47	0	0	5,294
News Regional (Continuous)	0.007	0	0.1	0	0	5,294
News Global (Continuous)	0.017	0	0.2	0	0	$5,\!294$

for each country included in the sample, but does not vary at firm-level. Information on carbon emission intensity, instead, is available at the firm-level but only at annual frequency. We address this challenge by interacting daily-level news with firm-level carbon emissions. In the baseline specification, we use data on carbon emission intensity for the previous year (this is because carbon emission for year y are reported in year y + 1) and news for the previous day (the idea is that prices in day d will incorporate news released on day d - 1; we will then show that news released on other days does not matter). Thus, our key explanatory variable is the interactive term:

$$CEI_{i(c),y-1} \times News_{c,d(y)-1}$$

where $CEI_{i(c),y-1}$ measures carbon emission intensity of firm *i* in year y-1 and $News_{c,d(y)-1}$ measures the presence of ED News about country *c* on day d-1.

Note that we collected information on different types of ED News (domestic, regional, and global; see Section 2), and we can focus on both the extensive margin (whether on a given day there is at least one piece of ED News) or the intensive margin (the number of ED News pieces). In the baseline specification, we focus on the extensive margin for all types of news and we define $News_{c,d(y)-1}$ as a dummy variable that takes value one if on day d-1 there was at least one piece of ED News (no matter whether this is from a domestic, regional, or global source) about country c. We will also conduct a battery of robustness checks that focus on the intensive margin and on different types of news sources.

The second challenge relates to identify the causal effect of ED news on the stock returns of emission-intensive firms. As a first step, we follow Hengge et al. (2023) and saturate the model with fixed effects that control for all possible shocks that can affect a specific firm at annual or quarterly frequency and all possible shocks that can affect overall stock market returns in country c at daily frequency. Formally, we estimate the following model:

$$R_{i(c),d(y)} = \beta CEI_{i(c),y-1} \times News_{c,d(y)-1} + \phi_{i(c),y} + \delta_{d(y),c} + \varepsilon_{i(c),d(y)}$$
(1)

where $R_{i(c),d(y)}$ are stock returns (in basis points) for firm *i* (in country *c*), in day *d* (of year *t*), $CEI_{i(c),y-1}$ and $News_{c,d(y)-1}$ are defined as above, $\phi_{i(c),y}$ are firm-year fixed effects (we will also use firm-quarter fixed effects), and $\delta_{d(y),c}$ are day-country fixed effects. Within this set-up, $\phi_{i(c),y}$ controls for the fact that firms with different levels of carbon intensity might have different average cross-sectional returns (see Bolton and Kacperczyk, 2021, and Bolton and Kacperczyk, 2022), and $\delta_{d(y),c}$ controls for the fact that ED News might affect overall market returns. Our parameter of interest is β , which measures whether ED News has a *differential* effect (with respect to the overall effect absorbed by $\delta_{d(y),c}$) on stock returns that depends on firm-level carbon emission intensity.

Equation 2 clarifies that our key identifying assumption is that carbon emission intensity is the only *firm-specific* variable that affects the relationship between ED News and stock returns.³ Below we will relax this assumption and show that our results are robust to controlling for the interaction of ED news with a large number of firm level characteristics (size, turnover, profitability, leverage, and sector of operation).

Our baseline results show that β is negative and statistically significant at the one-percent confidence level (column 1, Table 2). The point estimate (-0.00094) indicates that, the day after the release of an ED News piece, stock returns for firms at the 75th percentile of carbon emission intensity (282, see Table 1) are 0.25 basis points lower than stock returns for firms at the 25th percentile of the distribution. As the average daily return in the sample is 1.4 basis points, the results indicate that after the release of ED News returns of high emission intensity firms (defined as firms at the 75th percentile of the distribution of emission intensity) are 17% lower than returns of low emission firms (defined as firms at the 25th percentile of the distribution). The left panel of Figure 2 shows how the relationship between stock returns and the release of ED News varies at different levels of carbon emission intensity.

 $^{^{3}}$ In fact, we only need the weaker assumption that there is no other variable correlated with carbon emission intensity which affects the relationship between ED News and stock returns.

Table 2: Baseline Estimations: Extensive Margin

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news. $News_t$ is a dummy that takes value one if on day t there is at least one piece of ED News. Columns 1 and 4 use the specification of equation 2, columns 2-3 and 5-6 have a richer lag structure. All regressions include country-day fixed effects. The models of columns 1-3 include firm-year fixed effects and the models of columns 4-6 include firm-quarter fixed effects. The standard errors are reported in parenthesis and are clustered at the firm level

	(1)	(2)	(3)	(4)	(5)	(6)
$CEI_{y-1} \times News_{t-1}$	-0.000936***	-0.00103***	-0.00135***	-0.000977***	-0.00108***	-0.00140***
	(0.000172)	(0.000119)	(0.000181)	(0.000197)	(0.000131)	(0.000229)
$CEI_{y-1} \times News_t$		0.000614	0.000549		0.000631	0.000584
		(0.000465)	(0.000471)		(0.000421)	(0.000424)
$CEI_{y-1} \times News_{t+1}$		0.000437	0.000342		0.000389	0.000317
		(0.000504)	(0.000495)		(0.000439)	(0.000428)
$CEI_{y-1} \times News_{t-2}$			-1.22e-05			-4.92e-05
			(0.000680)			(0.000693)
$CEI_{y-1} \times News_{t+2}$			8.07e-05			-1.19e-06
			(0.000483)			(0.000363)
Const.	-0.0859***	0.774^{***}	1.144^{***}	-0.0839***	0.775^{***}	1.147^{***}
	(0.00831)	(0.0216)	(0.0153)	(0.00949)	(0.0182)	(0.0102)
N. Obs	856,232	698,293	645, 165	856,232	698,293	645,165
R-squared	0.193	0.189	0.187	0.201	0.199	0.199
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	\checkmark	\checkmark	х	х	x
Firm-quarter FE	х	х	х	\checkmark	\checkmark	\checkmark

*** p<0.01, ** p<0.05, * p<0.1

Figure 2: Stock Returns and Environmental Damage News: Marginal Effects

This figure shows how carbon emissions affect the relationship between stock returns and the release of Environmental Damage News (the vertical bars are with a 95% confidence intervals). The left panel is based on the estimations of column 1 of Table 2, and the right panel is based on the estimations of column 4 of Table 2.



To probe further, we estimate a model that also interacts carbon emission intensity with news on day d and, to capture possible anticipation effects, the day before the news was issued (day d+1). We find that the interactive terms for the contemporary and early news are insignificant, while the interaction with the lagged value remains significant and with a point estimate which is slightly larger (in absolute value) than what we found in the model without the contemporary and lead interactions (see column 2 of Table 2). The results are also robust (and larger in absolute value) when we allow for two lags and leads (see column 3 of Table 2).⁴

The estimates of columns 2 and 3 of Table 2 indicate that our results are unlikely to be driven by different trends in firms with different levels of carbon intensity. To confirm that this is the case, we plot the interaction between carbon intensity and ED News for a 10-day window (from d - 6 to d + 4 around the release of the news, these are the same estimations of column 3 of Table 2 but with longer leads and lags) and show that there is no pre-trend. The only significant coefficient is for the day after the release of the news (Figure 3).

Figure 3: Carbon Emissions and Stock Returns around the Release of ED News

This figure plots the values of β_h obtained by estimating: $R_{i(c),d(y)} = \sum_{h=-6}^4 \beta_h CEI_{i(c),y-1} \times News_{c,(d(y)-h)} + \phi_{i(c),y} + \delta_{d(y),c} + \varepsilon_{i(c),d(y)}$



The regressions of first three columns of Table 2 control for firm-year fixed effects, but they do not control for firm characteristics that are reported at quarterly frequency such as size, profitability, book-to-market value, leverage, and sales growth. Rather than controlling for these variables individually, we re-estimate equation 2 by including firm-year-quarter fixed effects. This model, which implicitly controls for all quarterly data releases that are observed by

 $^{^{4}}$ Note that the number of observations decreases as we move from column 2 to column 6 because, when we estimate models with lag and leads, we exclude observations in which there are multiple events within the lag structure that we consider.

investors, yield results which are essentially identical to those obtained when we only included firm-year fixed effects. If anything, the absolute value of the point estimate of β is slightly larger when we control for firm-quarter fixed effects (compare columns 1-3 of Table 2 with columns 4-6 of the same table and also the two panels of Figure 2).

As equation 2 does not allow us to estimate the main effects of carbon emission and ED News, we also estimate a version of the model that substitute the firm-year (or firm-quarter) and country-day fixed effects, with firm and time fixed effects. The results for the interactive term corroborate the findings of Table 2, while the coefficients of the main effects are imprecisely estimated (see Appendix Table A5).

As mentioned, equation 2 implicitly assumes that carbon emission intensity is the only *firm-specific* variable that affects the relationship between ED News and stock returns. We now relax this assumption by allowing for a richer set of interactive effects and estimate the following equation:

$$R_{i(c),d(y)} = (\beta CEI_{i(c),y-1} + X_{i(c),y-1}\Gamma) \times News_{c,d(y)-1} + \phi_{i(c),y} + \delta_{d(y),c} + \varepsilon_{i(c),d(y)}$$
(2)

where $X_{i(c),y-1}$ is a matrix of time-varying firm characteristics that are potentially correlated with carbon emission intensity (the main effects of these variables are captured by the firm-year fixed effects $\phi_{i(c),y}$).

We start by augmenting the model with the interaction between ED news and firm size as measured by the log of total assets (in constant USD). We find that the interactive coefficient is negative and statistically significant (column 1 of Table A6). As large firms are likely to be more visible, this result is consistent with the findings of Jeon et al. (2022) that the sensitivity of stock returns is stronger for firms with high media visibility. More important for our purposes is the fact that controlling for the interaction between ED news and firm size has no effect on our parameter of interest: β remains negative, statistically significant and with a magnitude which is basically identical to that of our baseline estimates. Next, we measure firm size with log turnover and again find that large firms tend to underperform in the aftermath of ED News releases. Our parameter of interest is unchanged (column 2 of Table A6). Columns 3 and 4 of Table A6 indicate that more profitable firms (profitability is measured with the operating margin in %) perform better than the market after the release of ED news, while leverage does not matter. Again, our parameter of interest do not change after we include these controls. In column 5, we augment the model with the interaction between ED News and a rich set of sector fixed effects. This exercise sets a particularly high bar because the sector dummies absorb a substantial amount of the cross-firm variance in carbon emission. Nonetheless, our results are robust to augmenting the model with this large set of interaction. Finally, we include all the interactive effects in the same model. As before, we find that large firms tend to outperform after the release of ED News and that parameter of interest does not change (column 6 of Table A6). Results are also robust to estimating the equations of Table A6 by substituting firm-year

fixed effects with quarter-year fixed effects (see Table A6).

Next, we explore whether the result that stock returns of high carbon intensity firm underperform after the release of ED News is driven by the extensive or intensive margin. As a first step, we re-estimate the models of Table 2 by replacing the dummy that takes value one if there is at least one piece of ED News with a variable that measures the actual number of ED News in a given day. We find results that qualitatively similar to the baseline estimates (see Table 3). The point estimate of column 1 indicate that one additional ED News, is associated with stock returns for firms at the 75th percentile of carbon emission intensity are 0.12 basis points lower than stock returns for firms at the 25th percentile of the distribution (9% of average daily returns).

As expected, the point estimates obtained when using the continuous measure of news are smaller (because the average value is larger), but the standardized coefficients are basically identical (the coefficient of column 1 of Table 2 scaled by the standard deviation of the News dummy is 0.0025 and that of column 1 of Table 3 scaled by the standard deviation of number of news is 0.0023).

We also interact firm-level carbon emission intensity with both the dummy and the continuous measure of ED News. The first interaction captures the extensive margin and the second the intensive margin. We find that both coefficients are negative and that the two coefficients are jointly statistically significant (see the F tests at the bottom of Table 4). However, only the extensive margin is individually statistically significant.

Taken at face value, the point estimates of column 1 Table 4 indicate that, on days when there is exactly one ED news item, stock returns for firms at the 75th percentile of carbon emission intensity are 22 basis points lower than stock returns for firms at the 25th percentile of the distribution (16% of average daily returns); this difference increases to 29 basis points on days with 2 pieces of ED News and to 46 basis points on days with 5 pieces of ED News.

Table 3: Baseline Estimations: Intensive Margin

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news. $News_t$ measures the number of ED News released at time t. Columns 1 and 4 use the specification of equation 2, columns 2-3 and 5-6 have a richer lag structure. All regressions include country-day fixed effects. The models of columns 1-3 include firm-year fixed effects and the models of columns 4-6 include firm-quarter fixed effects. The standard errors are reported in parenthesis and are clustered at the firm level

	(1)	(2)	(3)	(4)	(5)	(6)
$CEI_{y-1} \times News_{t-1}$	-0.000442***	-0.000958***	-0.00121***	-0.000424***	-0.00104***	-0.00132***
	(0.000110)	(0.000165)	(0.000215)	(0.000107)	(0.000181)	(0.000224)
$CEI_{y-1} \times News_t$		0.000336^{*}	0.000435		0.000335^{**}	0.000427
		(0.000193)	(0.000380)		(0.000156)	(0.000312)
$CEI_{y-1} \times News_{t+1}$		0.000166	-1.55e-06		0.000135	-2.14e-05
		(0.000150)	(9.96e-05)		(0.000115)	(7.39e-05)
$CEI_{y-1} \times News_{t-2}$			6.76e-05			-8.59e-06
			(0.000456)			(0.000500)
$CEI_{y-1} \times News_{t+2}$			-8.56e-05			-0.000144
			(0.000283)			(0.000192)
Const.	-0.0953***	0.788^{***}	1.157^{***}	-0.0968***	0.791^{***}	1.163^{***}
	(0.00886)	(0.00980)	(0.0120)	(0.00864)	(0.00657)	(0.00750)
N. Obs.	856,232	698,293	645, 165	856,232	698,293	645,165
R-squared	0.193	0.189	0.187	0.201	0.199	0.199
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	\checkmark	\checkmark	x	x	х
Firm-quarter FE	х	х	х	✓	✓	✓
444 001 44 00						

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Intensive versus Extensive Margin

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news. We use both a dummy that takes value one after the release of at least one ED News pieces (this variable captures the extensive margin) and a variable that measures the number of ED News pieces (intensive margin). Column 1 includes time-country and firm-year fixed effects, Column 1 includes time-country and firm-year fixed effects. The bottom panel of the table reports the results of a series of F-tests for the joint significance of the extensive and intensive margin. The standard errors are reported in parenthesis and are clustered at the firm level.

	(1)	(2)	(3)
$CEI_{y-1} \times News_{t-1}$ (Dummy)	-0.000607***	-0.000774***	-0.000494***
	(9.28e-05)	(9.00e-05)	(9.20e-05)
$CEI_{y-1} \times News_{t-1}$ (Continuous)	-0.000215	-0.000132	-0.000240
	(0.000142)	(0.000123)	(0.000146)
CEI_{y-1}			$-5.23e-05^{***}$
			(1.28e-05)
$News_{t-1}$ (Dummy)			-1.598
			(1.026)
$News_{t-1}$ (Continuous)			1.169^{***}
			(0.436)
Const.	-0.0844***	-0.0830***	-0.0963
	(0.00902)	(0.0101)	(0.105)
N. Obs	856,232	856,232	862,050
R-squared	0.193	0.201	0.102
Firm FE	х	х	\checkmark
Time FE	x	х	\checkmark
Time-country FE	\checkmark	\checkmark	x
Firm-year FE	\checkmark	х	х
Firm-quarter FE	x	\checkmark	х
F test	55.66	40.62	26.86
p value	0.000	0.000	0.00

*** p<0.01, ** p<0.05, * p<0.1

4 News and Country Heterogeneity

Having established that stocks of firms with high carbon emissions tend to underperform after the release of ED News, we now explore heterogeneity across types of news and whether the results are driven by a particular country.

As a first step, we estimate the models of columns 1 and 4 of Tables 2 and 3 separately for domestic, regional, and global news. We find that the interactive terms are always negative, but that they are statistically significant only for domestic news (see Tables A8, A9, and A10, in the Appendix; one coefficient is marginally significant in one of the four global news regression). The point estimates for the domestic news regression are similar (albeit slightly larger in absolute value) to those obtained when using all news, while the point estimates for regional and global news are marginally smaller.

Next, we run a horse race that includes interactions between firm-level carbon emissions and

the three types of news. We also find in this case that the interactive terms are always negative but that the only interaction which is statistically significant is that with domestic news (see Table 5). In fact the point estimates and standard errors are similar to those obtained when we estimated the model with one type of news at a time (compare Table 5 with Tables A8-A10).

Table 5: Horserace Regressions

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news from three sources: Domestic newspapers and magazines, Regional newspapers and magazines, and Global newspapers and magazines. All regressions include country-day fixed effects. The models of columns 1 and 4 include firm-year fixed effects and the models of columns 2 and 4 include firm-quarter fixed effects. Columns 1 and 2 use a dummy that takes value one after the release of at least one ED News. Columns 3 and 4 use a measure of the number of ED news. The standard errors are reported in parenthesis and are clustered at the firm level

	(1)	(2)	(3)	(4)
$CEI_{y-1} \times DomesticNews_{t-1}$	-0.000963***	-0.000978***	-0.000425***	-0.000398**
	(0.000307)	(0.000315)	(0.000159)	(0.000156)
$CEI_{y-1} \times RegionalNews_{t-1}$	-0.000611	-0.000682	-0.000637	-0.000722
	(0.000839)	(0.000780)	(0.000685)	(0.000637)
$CEI_{y-1} \times WorldNews_{t-1}$	-0.000783	-0.000892	-0.000727	-0.000814
	(0.000494)	(0.000608)	(0.000469)	(0.000558)
Const.	-0.0841***	-0.0828***	-0.0947***	-0.0960***
	(0.0112)	(0.0121)	(0.00972)	(0.0101)
N. Obs.	856,232	856,232	856,232	856,232
R-squared	0.193	0.201	0.193	0.201
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	x	\checkmark	x
Firm-quarter FE	x	\checkmark	х	\checkmark
News is	Dummy	Dummy	Continuous	Continuous

Robust standard errors clustered at firm level in parentheses

*** p<0.01, ** p<0.05, * p<0.1

One possible source of concerns is that our sample is dominated by a small number of large countries. Brazilian firms account for 43% of the observations, and the top three countries (Brazil, Mexico, and Chile) account for 77% of observations. To make sure that the observations are not driven by an individual country or by a small set of countries, we re-estimate the baseline regressions by weighing each observation by the inverse of the number of observations in that specific country. Thus, each observation involving Brazilian firms has a weight of $\frac{1}{368,215}$, and each observation involving Panamanian firms has a weight of $\frac{1}{5925}$. With this weighting scheme, each country has exactly the same weight. The results, reported in Table 6, are essentially identical to the baseline findings of Tables 2 and 3. They thus confirm that our findings are not driven by a particular country or group of countries with a large number of firms.

As a further robustness check we re-estimate the baseline model (with and without inverse country weights) by dropping one country at a time. The results confirm that the findings are not driven by just one influential country (see Appendix Table A11). The point estimates become smaller (but still statistically significant at the 1 percent confidence level) when we exclude Brazil and larger when we exclude Mexico (this is the country with the second largest number of observations, corresponding to 19% of the total).

We also estimate country-by-country regressions for the 6 countries with the largest number of observations (Argentina, Brazil, Chile, Colombia, Mexico, and Peru). We find that the coefficient of interest is negative and statistically significant (or very close to being statistically significant in the case of Argentina) in four countries, negative but far from being statistically significant in Colombia and positive but close to zero in Chile (Appendix Table A12).

Table 6: Weighted Regressions

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news. All regressions include country-day fixed effects. The models of columns 1 and 4 include firm-year fixed effects and the models of columns 2 and 4 include firm-quarter fixed effects. Columns 1 and 2 use a dummy that takes value one after the release of at least one ED News piece. Columns 3 and 4 use a measure of the number of ED News pieces. Each observation is weighted by the inverse of the number of observations in its specific country. The standard errors are reported in parenthesis and are clustered at the firm level

	(1)	(2)	(3)	(4)
$CEI_{y-1} \times News_{t-1}$	-0.000868***	-0.000887***	-0.000372**	-0.000352**
	(0.000208)	(0.000236)	(0.000144)	(0.000142)
Const.	1.184^{***}	1.184^{***}	1.178^{***}	1.178^{***}
	(0.00417)	(0.00471)	(0.00463)	(0.00455)
N. Obs	856,232	856,232	856,232	856,232
R-squared	0.287	0.294	0.287	0.294
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	х	\checkmark	x
Firm-quarter FE	х	\checkmark	х	\checkmark
News is	Dummy	Dummy	Continuous	Continuous

Robust standard errors in parenthesis clustered at the firm level *** p < 0.01, ** p < 0.05, * p < 0.1

5 Event Study

As an alternative method to study how environmental damage news affect carbon intensive firms, we use a two-step event-study approach. In the first step, we conduct a classic event study and compute abnormal returns around the release of environmental damage news for all firms in our sample. In the second step, we look at the relationship between these abnormal returns and carbon emission intensity.

To estimate abnormal returns associated with environmental damages news released on day T, we start by estimating the following regression for a 57 trading days window that starts at time T - 60 and ends at time T - 3:

$$r_{i(c),d} = \alpha + \beta m_{c,d} + u_{i(c),d} \tag{3}$$

where $r_{i(c),d}$ is the daily return of firm *i* (based in country *c*) on day *d* and $m_{c,d}$ is the market return in country *c* on day *d*.

Unlike most event studies, we have several events which are close to each other (as discussed in the data section, on average, we have more than two events per month). The problem with having events close to each other is that they contaminate the estimation window (in the typical event study there should no events in the estimation window). Consider, for instance, a situation in which there is one event on April 15 and one event on May 20. The estimation window for the first event starts in mid January (approximately 12 weeks before the event) and ends on April 13, and the estimation window for the second event starts in mid February and ends on May 17. There is thus a substantial overlap between the two estimation windows and the event of April 15 could affect the parameter estimates used to compute the excess returns for the May 20 event. In our case, the problem is even worse, as we have many cases with estimations windows that include multiple events.

One way to address this problem is to exclude all cases in which there are events which overlap with another event's estimation window. The problem with this strategy is that we would end up with a very small number of events. As an intermediate strategy, we allow for some overlap. Specifically, we include in our sample events with a maximum overlap of 10 days and exclude events with longer overlaps.⁵. This strategy yields a sample of 28,461 firm-events.

We then use the parameter estimates of equation 3 to obtain excess ("abnormal") returns as out-of-sample forecast error over a 5-day event window that starts at T - 2 and ends at T + 2:

$$ar_{i(c),d} = r_{i(c),d} - (\hat{\alpha} + \hat{\beta}m_{c,d}) \tag{4}$$

and compute average accumulated average abnormal returns for event E as:

$$AAR_{i(c),E} = \frac{1}{5} \sum_{d=T-2}^{T+2} ar_{i(c),d}.$$
(5)

The ratio $\frac{AAR}{\sigma_{ar}\sqrt{5}}$ (where σ_{ar} is the standard deviation of $\hat{u}_{i(c),d}$ in the estimation window) is a t-test on AAR.

As some of our estimates yield very large excess return, we trim our data at 5 percent of the abnormal return variable, and we are left with a sample of 25,615 firm-events with average excess returns that range between -1,500 and 1,500 basis points. Nearly 20,000 (77 percent of the total) of these estimated excess returns are not statistically significant, 2,869 (11 percent of the total) are positive and statistically significant at the 5 percent confidence level, and 3,077 (12 percent of the total) are negative and statistically significant.

Having built our sample of firm-event abnormal returns, we are now ready to test whether carbon-intensive firms are more likely to experience negative abnormal returns around release

⁵We explore with different maximum overlaps and obtain similar results

of environmental damages news.⁶ We start by regressing abnormal returns over the log of carbon emission intensity and find a negative but not statistically significant coefficient (column 1 of Table 7). Lack of significance could be due to the fact that our dependent variable is imprecisely estimated (77 percent of observations are not statistically significant, often because of large confidence interval). One possible solution would be to concentrate the analysis on statistically significant returns. However, it would be arbitrary to include an observation with a t-test of, say, 1.97 and exclude an observation with a t-test of 1.95. As an alternative, we rescale our t-test to range between 0 and 1 and weight each observation by its own t-test. In this way we give more weight to precisely estimated abnormal returns and less weight to abnormal returns with a large confidence interval. The weighted regressions show a much stronger and statistically significant negative relationship between carbon emission intensity and abnormal returns. The point estimate indicate that a 1 percent increase in carbon emission intensity is associated with a 242 basis points decrease in abnormal returns in the days that surround the release of environmental damage news (column 2 of Table 7). The results are robust to substituting the log of carbon emissions with the level of carbon emissions (column 3 of Table 7). We find qualitatively similar results when we augment the model with country and event fixed effects (columns 4 and 5 of Table 7). However, controlling for fixed effects reduces the magnitude of the effect of carbon emission intensity on abnormal returns. The point estimates now suggest that a one percent increase in carbon emissions is associated with a 65 basis points decrease in abnormal returns on the 5 days that surround the release of environmental damages news.

To probe further, we use two non-parametric approaches to allow for non-linearities in the relationship between abnormal returns and carbon emission intensity. We first compute average abnormal returns at different points in the distribution of carbon emissions. Specifically, we compute t-test weighted average abnormal returns for all firms in the bottom 10 percent of the distribution of carbon emissions, and we then move to firms in the bottom 20, 30, 40 and 50 percent of the distribution of carbon emissions. We also compute average abnormal returns for firms in the top 50, 60, 70, 80 and 90 percent of the distribution of carbon emissions.⁷ Figure 4 plots the average values with their corresponding 95 percent confidence intervals and shows that firms in the bottom part of the distribution of carbon emission tend to have positive abnormal returns, while firms in the upper part of the distribution (and this is especially the case for firms in the top 20th and 10th percentile) tend to have negative abnormal returns.

⁶In order to avoid focusing on firms with extreme values of carbon emissions, we also trim carbon emissions at 5 percent. We are left with a sample of 23,119 firm-events. Of these firm-events, 5,327 (23 percent of the total) have statistically significant abnormal returns, 2,560 firm-events (11 percent of the total) have positive and statistically significant abnormal returns, and 2,767 (12 percent of the total) have negative and statistically significant abnormal returns.

⁷In practice, we run t-test-weighted regressions with no controls on different sub-samples and report the constant and its 95 percent confidence interval.

	(1)	(2)	(3)	(4)	(5)
ln(CEI)	-0.209	-2.419**		-0.649**	
	(0.240)	(1.057)		(0.220)	
CEI			-0.017***		-0.005**
			(0.004)		(0.0018)
Constant	-2.478**	12.30^{***}	6.082***	5.112^{***}	3.556^{***}
	(1.021)	(3.990)	(1.621)	(0.883)	(0.382)
N. Obs	23,119	$23,\!119$	23,119	23,058	23,058
R2	0.000	0.018	0.030	0.289	0.289
Weights	х	\checkmark	\checkmark	\checkmark	\checkmark
Country Fixed Effects	x	x	х	\checkmark	\checkmark
Event Fixed effects	х	x	x	\checkmark	\checkmark

Table 7: Abnormal Returns and Carbon Emissions

This table plots the result of a set of regression in which abnormal returns are regressed on firm-year level carbon emissions. The regressions of columns 2-5 are weighted by the absolute value of abnormal return t-statistics rescaled to range between 0 and 1. The regressions of columns 4-5 include country and event fixed effects.

Robust standard errors in parenthesis clustered at country and event level *** p<0.01, ** p<0.05, * p<0.1

Figure 4: Average Abnormal Returns at Different Levels of Carbon Emissions

This figure plots average abnormal returns with 95% confidence intervals for subsamples of firms at different levels of carbon emissions. CEI<P10 plots average abnormal returns for firms in the bottom 10% of the distribution of carbon emission intensity; CEI<P20 plots average abnormal returns for firms in the bottom 20% of the distribution of carbon emission intensity, and so on for CEI<P30, CEI<P40, and CEI<P50. CEI>P50 plots average abnormal returns for firms in the top 50% of the distribution of carbon emission intensity, CEI>P60 plots average abnormal returns for firms in the top 60% of the distribution of carbon emission intensity, and so on for CEI>P70, CEI>P80, CEI>P90. All averages are weighted by the absolute value of abnormal return t-statistics rescaled to range between 0 and 1.



We also estimate a series of regressions using dummies that take value one at different points of the distribution of carbon emissions. For instance, the regression reported in column 1 of Table 8 includes a dummy that take value one for all firms in the bottom 10 percent of the distribution of carbon emission and value 0 for all other firms. Similarly, the regression of column 2 uses a dummy that takes value one for all the firms in the bottom 20 percent in the distributions. Columns 3 and 4 focus on the different extreme of the distribution and use dummies that take value 1 for firms in the top 20 and 10 percent of the distribution of carbon emissions. Columns 5 and 10 jointly include the bottom 10 percent and top 10 percent dummies.

The interpretation of the regressions of Table 8 is different from that of the average values of Figure 4. In the latter case, we are looking at average values in different points of the distribution of carbon emission intensity. In the former, we are testing for the difference of average values at different points of the distribution. For instance, the point estimates of column 1 in Table 8 tell us that average abnormal returns around the release of environmental damage news of firms in the bottom 10 percent of the distribution of carbon emission intensity are 75 basis points higher than abnormal returns in the remaining 90 percent of firms, but the difference is not statistically significant. Columns 3 and 4, instead, indicate that abnormal returns are significantly lower for firms in the top 20 and 10 percent of the distribution of carbon emission intensity (the difference is 1,200 and 1,500 basis points, respectively). Column 5 shows that abnormal returns for firms in the bottom 10 percent of the distribution of carbon emission intensity are higher (but not significantly higher) than those of firms at the 10th-90th percentile of the distribution of carbon emission intensity and abnormal returns for firms in the top 10 percent are significantly lower than those of firms at the 10th-90th percentile of carbon emission intensity.

Columns 6-10 of Table 8 are qualitatively similar when we control for country and event fixed effects. However, controlling for these variables results in lower point estimates. For instance, the difference in abnormal returns between firms in the top 10th percentile and firms in the bottom 90th percentile goes from 1,500 to 400 basis points.

Table 8: Abnormal Returns and Carbon Emission Dummies

This table plots the result of a set of regression in which abnormal returns are regressed on firm-year level dummies that take value one for different levels of carbon emissions. For instance, CEI<P10 is a dummy that takes value one for firms in the bottom 10 percentile of carbon emissions and CEI>P90 is a dummy that takes value one for firms in the top 10 percentile of carbon emissions. All regressions are weighted by the absolute value of abnormal return t-statistics rescaled to range between 0 and 1. The regressions of columns 5-8 include country and event fixed effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
P10	0.754				-1.328	0.326				0.161
	(3.523)				(3.038)	(1.049)				(1.013)
P20		-1.979					-1.668			
		(3.026)					(1.858)			
P80			-11.81***					-3.105^{**}		
			(4.338)					(1.039)		
P90				-14.96^{***}	-15.07^{***}				-4.085***	-4.076***
				(4.036)	(4.078)				(1.091)	(1.119)
Constant	2.428	2.753	5.180^{***}	4.404***	4.510***	2.454^{***}	2.706^{***}	3.186^{***}	3.002^{***}	2.989^{***}
	(2.425)	(2.608)	(1.570)	(1.537)	(1.644)	(0.0758)	(0.256)	(0.234)	(0.144)	(0.196)
N. Obs	23,119	23,119	23,119	23,119	23,119	23,058	23,058	23,058	23,058	23,058
R2	0.000	0.000	0.024	0.025	0.025	0.289	0.289	0.289	0.289	0.289
Country FE	х	х	х	х	х	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Event FE	х	х	x	x	x	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

Robust standard errors in parentheses clustered at the country and event level *** p < 0.01, ** p < 0.05, * p < 0.1

6 Conclusions

This study provides evidence that news related to environmental damages significantly influences stock returns, particularly for firms with high carbon emission intensity in Latin America and the Caribbean. The primary conclusion drawn from this analysis is that the release of environmental damage news disproportionately and negatively affects firms with a higher carbon footprint compared to those with a lower one. This finding underscores the increasing sensitivity of the market to environmental performance, reflecting growing investor awareness and concern about environmental risks and their financial implications.

Further, the study highlights the critical role of transparent and timely environmental reporting in shaping investor behavior. As the financial market reacts swiftly to news of environmental harm, it becomes salient for firms, especially those with high carbon intensity, to adopt more sustainable practices and reduce their environmental impact. This shift not only mitigates potential reputational and financial risks but also aligns with global efforts to combat climate change.

The results also have significant implications for policymakers. They underscore the need for environmental regulations and policies that incentivize firms to reduce their carbon emissions. Such policies could include carbon taxes, emission trading schemes, and subsidies for green technologies. In addition, enhancing the disclosure requirements related to environmental impacts could further sensitize the market to these issues, leading to more environmentally responsible investment decisions. Future research could extend this analysis to other regions, examine the long-term effects of environmental news on stock returns, and explore the impact of different types of environmental news.

In conclusion, this study contributes to our understanding of the interplay between environmental performance and financial valuation. It highlights the increasing importance of environmental considerations in the financial market and offers insights for investors, firms, and policymakers in navigating the challenges of integrating environmental risks into financial decision-making.

References

- Ardia, David et al. (Oct. 2020). Climate change concerns and the performance of green versus brown stocks. Working Paper Research 395. National Bank of Belgium.
- Aswani, Jitendra, Aneesh Raghunandan, and Shivaram Rajgopal (2023). "Are carbon emissions associated with stock returns?" *Review of Finance, forthcoming.*
- Berthold, Brendan et al. (2023). The Heterogeneous Effects of Carbon Pricing: Macro and Micro Evidence. Tech. rep. Centre for Macroeconomics (CFM).
- Bessec, Marie and Julien Fouquau (2022). "Green Attention in Financial Markets: A Global Warning". Annals of Economics and Statistics 148, pp. 29–64.
- (2024). "A Green Wave in Media: A Change of Tack in Stock Markets*". Oxford Bulletin of Economics and Statistics n/a.n/a.
- Bolton, Patrick and Marcin Kacperczyk (2021). "Do Investors Care about Carbon Risk?" Journal of Financial Economics 142.2, pp. 517–549.
- (2022). "Global Pricing of Carbon-Transition Risk". Journal of Finance forthcoming.
- (2023). "Are carbon emissions associated with stock returns? Comment". Review of Finance, rfad019.
- Bolton, Patrick, Adrian Lam, and Mirabelle Muûls (2022). Do Carbon Prices Affect Stock Returns? Imperial College.
- Capelle-Blancard, Gunther and Marie-Aude Laguna (2010). "How does the stock market respond to chemical disasters?" Journal of Environmental Economics and Management 59.2, pp. 192– 205.
- Carpentier, Cécile and Jean-Marc Suret (2015). "Stock market and deterrence effect: A mid-run analysis of major environmental and non-environmental accidents". *Journal of Environmental Economics and Management* 71.C, pp. 1–18.
- Cutler, David, James Poterba, and Lawrence Summers (1989). "What Moves Stock Prices?" The Journal of Portfolio Management 15.3, pp. 4–12.
- Dahlmann, Frederik, Layla Branicki, and Stephen Brammer (2019). "Managing Carbon Aspirations: The Influence of Corporate Climate Change Targets on Environmental Performance". *Journal of Business Ethics*, pp. 1–24. URL: https://api.semanticscholar.org/CorpusID: 158730682.
- El Ouadghiri, Imane et al. (2021). "Public Attention to Environmental Issues and Stock Market Returns". *Ecological Economics* 180, p. 106836.

- Engle, Robert F et al. (2020). "Hedging Climate Change News". The Review of Financial Studies 33.3, pp. 1184–1216.
- Faccini, Renato, Rastin Matin, and George Skiadopoulos (2023). "Dissecting climate risks: Are they reflected in stock prices?" Journal of Banking & Finance 155, p. 106948.
- Flammer, Caroline (2013). "Corporate Social Responsibility and Shareholder Reaction: The Environmental Awareness of Invstors". The Academy of Management Journal 56.3, pp. 758– 781.
- Fraiberger, Samuel P. et al. (2021). "Media sentiment and international asset prices". *Journal* of International Economics 133, p. 103526.
- Garcia, Diego (2013). "Sentiment during Recessions". The Journal of Finance 68.3, pp. 1267–1300.
- Hengge, Martina, Ugo Panizza, and Richard Varghese (Feb. 2023). Carbon Policy Surprises and Stock Returns: Signals from Financial Markets. CEPR Discussion Papers 17868. C.E.P.R. Discussion Papers. URL: https://ideas.repec.org/p/cpr/ceprdp/17868.html.
- Jeon, Yoontae, Thomas H. McCurdy, and Xiaofei Zhao (2022). "News as sources of jumps in stock returns: Evidence from 21 million news articles for 9000 companies". Journal of Financial Economics 145.2, Part A, pp. 1–17.
- Lee, Su-Yol, Yunseon Park, and Robert D. Klassen (2015). "Market Responses to Firms' Voluntary Climate Change Information Disclosure and Carbon Communication". *Corporate Social Responsibility and Environmental Management* 22, pp. 1–12. URL: https://api. semanticscholar.org/CorpusID:166760334.
- Millischer, Laurent, Tatiana Evdokimova, and Fernandez Oscar (2022). The Carrot and the Stock: In Search of Stock-Market Incentives for Decarbonization. IMF Working Paper 22/231.
- Min, Seung-Ki et al. (2011). "Human contribution to more-intense precipitation extremes". Nature 470, pp. 378-381. URL: https://api.semanticscholar.org/CorpusID:1770045.
- Pástor, Ľuboš, Robert F. Stambaugh, and Lucian A. Taylor (2021). "Sustainable investing in equilibrium". *Journal of Financial Economics* 142.2, pp. 550–571.
- Zhang, Junni et al. (2016). "Distillation of News Flow Into Analysis of Stock Reactions". Journal of Business & Economic Statistics 34.4, pp. 547–563.
- Zhang, Shaojun (2023). "Carbon Returns Across the Globe". Fisher College of Business Working Paper No. 2022-03-006.

Appendix A: Additional Tables and Figures

· · · · ·	U		
Country	Mean	St. Dev	N. Obs
Argentina	0.02323	0.17610	5,294
Bahamas	0.00057	0.02380	$5,\!294$
Brazil	0.25123	0.76380	$5,\!294$
Chile	0.08406	0.42445	$5,\!294$
Colombia	0.01133	0.12990	$5,\!294$
Costa Rica	0.00189	0.04342	$5,\!294$
Dominican Republic	0.00038	0.02749	$5,\!294$
Ecuador	0.01492	0.14664	$5,\!294$
Honduras	0.00302	0.05824	$5,\!294$
Jamaica	0.00076	0.03366	$5,\!294$
Mexico	0.12939	0.54884	$5,\!294$
Panama	0.00586	0.08564	$5,\!294$
Peru	0.02928	0.24759	$5,\!294$
Trinidad and Tobago	0.00019	0.01374	5,294
Uruguay	0.00094	0.03072	$5,\!294$
Venezuela	0.00699	0.09596	$5,\!294$
Total	0.03318	0.27554	89,998

Table A1: News By Country (All News)

This table reports country-by-country summary statistics for the All News variable.

Table A2: News By Country (Domestic News)

This table reports	country-by-country	summary	statisti	cs for	the	Domestic	News	variable.
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	Country	Mean	St. Dev	N. Obs
-	Argentina	0.0153	0.14001	5,294
	Bahamas	0.0000	0.00000	$5,\!294$
	Brazil	0.2306	0.73397	$5,\!294$
	Chile	0.0803	0.40795	$5,\!294$
	Colombia	0.0060	0.08887	$5,\!294$
	Costa Rica	0.0017	0.04120	5,294
	Dominican Republic	0.0000	0.00000	5,294
	Ecuador	0.0004	0.01943	5,294
	Honduras	0.0002	0.01374	5,294
	Jamaica	0.0000	0.00000	5,294
	Mexico	0.0701	0.37768	5,294
	Panama	0.0051	0.07636	5,294
	Peru	0.0089	0.10339	$5,\!294$
	Trinidad and Tobago	0.0000	0.00000	5,294
	Uruguay	0.0004	0.01943	5,294
	Venezuela	0.0002	0.01374	5,294
	Total	0.0247	0.23628	89,998

Country	Mean	St. Dev	N. Obs
Argentina	0.00472	0.08347	$5,\!294$
Bahamas	0.00000	0.00000	$5,\!294$
Brazil	0.00869	0.10788	$5,\!294$
Chile	0.00227	0.05827	$5,\!294$
Colombia	0.00491	0.08000	$5,\!294$
Costa Rica	0.00019	0.01374	$5,\!294$
Dominican Republic	0.00000	0.00000	$5,\!294$
Ecuador	0.00359	0.05981	$5,\!294$
Honduras	0.00113	0.03365	$5,\!294$
Jamaica	0.00000	0.00000	$5,\!294$
Mexico	0.02229	0.16343	5,294
Panama	0.00076	0.02748	5,294
Peru	0.01284	0.17009	$5,\!294$
Trinidad and Tobago	0.00019	0.01374	5,294
Uruguay	0.00019	0.01374	$5,\!294$
Venezuela	0.00378	0.06436	$5,\!294$
' Total	0.00386	0.07466	89,998

Table A3: News By Country (Regional News)

This table reports country-by-country summary statistics for the Regional News variable.

Table A4: News By Country (World News)

This table reports country-by-country summary statistics for the World News variable.

	ě		
Country	Mean	St. Dev	N. Obs
Argentina	0.00321	0.06291	$5,\!294$
Bahamas	0.00057	0.02380	$5,\!294$
Brazil	0.01190	0.12765	$5,\!294$
Chile	0.00151	0.04344	$5,\!294$
Colombia	0.00038	0.01943	$5,\!294$
Costa Rica	0.00000	0.00000	$5,\!294$
Dominican Republic	0.00038	0.02749	$5,\!294$
Ecuador	0.01096	0.12700	$5,\!294$
Honduras	0.00170	0.04556	$5,\!294$
Jamaica	0.00076	0.03366	$5,\!294$
Mexico	0.03702	0.26251	$5,\!294$
Panama	0.00000	0.00000	$5,\!294$
Peru	0.00756	0.10620	$5,\!294$
Trinidad and Tobago	0.00000	0.00000	5,294
Uruguay	0.00038	0.01943	$5,\!294$
Venezuela	0.00302	0.06440	$5,\!294$
Total	0.00467	0.08718	89,998

Lable 110. Louinaulons with Main Lifeth	Table A5:	Estimations	with	Main	Effect
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This table reports a set of regressions where the dependent variable is daily stock returns and the main control variables are firm-year level carbon emissions, country-day-levels ED News, and the interaction between these two variables. Columns 2 and 3 also include a richer lag structure. All regressions include firm and time fixed effects. The standard errors are reported in parenthesis and are clustered at the firm level.

	(1)	(2)	(3)
$CEI_{y-1} \times News_{t-1}$	-0.000866***	-0.000834***	-0.00123***
	(0.000199)	(0.000143)	(0.000196)
CEI_{y-1}	-5.20e-05***	-6.00e-05	-5.39e-05
	(1.29e-05)	(7.58e-05)	(5.45e-05)
$News_{t-1}$	0.434	-0.933	-4.242***
	(0.725)	(1.112)	(1.304)
$CEI_{y-1} \times News_t$		0.000601	0.000558
		(0.000464)	(0.000499)
$CEI_{y-1} \times News_{t+1}$		0.000382	0.000337
		(0.000456)	(0.000458)
$News_t$		5.553^{***}	3.833^{***}
		(1.150)	(1.271)
$News_{t+1}$		4.899^{***}	3.527^{***}
		(1.024)	(1.169)
$CEI_{y-1} \times News_{t-2}$			0.000206
			(0.000746)
$CEI_{y-1} \times News_{t+2}$			8.13e-05
			(0.000552)
$News_{t-2}$			-6.661***
			(1.330)
$News_{t+2}$			-3.560***
			(1.373)
Const.	-0.0975	0.223^{*}	1.431^{***}
	(0.105)	(0.127)	(0.158)
N. Obs	862,050	704,073	650,929
R-squared	0.102	0.100	0.098
Firm FE	\checkmark	\checkmark	\checkmark
Time FE	\checkmark	\checkmark	\checkmark

*** p<0.01, ** p<0.05, * p<0.1

Table A6: Multiple Firm-Level Interactions (firm-year FE)

The sectors are: Accommodation and food (S1); Administration and Support (S2); Agriculture, forestry and fishing (S3); Construction (S4); Education (S5); Electricity, gas and steam (S6); Entertainment (S7); Financial and insurance (S8); Health and social work (S9); Information and communication (S10); Manufacturing (S11); Mining (S12); Professional and technical (S13); Public administration (S14); Real estate (S15); Transport and storage (S16); Water, sewage, and water management (S17); Wholesale and retail (excluded group).

	(1)	(0)	(9)	(4)	(٢)	(C)
CEL NAME	(1)	(2)	(3)	(4)	(0)	(0)
$CEI_{y-1} \times News_{t-1}$	-0.0009^{100}	-0.0009^{4000}	-0.0009^{+44}	-0.0009	-0.0009	-0.0009
	(0.00017)	(0.00017)	(0.00017)	(0.00018)	(0.00018)	(0.00020)
$ln(Assets_{y-1}) \times News_{t-1}$	-1.414***					-2.474***
	(0.352)	0 000***				(0.868)
$ln(Turn_{y-1}) \times News_{t-1}$		-0.982***				0.977
		(0.350)				(0.850)
$Op. Marg{y-1} \times News_{t-1}$			0.00019***			1.61e-05
			(0.00001)			(0.0006)
$Leverage_{y-1} \times News_{t-1}$				-0.00306		-0.00290
				(0.0114)		(0.0118)
$S1 \times News_{t-1}$					1.290	0.166
					(4.525)	(4.980)
$S2 \times News_{t-1}$					3.855	7.802
					(4.492)	(4.965)
$S3 \times News_{t-1}$					-9.716*	-7.952
					(5.688)	(5.119)
$S4 \times News_{t-1}$					2.446	3.546
					(3.362)	(3.530)
$S5 \times News_{t-1}$					5.538	6.296
					(5.547)	(5.791)
$S6 \times News_{t-1}$					-2.156	-0.658
					(2.711)	(3.035)
$S7 \times News_{t-1}$					-1.339	-2.835
					(5.986)	(5.978)
$S8 \times News_{t-1}$					-2.197	2.443
					(2.771)	(3.398)
$S9 \times News_{t-1}$					-2.837	-4.510
					(4.263)	(5.075)
$S10 \times News_{t-1}$					2.253	4.201
0 1					(3.511)	(3.756)
$S11 \times News_{t-1}$					-0.216	-0.233
					(2.666)	(2.742)
$S12 \times News_{t-1}$					1.590	2.837
					(3.469)	(3.884)
$S13 \times News_{t-1}$					-4.192	-3.135
515 × 110 × 11					(4.568)	(5,791)
$S14 \times News_{\pm -1}$					-3 801	-4 936*
STIXTEESL					(2.678)	(2.809)
$S15 \times News_{\pm -1}$					4 061	5 797
$S10 \times Weas_{t=1}$					(3.215)	$(4 \ 143)$
$S16 \times Neares$					0.302	2.785
$010 \land 1000t=1$					(3.853)	(4.900)
$S17 \times News$					1 763	5 92/*
$S11 \times New S_{t-1}$					(2.596)	(2.954)
N. Obc	704 286	795 416	799 195	761.059	(0.000)	(0.000) 759.071
IN. ODS Decement	0.205	0.205	0 205	01,900	0102	0.200
Time country FF	0.200	0.200	0.200	0.210	0.195	0.209
Fine waar EE	v	V	V	v	v	V
гит-year гЕ	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table A7: Multiple Firm-Level Interactions (firm-quarter FE)

The sectors are: Accommodation and food (S1); Administration and Support (S2); Agriculture, forestry and fishing (S3); Construction (S4); Education (S5); Electricity, gas and steam (S6); Entertainment (S7); Financial and insurance (S8); Health and social work (S9); Information and communication (S10); Manufacturing (S11); Mining (S12); Professional and technical (S13); Public administration (S14); Real estate (S15); Transport and storage (S16); Water, sewage, and water management (S17); Wholesale and retail (excluded group).

	(1)	(2)	(3)	(4)	(5)	(6)
$CEI_{y-1} \times News_{t-1}$	-0.0009***	-0.001***	-0.001***	-0.001***	-0.001***	-0.0009***
	(0.0002)	(0.0002)	(0.0002)	(0.00019)	(0.00021)	(0.00022)
$ln(Assets_{y-1}) \times News_{t-1}$	-1.243^{***}					-2.372^{***}
	(0.363)					(0.883)
$ln(Turn_{y-1}) \times News_{t-1}$		-0.840**				1.048
		(0.353)				(0.876)
$Op. Marg{y-1} \times News_{t-1}$			0.00014^{**}			-0.000165
			(0.00001)			(0.00067)
$Leverage_{y-1} \times News_{t-1}$				-0.00614		-0.00572
				(0.0111)		(0.0115)
$S1 \times News_{t-1}$					1.180	0.184
					(4.850)	(5.306)
$S2 \times News_{t-1}$					2.103	6.421
					(4.582)	(5.136)
$S3 \times News_{t-1}$					-8.903	-6.845
					(5.480)	(4.802)
$S4 \times News_{t-1}$					2.725	4.104
					(3.358)	(3.483)
$S5 \times News_{t-1}$					3.822	4.776
					(5.555)	(5.833)
$S6 \times News_{t-1}$					-1.748	-0.176
					(2.719)	(3.024)
$S7 \times News_{t-1}$					-3.334	-4.286
					(5.111)	(5.178)
$S8 \times News_{t-1}$					-1.789	2.936
					(2.751)	(3.328)
$S9 \times News_{t-1}$					-2.580	-3.875
					(4.760)	(5.561)
$S10 \times News_{t-1}$					3.828	5.928
					(3.408)	(3.631)
$S11 \times News_{t-1}$					0.587	0.738
					(2.643)	(2.707)
$S12 \times News_{t-1}$					3.877	5.547
					(3.525)	(3.982)
$S13 \times News_{t-1}$					-4.058	-3.553
					(4.495)	(6.231)
$S14 \times News_{t-1}$					-6.109**	-7.181^{**}
					(2.695)	(2.803)
$S15 \times News_{t-1}$					4.728	6.754
					(3.221)	(4.126)
$S16 \times News_{t-1}$					0.544	3.276
					(3.935)	(4.225)
$S17 \times News_{t-1}$					1.536	5.610
					(3.796)	(3.859)
N. Obs	794,286	785,416	782,125	761,958	856,232	753,871
R-squared	0.213	0.214	0.214	0.218	0.201	0.217
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Firm-quarter FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table A8: Domestic News

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news in domestic newspapers and magazines. All regressions include country-day fixed effects. The models of columns 1 and 4 include firm-year fixed effects and the models of columns 2 and 4 include firm-quarter fixed effects. Columns 1 and 2 use a dummy that takes value one after the release of at least one ED News piece. Columns 3 and 4 use a measure of the number of ED News pieces. The standard errors are reported in parenthesis and are clustered at the firm level.

	(1)	(2)	(3)	(4)
$CEI_{y-1} \times News_{t-1}$	-0.000977***	-0.000992***	-0.000427***	-0.000399***
	(0.000254)	(0.000262)	(0.000148)	(0.000145)
Const.	-0.0882***	-0.0875^{***}	-0.100***	-0.102***
	(0.0111)	(0.0115)	(0.0108)	(0.0106)
N. Obs	856,232	856,232	856,232	856,232
R-squared	0.193	0.201	0.193	0.201
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	х	\checkmark	х
Firm-quarter FE	x	\checkmark	x	\checkmark
News is	Dummy	Dummy	Continuous	Continuous
where o o t where o o				

*** p<0.01, ** p<0.05, * p<0.1

Table A9: Regional News

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news in regional newspapers and magazines. All regressions include country-day fixed effects. The models of columns 1 and 4 include firm-year fixed effects and the models of columns 2 and 4 include firm-quarter fixed effects. Columns 1 and 2 use a dummy that takes value one after the release of at least one ED News piece. Columns 3 and 4 use a measure of the number of ED News pieces. The standard errors are reported in parenthesis and are clustered at the firm level.

	(1)	(2)	(3)	(4)
$CEI_{y-1} \times News_{t-1}$	-0.000771	-0.000832	-0.000675	-0.000756
	(0.000863)	(0.000818)	(0.000724)	(0.000676)
Const.	-0.128^{***}	-0.128^{***}	-0.128^{***}	-0.127^{***}
	(0.00373)	(0.00354)	(0.00355)	(0.00331)
N. Obs	856,232	856,232	856,232	856,232
R-squared	0.193	0.201	0.193	0.201
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	х	\checkmark	х
Firm-quarter FE	x	\checkmark	x	\checkmark
News is	Dummy	Dummy	Continuous	Continuous

Robust standard errors clustered at firm-level in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A10: Global News

This table reports a set of regressions where the dependent variable is daily stock returns and the main control variable is the interaction between firm-level carbon emission intensity and the release of environmental damage news in global newspapers and magazines. All regressions include country-day fixed effects. The models of columns 1 and 4 include firm-year fixed effects, and the models of columns 2 and 4 include firm-quarter fixed effects. Columns 1 and 2 use a dummy that takes value one after the release of at least one ED News piece. Columns 3 and 4 use a measure of the number of ED News pieces. The standard errors are reported in parenthesis and are clustered at the firm level.

	(1)	(2)	(3)	(4)
$CEI_{y-1} \times News_{t-1}$	-0.000690*	-0.000817	-0.000672	-0.000780
	(0.000417)	(0.000524)	(0.000421)	(0.000514)
Const.	-0.129^{***}	-0.129^{***}	-0.129^{***}	-0.129^{***}
	(0.00113)	(0.00142)	(0.00133)	(0.00162)
N. Obs.	856,232	856,232	856,232	856,232
R-squared	0.193	0.201	0.193	0.201
Time-country FE	\checkmark	\checkmark	\checkmark	\checkmark
Firm-year FE	\checkmark	х	\checkmark	х
Firm-quarter FE	x	\checkmark	x	\checkmark
News is	Dummy	Dummy	Continuous	Continuous

Robust standard errors clustered at firm-level in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1

Table A11: Regression Results with Country Exclusions

This table reports the coefficients and t-statistics of the interaction between firm-level carbon emission intensity and the release of environmental damage news using the same models as column 4 of Table 2 and column 2 of Table 6 but by dropping one country at a time.

	NT - TT		*** •	1 . 1	
Excluded	Not W	eighted	Weig	ghted	
Country	Coefficient	t statistics	Coefficient	t statistics	N. Obs
Argentina	-0.0010	4.691 ***	-0.0008	3.292 ***	4,102,850
Bahamas	-0.0010	4.975 ***	-0.0009	3.768 ***	4,441,666
Brazil	-0.0005	3.303 ***	-0.0005	2.608 **	2,869,348
Chile	-0.0010	5.262 ***	-0.0009	3.900 ***	$3,\!679,\!330$
Colombia	-0.0010	4.947 ***	-0.0009	3.680 ***	$4,\!251,\!082$
Costa Rica	-0.0010	4.974 ***	-0.0009	3.767 ***	$4,\!441,\!666$
Dominican Republic	-0.0010	4.973 ***	-0.0009	3.766 ***	4,446,960
Ecuador	-0.0010	4.983 ***	-0.0009	4.105 ***	$4,\!436,\!372$
Honduras	-0.0010	4.973 ***	-0.0009	3.766 ***	4,446,960
Jamaica	-0.0010	4.973 ***	-0.0009	3.766 ***	4,304,022
Mexico	-0.0012	18.62 ***	-0.0012	10.15 ***	$3,\!626,\!390$
Panama	-0.0010	4.976 ***	-0.0009	3.787 ***	$4,\!394,\!020$
Peru	-0.0010	4.876 ***	-0.0009	3.584 ***	4,092,262
Trinidad and Tobago	-0.0010	4.971 ***	-0.0009	3.741 ***	4,372,844
Uruguay	-0.0010	4.973 ***	-0.0009	3.766 ***	$4,\!446,\!960$
Venezuela	-0.0010	4.974 ***	-0.0009	3.774 ***	$4,\!436,\!372$

Table A12: Country by Country Regressions

This table reports the coefficients and t-statistics of the interaction between firm-level carbon emission intensity and the release of environmental damage news based on country-by-country regressions using the same models as column 4 of Table 2 but with time fixed effects instead of country-time fixed effects.

Country	Coefficient	p value
Argentina	-0.0131	0.108
Brazil	-0.0012	0.000
Chile	0.0001	0.909
Colombia	-0.0030	0.479
Mexico	-0.0004	0.013
Peru	-0.0025	0.099

Appendix B: Factiva Professional News Examples

B1: Review of the Top 15 News Results Obtained from our Selected Query Code in Factiva Professional

Figure A1: Domestic News for Chile

The selected query topic filter is: (('Natural Environment' and 'Corporate Crime/Legal Action') and not ('Carbon Sequestration' or 'Energy Efficiency' or 'Environmental Protection')) Filter criteria (including selected query topic): Sources: All domestic news sources from Chile, Related country article content: Chile, Date range: 01/01/2009 - 12/31/2022, Language: Spanish

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10	0	- 1		1. Te Corte Suprema rechaza recurso y confirma multa contra Arauco por contaminación de río Cruces		
				ValorFuturo 9.04, 29 December 2022, 547 words, (Spanish)		
			н.	Valdivia-Dic 29-Austral de Valdivia-En un fallo emitido el pasado 13 de diciembre, la Corte Suprema rechazó los recursos de casación "en la forma y en el fondo" deducidos por la Si (SMA) y	3uperintendencia del Medio An	nbiente
0	0 1-Jan-2010 31-De	ic-2022		2. Presentan demanda contra minera Vizcachitas Holding por contaminación y modificación de Río Rocín		
	Distribution: Yearly	-	L	Londow, 1 - Discontinue care, contraining (continue) Ante el Segundo Tribunal Ambiental, la organización Vecinos en Movimiento por el Valle de Putaendo, presentó una demanda contra la minera Vizcachitas Holding, acusando daño al Las Tejas del Río Rocín	l medio ambiente efectuado en	n el sector
	Companies	Export		3. Ta PAÍS; «Fallo importante»: Corte Suprema prohíbe venta de terrenos del proyecto Punta Puertecillo y multa a inmobiliaria del dueño del Mall		
	Barrick Gold Corp	24		El Mostrador , 28 November 2022, 650 words, (Spanish)	lución de Californión Ambiente	
	Empresa Nacional de Petr	18	1	ci moximo mouna promoto la vena de tenenos como medida cadelar nasia que el projecto numa nuelecimo -ubicado en la Región de O rigginis- odenga la conespondente Resolu dictó la medida tras	ución de Calincación Ambienta	si. La Conte
	Antofagasta pic	15), C	14. 📲 Zofri acusa a Engle Chile por "desastre ambiental" tras abandonar terrenos de excentral a diésel sin hacer saneamiento		
	AES Andes S.A.	11		La Terceral, 8 November 2022, 930 words, (Spanish) Un recurso presentado ante el Primer Tribunal Ambiental va fue aconido a trámite. Informes de expertos señalan que la contaminación afecta a aquas subterráneas y notiría llegar a la	mar, siendo incluso más grave	e que el
	Corporacion Nacional del	8	u.	icónico caso de Las	inal, clonac incluse inde grate	. 400 0.
	Empresas Copec SA	8	C]5. 🔚 Nuevo "sheriff ambiental": quiénes son los candidatos a superintendente del Medio Ambiente y sus desafios		
	Sociedad Quimica y Miner Anglo American PLC	7		La rercera, / November 2022, 1222 words, (spanish) El pasado jueves, el Servicio Civil entregó al Presidente Gabriel Boric una nómina con tres postulantes para asumir como nuevo superintendente del Medio Ambiente. El listado está in	integrado por Marie Claude Pli	umer, actual
٥	3	0		jefa de la División		
	 Sources 	Export	C	6. Muevo "sheriff ambiental": quiénes son los candidatos a superintendente del Medio Ambiente y sus desafios		
	La Tercera (Chile, Spanis BioBio (Chile, Spanish La	77 69		El pasado jueves, el Servicio Civil entregó al Presidente Gabriel Boric una nómina con tres postulantes para asumir como nuevo superintendente del Medio Ambiente. El listado está ir jefa de la División	integrado por Marie Claude Plu	umer, actual
	El Mercurio (Chile, Spanis Business News Americas	53 42	C	7. 📲 Se rechaza reclamación de EFE contra el Ministerio del Medio Ambiente que pretendía redefinir el área del Humedal Urbano Estero Quilpué		
	ValorFuturo (Chile, Spanis	41		La tercera, « november 2022, // words, (spanish) El Segundo Tribunal Ambiental desestimó cada una de las alegaciones de la empresa estatal, asociadas a supuestas vulneraciones al derecho de propiedad, al derecho a desarrollar	r cualquier actividad económic:	a lícita, al
	El Mostrador (Chile, Spani Pulso (Chile, Spanish Lan	39	-	principio de		
	Diario Financiero (Chile, S	17 4	• C	☐ Headlines 1 - 20 of 379 Next 20 ►		
	Revista Energía (Spanish	8	C	🔉 🔚 Demandan a Essblo por contaminación en bahía de San Vicente: acusan que se acabaron recursos marinos		
	 Subjects 	Export		Bioblo, 3 November 2022, 401 Words, (spanish) El síndicato de algueros y recolectores de orilla de la bahía de San Vicente interpuso una demanda por contaminación contra la empresa Essbio, en la región del Bío Bío.		
	Corporate Crime/Legal Ac Natural Environment	339	C	□ 9. 🕼 Zofri ingresa demanda ambiental ante 1TA contra Engie Chile por derrame de hidrocarburos		
	Regulation/Government P	112		ValorFuturo , 16:12, 3 November 2022, 637 words, (Spanish) SantianoNov 3 I na demanda nor daño ambiental internuso ante el Primer Tribunal Ambiental la Zona Franca de Inuinue (Zofo) contra la empresa Engle Chile por lo que indica sería	ía un derrame de hidrocarburo	os debido a
	Environmental Pollution	87		las	a an acrianci ac marocarbaro.	5 405/40 4
	Judicial Branch (Discontin Regulatory Breach	80	C	🛛 ^{10.} 🔚 Puente Bicentenario: Corte ordena a SMA reabrir procedimiento administrativo por obras de viaducto		
	Crime/Legal Action	46		BioBio , 24 October 2022, 341 words, (Spanish) La Corte de Apelaciones de Valdivia, región de Los Ríos, confirmó la sentencia del Tercer Tribunal Ambiental y ordenó a la Superintendencia del Medio Ambiente reabrir un procedimie	iento administrativo por las obr	ras del
	Corporate/Industrial News	42		Puente Bicentenario en		
	Regulatory Bodies Suggested Reading - Met	18	< 0	11. CULTURA/MEDIOAMBIENTE; Inician proceso sancionatorio por faltas gravísimas a salmonera de Pablo Baroaona, hijo del exministro de Economia de		
٥			LTERS	Tras una denuncia ciudadana, la Superintendencia del Medio Ambiente (SMA) inició un proceso sancionatorio contra la empresa Salmones Aysén S.A., controlada Pablo Baraona, hijo Direched de interno nombre El	jo del ex ministro de Economia	a de
	 Industries 	Export				
	Silver Ore Mining	78		Image:		
	Utilities	19		Por segunda vez en el año, la minera tuvo que detener sus actividades en la región de Valparaíso. Esta vez fue por desacato, al no contar con un plan de monitoreo de vizcacheras y por el Servicio	del gato andino, debidamente	e aprobado
	Copper Ore/Nickel Ore Mi	18		13. 🎏 Detenidos en Arauco habrían robado dos mil camiones con madera		
	Real Estate	12		El Mercurio , 17 September 2022, 579 words (Spanish)		
	Fishing	11		Una reiterada participación en delitos de tala ilegal de bosques por parte de la organización criminal que fue sorprendida el martes 13 en flagrancia, mientras robaba madera en el fun de Bioblo,	ido Yani, en la comuna de Ara	uco, al sur
	Electric Power Generation	11	C	14. 🌆 Violenta oposición a operativo policial por robo de madera termina con los 7 detenidos solo con prohibición de acercarse al predio		
	Primary Metals	11		El Mercurio, 14 September 2022, 951 words, (Spanish)		

Figure A2: Domestic News for Panama

The selected query topic filter is: (('Natural Environment' and 'Corporate Crime/Legal Action') and not ('Carbon Sequestration' or 'Energy Efficiency' or 'Environmental Protection')). Filter criteria (including selected query topic): Sources: All domestic news sources from Panama, Related country article content: Panama, Date range: 01/01/2009 - 12/31/2022, Language: Spanish

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15				01.	Te Ecologistas buscarán avuda ante Tribunal de La Hava para frenar minería de cielo abierto en Panamá			
10			ы		La Verda Prananá . 19 November 22. 433 volos, (Spanih)			
5			L		Javier Collins Agnew La Verdad Panamá Ecologistas panameños están haciendo contactos para que el estado panameño sea demandado ante la Corte Internacional de Justicia, órgano judicial de la Naciones Unidas (ONU), con sede	ı Organizació	n de las	5
0	-Jan-2011 31-D	ec-2022	ы	2.	Reportan al MINSA caso contra desguazadoro de barcos Paramá Amídicai 20 october 202 869 veció (Seneth)			
	Distribution: Yearly		ы		El caso del desguazadero de barcos ubicado en el corregimiento de Cristóbal en Colón, cercano a una zona residencial y comercial, pasó a manos del ministro de Salud, Luis Francisco Sucre.			
-	 Companies 	Export	ы	3,	[™] Solicitan que el diseño de la via Omar Torrijos sea menos 'invasivo'			
	Volkswagen AG	3			La Prensa , 8 September 2022, 324 words, (Spanish) El norwento de ensanche de la suvenita norar Torrilos, que se encuentra detenido actualmente, deberá contar con un quevo estudio de impacto ambiental			
	Panama Maritime Authority	2		Π4.	e provense en antenna en a entre elle antenna en a como economica de contra estar en anten e contante en antene e contante en antene estar elle antene esta			
	Inter-American Developm	2	<		La Presa ; June 202, 243 werd, (Spanis)			
	Astaldi SpA	1			La Fiscalia Superior de Medio Ambiente del Ministerio Público (MP) realizó este jueves 2 de junio una serie de diligencias de inspección en las comunidades de Kuna Nega, Cárdenas, Mocambo y oti relieno sanitario de	ras barriadas	cercan	as al
	Cerrejon	1	-	5.	Te Frees con luz verde para bacer estudio ambiental de cuarta línea de transmisión			
	Empresa de Transmision Court of Justice of the Eur	1	<		Le Prema, 10 April 2022, 66 Honda, (Spanish)			
	 Sources 	Export			El Tribunal Administrativo de Contrataciones Públicas confirmó la decisión de adjudicar al Consorcio Camsa-Engimore, la licitación del estudio de impacto ambiental categoría III para el desarrollo de eléctrica	la cuarta líne	.a de tra	ansmisión
	La Estrella (Panama, Spa	. 16		6.	🕼 Juez pone fin al caso por contaminación del río La Villa			
	La Prensa (Panama, Spa	6			La Prensa , 23 February 2022, 251 words, (Spanish)			
	El Siglo (Panama, Spanis	4			L'espués de ocho anos de la contaminación de las aguas del no La Villa, en la península de Azuero, con nerviolas atrazina, un Juzgado de Cumplimiento declaro ejecutada la pena contra la empresa fue condenada en 2016	Campos de	Pese S.	.A. que
	Dia a Dia Online (Panama.	- 3		07.	ି≣ Defensoria demanda a colombiana Urbalia por daño ambiental			
	Panamá América (Spanis	3			El Sigle J. 22 January 2022, 512 words, (Spanish)			_
	Critica Online (Panama, S	- 1			Er nutai de la Detensiona del Pueblo de Panama, Eduardo Lebiano, presento este vientes una demanda penar por posible dento antibernar y contra la satud publica contra la empresa Orbana, proper Interasso, encargada del	lad de la colo	mpiana	1
	La Verdad Panamá (Spani.	·· 1		08.	🖆 Defensor presenta denuncia contra empresa por delitos ambientales			
-	 Subjects 	Export]			Critica Online , 21 January 2022, 203 words, (Spanish)			
	Corporate Crime/Legal Ac.	32		UH	Headines 1 - 20 of 37 Next 17 >			
	Regulation/Government P	24		- 0	Panama- El Detensor del Pueblo, Eduardo Leblanc, presento hoy, viernes, ante el Ministeno Público una denuncia penal contra la empresa Urbalia, por posibles delitos contra los Recursos Naturales	y la Salud P	ublica.	
	Environmental Pollution	10		9.	Im Activistas de Panamá rechazan el contrato minero y piden al Parlamento que actúe El sigle, "20 anama/2022, 97 words, fepansiho			
	Regulatory Breach	8			Organizaciones ambientalistas y activistas de Panamá rechazaron este miércoles un nuevo contrato de concesión para una gran mina de cobre explotada por una empresa de capital canadiense, y p	idieron al Pa	rlament	to que lo
	Crime/Legal Action Government Contracts/Or	8		- 10	revise ue forma			
	Judicial Branch (Discontin	5		0.10	⁵ Z Activistas de Panama rechazan contrato minero y piden a la Asamblea Nacional que actúe Día a Día Omine, 19 anaura 2022, 616 vords, (Spraint)			
	Product/Consumer Safety	3			Organizaciones ambientalistas y activistas de Panamá rechazaron este miércoles un nuevo contrato de concesión para una gran mina de cobre explotada por una empresa de capital canadiense, y p Nacional uno la remiere da.	idieron a la A	samble	ea
0	Contracts/Orders	3		0.11.				
-	 Industries 	Export	Ш	0	In Los ambientaiss pierden una batalia en la Corte Suprema de Justicia La Prema, 28 November 2023, Baz evidos, (Sepanish)			
	Mining/Quarrying	4	<		Por considerar que no queda claro si se vulneran o no los derechos o garantias cludadanos, la Corte Suprema de Justicia no acogió un amparo de garantias constitucionales promovido por la Asocia contra una resolución	ción de Dere	cho Ami	biental
	Basic Materials/Resources	3	E S S	□ 12.	2. Te Los ambientelistes pierden una batella en la Corta Suprema			
	Utilities Electricity/Gas Utilities	3	1		Le Prena, 25 November 2021, 559 words, (Spanish)			
	Electric Power Generation	2	<		Por considerar que no queda claro si se vulneran o no los derechos o garantías cludadanos, la Corte Suprema de Justicia no acogió un amparo de garantías constitucionales promovido por la Asocia contra una resolución	ción de Dere	cho Ami	.biental
	Copper Ore/Nickel Ore Mi	2	ы	13.	3. Te Desmantelan red de extracción ilegal de oro en Darién			
	Sewer Construction	2			La Estrelia). 8 April 2021, 257 words, (Spanish)			
	Automotive	2			ci ministerio de Annorente (manurente) revero que la riscana regional de Danen y la riscana superior de Denios Annorentales, con la participación de la División de Denios Annorentales, la Pacción di Nacional de	e mieligencia	uei sei	I VICIO
0.1	Electric Utilities	2		□ 14	4. [™] ≊ Panamá enducere su política contra la pesca ilegal			
	 Languages 	Export			Panamá América2 July 2020, 351 words, (Spanish) Panamá endureció su postura internacional en contra de la pesca llegal, con el fin de cumplir con los estándares exicidos, sobre todo, por la Unión Europea.			
	Spanish	37		15.	5. 🚰 ONG dice que fallo judicial apula concesión minera otornada en 1997 en Panamá			
	 Regions 	Export		Ľ	La Estrella , 25 September 2018, 649 words, (Spanish)			
	Panama	37	Ŧ		El Centro de Incidencia Ambiental (CIAM), una asociación ecologista, dijo hoy que un fallo del Supremo de Panamá provoca la anulación de una concesión minera otorgada hace más de 20 años, y c maneja la empresa Minera	jue tras suce	sivas ve	entas
	_							

B2: Review of News Articles Identified through API News Counts using Factiva Professional

Figure A3: Filtered news search based on API count results: domestic sources for Chile

The selected query topic filter is: (('Natural Environment' and 'Corporate Crime/Legal Action') and not ('Carbon Sequestration' or 'Energy Efficiency' or 'Environmental Protection')). Filter criteria (including selected query topic): Source: Domestic news source "La Tercera," Related country article content: Chile, Date: 11/07/2022

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thtps://global.factiva.com/aa/translate.aspx?napc=AU	Q č	e A [®]		
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New "environmental sheriff": who are the candidates for superintendent of the Environment and their challenges Last Thursday, the Civil Service delivered to President Cabriel Boric a list with three candidates to take over as the new superintendent of the Environment. The list is made up of Marie Claude Plumer, current head of the Legal Division current head of the service on a substitute basis and who is seeking to be confirmed in the position, and Eduardo Astorga, academic and former Codelco executive.	n of the Ministry of the Environment; Ema	inuel Ibarra,		
Not only the Public Ministry and the National Economic Prosecutor's Office are on the verge of a key definition. In parallel, the selection process for the new 'environmental sheriff' is advancing, but in absolute secrecy.				
This is the competition that the Civil Service opened through the Senior Public Management System (ADP) to define the Superintendent of the Environment (SMA). The position is extremely relevant for environmental lawyers and advis an institution that has oversight and sanctioning powers.	sors to large companies, as it is respons	ible for direct	ing	۱
The shortlist chosen by the Civil Service and which was sent to President Gabriel Boric last Thursday, is made up of lawyers: Marie Claude Plumer, former head of the Sanctions and Compliance Division during the second government Legal Department of the Ministry of the Environment, Emanuel Ibarra, superintendent(s), and Eduardo Astorga, lawyer with an academic profile from the PUC and Doctor of Law from the <u>University of Alicante</u> , Spain.	t of Michelle Bachelet and today head of	the Division		l
Plumer has practiced for more than 25 years in environmental matters. She was a lawyer for the National Environmental Commission and has held similar roles in other bodies of the State administration. She has been an independent Directorate. She has participated in various national and international seminars and in different national bodies on environmental regulation matters.	advisor and advisor to the Borders and	Boundaries		l
After his experience in the old environmental institutions, he had a stint at Sematur, provided services to DIFROL and has been part of the Environmental Law Center of the University of Chile. She has also been part of the SMA on two Chaves, Awad, Contreras y Schürmann (CACS), where he provided advice mainly to salmon companies. Today within the Ministry of the Environment she is leading the legislative agenda of Minister Maisa Rojas, and provides advice in	o occasions. Since May 2019 she was pa in the various areas of the institution.	art of the law	firm	l
Her time at the SMA was not without problems, because in the regulated sector she is recognized for having a somewhat intransigent profile. Likewise, her management was questioned with a report from the Comptroller General of the ordered a summary of the action in a particular case in Special Investigation Report No. 648. of 2017.	e Republic (Report No. 280/2020), an ins	titution that a	IISO	l
However, the SMA itself determined not to continue with that investigation because liability was prescribed. Likewise, the National Congress asked him for various explanations for the thousands of cases that he had left unprocessed by the above, she would be a strong candidate to get the position due to her political support and proximity to the former Concertación and Nueva Mayoría.	efore leaving his last position in the instil	ution. Despit	e	l
For his part, Emanuel Ibarra is a lawyer trained at the PUC and a career official at the SMA. He joined the institution in 2013 and has a Master's Degree in Environmental Law and Project Development from Finis Terrae University.				I
The current superintendent(s), who is seeking confirmation, has a management career marked by his participation in relevant environmental trials such as Pascua Lama, Minera Candelaria, Minera Maricunga, among others. In 2022, v has had an impact due to his intervention in the new episodes of mass poisoning in Concón, Quintero and Puchuncavi, as well as in the case of the Tierra Amarilia sinkhole.	when he held the position of Deputy Sup	erintendent,	he	l
Likewise, it has had an agenda marked by filing cases against samon companies, applying for the first time the sanction of revocation of three environmental permits for Nova Austral samon centers in Magalianes. Recently he has also for SOM Salar and Collatuasi, as well as closing multiple cases with significant fines. Within the service they consider him a good candidate because of the work he has done with the internal teams, and because of the gender equality unions believe that he is a person who takes a lot.	to been known for approving large compl y certification that he obtained for the inst	iance prograi titution. The	ms	l
However, he would be the candidate who would not have the support of any specific political party, because he is not active in any.				I
The academic				I
Meanwhile, the third candidate is the lawyer from the PUC and Doctor of Law from the University of Alicante, Spain, Eduardo Astorga. The jurist has been a professor of Environmental and Indigenous Law at the University of Chile, Un Usach.	niversidad de Los Andes, Universidad de	I Desarrollo a	and	l
In the years 2014-2015 he was Sustainability Manager of the Minister Hales Division of Codelco. During the years 2013-2014 he was a Senior Consultant for ARCADIS. Between 2006 and 2013 he was a Codelco Executive in charge of Directorate of the Andean Division. He created the Executive Secretariat of Environment, Territory and Citizen Participation of the MOP between the years 2000-2006. Likewise, he was the first prosecutor of the National Corporation for the drafting of Law No. 19,253 on Indigenous Peoples.	of the Environment, Territory and Water ir Indigenous Development (CONADI) an	Resources d participated	d in	l
He is recognized as a professional will extensive experience, with extensive experience in environmental matters and with extensive academic experience. However, he would be the candidate who knows the least about the new envir	ironmental institutions and the SMA.			I
Tasks and low resources				I
Just as a way to gauge the relevance of the institution, it is enough to say that just one year after its launch, in 2013 it applied the highest fine in its history: 14,745 UTA against SCM Minera Lumina Cooper Chile, for environmental violat	ations in his Caserones Project.			
On the other hand, the institution has extensive challenges, not only due to the large number of complaints that come in daily due to annoying noises, but also due to the growing empowerment of communities that demand to assert the over thirteen billion pesos, being one of the superintendencies with the fewest resources, and with a growing workload and the duty to supervise more than 15,000 Environmental Qualification Resolutions.	eir environmental rights. It has an annual	i budget of ju	st	
A PwC report revealed that the SMA needs to increase its funding by 2.2 times to meet its demand by 2025. The same report stated that most of the additional funding required - close to 70% - should directly support regional work, this	is in line with expected demand.			Ŧ

Note: This news article was translated from Spanish (original) to English, powered by Google Translate.

Figure A4: Filtered News Search Based on API Count Results: Domestic Sources for Honduras

The selected query topic filter is: (('Natural Environment' and 'Corporate Crime/Legal Action') and not ('Carbon Sequestration' or 'Energy Efficiency' or 'Environmental Protection')) Filter criteria (including selected query topic): Source: Domestic news source "Criterio," Related country article content: Honduras, Date: 07/28/ 2022

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Rate Translation Readability. This article is a translation produced by Google, Inc. from an original article from Criterio dated 28 July 2022.			
Chortí Mayan People of Azacualpa present an annulment action against Minosa Editor: Marcia Perdomo			
Tegucigalpa - The Committee of Those Affected by Minosa and the Maya Chorti community of Azacualpa promoted before the Secretariat of Natural Resources and Environment (MiAmbiente) an action for annulment against the environmental licenses granted company Minerales de Occidente (Minosa).	by said institu	ution to the	
The legal action, presented by the lawyers of the law firm Estudios para la Dignidad, Victor Fernández and Pedro Mejía, states that Minosa's nine environmental licenses were granted through fraud of law and without the consent of the Maya Chordi people.			
Lawyer Mejia indicated that fraud of law, in this case implies that the State decided to grant environmental licenses to the subsidiary in Honduras of the transnational mining company Aura Minerais, omitting or ignoring the indigenous condition of the Maya Cho Union, Copán.	ti people in A	Azacualpa, L	а
Click to view the image. [https://citetio.hn/wp-conten/uploads/2022/07/azacualpa-contra-minosa.png]			
This is with the purpose of not being forced to carry out Free and Informed Consultation (FPIC), protected by ILO Convention 169 and which would allow the active participation of the community to oppose the impacts that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact that the activity of the mining company would allow the active participation of the community to oppose the impact to active participation of the community to oppose the impact to active participation of the community to active pa	ld generate.	, indicated th	ie
Related news: Honduras 'free of mining' was only left in a statement [https://citterio.hn/honduras-libre-de-mineria-solo-quedo-en-un-comunicado/]			
"There was no such consultation, environmental licenses were granted without participation and without consent of the communities and this has left serious impacts on the communities," said lawyer Mejia at a press conference held in front of the MiAmbiente b capital.	uilding in the	Honduran	
Javier Madrid, representing the Maya Chortí people of Azacuaipa, demanded the annulment of the nine environmental licenses, stating: "we are human beings who are in danger, there are 2,100 inhabitants in our community and Azacuaipa is already on red ale activities.	t," due to the	e mining	
Ismael Trigueros also raised his voice in protest, staling that as the Chorti Maya people they were not consulted when the nine environmental licenses were granted and those that are about to be granted. "We do not agree, the Maya Chorti people have never t authorities have been partial to the mining company," he denounced.	een consulte	ed and the	
Read also: Political will of the Secretariat of My Environment has not yet been reflected in actions [https://criterio.hn/voluntad-politica-de-secretaria-de-mi-ambiente-aun-no-se-plasma-en-acciones /]			
With this action we want to make it clear that the process of territorial resistance and the legal debate on the issue of the llegal operations of <u>Aura Minerals</u> / Minosa in the territory of Azacualpa will continue," declared the lawyer of the firm Estudios para la Digr	idad, Victor i	Fernandez.	
The lawyer also explained that by filing this action the MiAmbiente authority has the opportunity to definitively reverse the operations of the mining company, because it has always operated with an accumulation of public illegalities, in which officials of the State	of Honduras	also particip	ated.
Fernández pointed out that it is an opportunity and an obligation for MiAmbiente officials to move from discourse against open pit mining to concrete actions that resolve and confront Minosa's clear legal disrespect [https://criterio.hn/aura-minerals-y-tribunal-de- pobladores-de-azacualpa], which destroyed the old Mayan-Chorti cemetery of San Andrés despite a ruling from the Constitutional Chamber in favor of the protection of this.	copan-irresp	etan-csj-ya-	
Learn more; They denounce that Minosa enters machinery into the Azacualpa cemetery with the support of the police [https://citerio.hnidenuncian-que-minosa-ingresa-maquinaria-a-cementerio-de-azacualpa-con-apoyo-de-police]			
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Note: This news article was translated from Spanish (original) to English, powered by Google Translate.

Figure A5: Filtered News Search Based on API Count Results: Regional Sources for Argentina

Filter criteria (including selected query topic): Source: Regional news source "El Mercurio (Chile)," Related country article content: Argentina, Date: 10/23/2015

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English The content of this translation is generated by way of automated translation software and is no substitute for a professional human translator. Dow Jones Factiva does not take responsibility for the accuracy, reliability or completeness of this translation Powered by Google Translate	n. <u>Click for</u>	full discla	imer	ĺ
Rate Translation Readability: This article is a translation produced by Google, Inc. from an original article from El Mercurio dated 23 October 2015.				
Volkswagen reviews vehicles in Argentina for possible data manipulation				
The company is going to observe the Amarok, Tiguan, Passat and Vento models equipped with diesel engines of the EA189 type, after the global scandal if faces.				
BUENOS AIRES - The German automobile group Volkswagen announced today that it will review in Argentina the Amarok, Tiguan, Passat and Vento models equipped with EA189 type diesel engines, put under scrutiny after the global scandal for alleged man	pulation o	of pollutin	g data.	
Volkswagen Argentina today informed its users that "certain vehicles equipped with EA189 type diesel engines have software installed that optimizes nitrogen oxide emission values during their evaluation on test benches."				
The company is determining "If the affected vehicles require some type of technical measure on the software in question" and stated that any work to be carried out on the units will be at the firm's expense and expense.				
In a statement, the Argentine subsidiary of the automaker highlighted that the situation "does not necessarily imply non-compliance with local regulations regarding the emission of polluting gases," since regulations vary depending on the country.				
Volkswagen Argentina also clarified that the software 'does not affect in any way the operation of the vehicles involved, which are safe technically and in relation to handling."				
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Figure A6: Filtered News Search Based on API Count Results: World Sources for Brazil

Filter criteria (including selected query topic): Source: World news source "The Wall Street Journal (USA)," Related country article content: Brazil, Date: 12/15/2011 Factive - Work - Microsoft Edge - O ×

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Brazil Sues Chevron For \$11 Billion SAO PAULO Brazil's federal prosecutor on Wednesday said it wants <u>Chevron Corp.</u> and <u>Transc</u>	cean Ltd. to shut down operations in Brazil, as it sued the two firms for 20 billion Brazilian reats (\$11 billion) in damages allegedly caused by an oil spill in early Nov	ember.			
The prosecutor's office in Campos, Rio de Janeiro state, brought suit against Chevron and Transc	cean for the environmental damage.				
It also wants a court injunction to stop the two firms' local operations while the broader case contin	nues, according to a statement posted on the prosecutor's website.				
The drilling accident on Nov. 7 caused an oil spill at an appraisal well at the Frade oil field, which i	s located in deep Atlantic waters off the coast of Rio de Janeiro state.				
The prosecutor found that Chevron and Transocean "weren't able to control the damage caused t	y the spill of nearly 3,000 barrels of oil, which shows a lack of planning and environmental management by the companies," according to the statement.				
The lawsuit was submitted to Brazil's federal-court system Wednesday, said Karla Pacheco, an ar	tviser for the prosecutor, Eduardo Santos de Oliveira.				
It will take "one or two days" to determine which judge in the city of Campos, in Rio de Janeiro sta	te, will hear the case, Ms. Pacheco said.				
Chevron didn't immediately respond to requests for comment about the lawsuit.					
Transocean, which operated the rig responsible for drilling the appraisal well that caused the accir	tent, said that it hadn't yet seen the lawsuit.				
"We have not seen anything in writing," Transocean spokesman Guy Cantwell said in a statement	"We are continuing to cooperate with all the authorities in Brazil."				

Ben Lefebvre in Houston contributed to this article.

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