

Exhibit A



RESPONSIBLE GROWTH REPORT

Spring 2021

*A resource for evaluating our environmental
performance and informing action at **RELX***

CONTENTS

This report was generated in line with RELX's culture of integrity, where team members are encouraged to ask questions, speak up, and report concerns. The information contained in this report is not exhaustive and will be updated every 6 months or fewer. Subsequent editions will be posted [here](#). This version is from April 2021.

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SUMMARY

RELX has set ambitious **goals** towards addressing the environmental impacts of our businesses. Built around the U.N. Sustainable Development Goals (SDGs), our goals center on accelerating a transition to a clean energy economy and setting science-based emissions targets in line with limiting warming to 1.5°C above pre-industrial levels.¹ Papers published by Elsevier indicate this initiative requires a worldwide decrease in fossil fuel production of roughly 7.6% per year between 2020 and 2030,² with over 80% of all proven fossil fuel reserves being left in the ground.³

While we've made some progress towards our goals, there currently exist a number of **barriers** within the company that will prevent success. Different business units within RELX have initiatives, products, and services that are expanding fossil fuel production that will generate impacts well beyond 2030. Our business activities that are enabling oil and gas discoveries and production, expediting new drilling methods, stimulating vast expansions of coal mining, facilitating the destruction of the Amazon, promoting climate change denial, and hindering urgently needed climate legislation are impactful to all the SDGs. As Elsevier markets ScienceDirect, our journals, and our books as means for the oil and gas industry to continue "accelerating their discoveries"⁴, our company has positioned itself as a driver of increased fossil fuel extraction.

FIGURE 1: PROJECTED CHANGE IN OIL PRODUCTION TO 2030 BY COMPANY

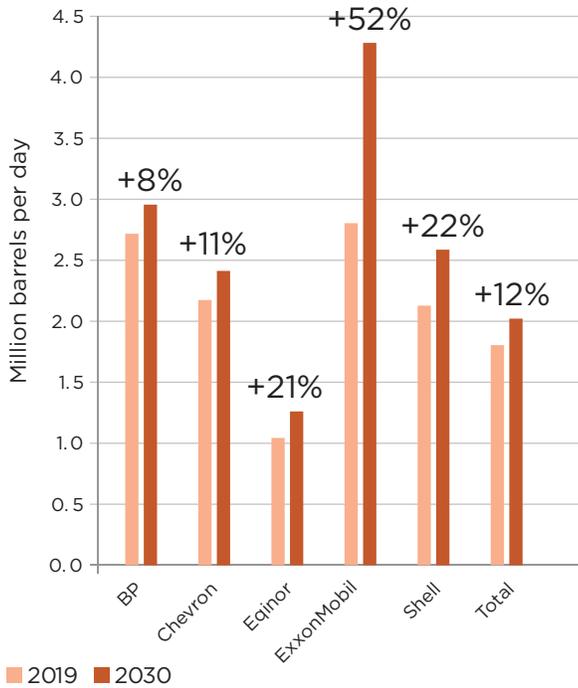
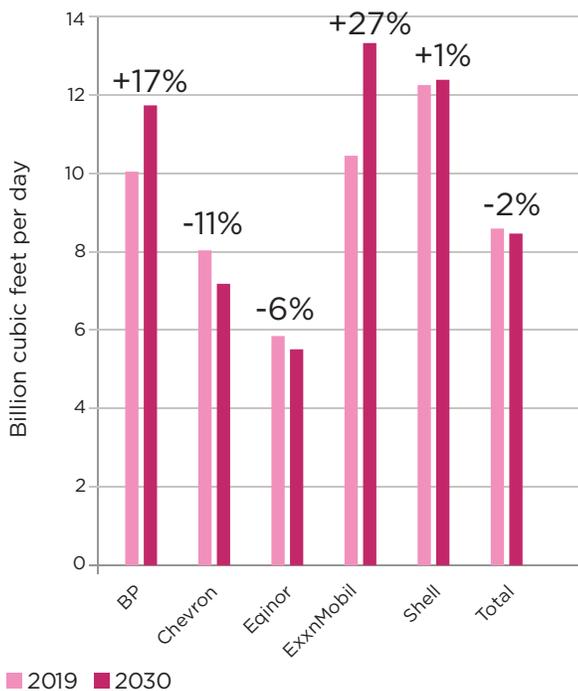


FIGURE 2: PROJECTED CHANGE IN GAS PRODUCTION TO 2030 BY COMPANY



Source: Rystad Energy UCube

This business activity is a net loss for the climate, but none of the resulting extra carbon emitted is reflected in our published footprint data. This oversight and others can be corrected by more closely observing the array of value-based company **policies** already in place that, if fully implemented, will enable us to meet our goals and help mitigate the threats of climate change. These policies compel us to address our contribution to existing or potential environmental and human rights impacts—ones that occur through our business relationships, from the use of our products and services, or by our own activity.

RELX has incorporated climate change scenarios into our climate change risk assessment and has not identified any significant risks to the business.⁵ Yet as a leading publisher of climate research, we continually identify “severe and irreversible impacts” that are destroying the “foundations of our future well-being.”⁶ That future will surely put extreme pressure on almost every revenue stream of our businesses. Immediate action towards achieving **progress** can differentiate RELX as an environmental leader, produce a competitive edge by moving us to the forefront of the transition to a low-carbon economy, build resilience against regulation, raise investor confidence, increase innovation, safeguard our reputations, and secure our core mission to benefit society.

GOALS

RELX is committed to advancing the U.N. Sustainable Development Goals (SDGs)¹, a shared blueprint for the planet grounded in human rights law² that contains what we've affirmed are essential objectives for the world.³ The SDGs are integrated and interrelated, simultaneously a claim about human rights and the climate.⁴ As we tackle health, education, and inequality, we recognize that "if it continues unabated, climate change will reverse progress made across all SDGs."⁵

Aligning with the SDGs, RELX Group has committed us to the global effort to keep warming from progressing beyond 1.5°C⁶—which means we're committed to reducing the quantity of absolute greenhouse gases in the atmosphere.⁷ Alarmingly, humanity currently plans to produce more than double the amount of fossil fuels in 2030 than would be consistent with that temperature limit.⁸ To meet the goal of no more than a 1.5°C increase, the world will need to decrease fossil fuel production by roughly 7.6% per year between 2020 and 2030⁹ and leave 80% of all proven fossil fuel reserves in the ground.¹⁰

What follows are some barriers to achieving this goal that presently exist within the scope of RELX's business.



BARRIERS

“ There’s really nobody in [the oil and gas] industry planning for a true transition away from fossil fuels.”

—Andrew Logan, senior director of oil and gas at Ceres¹

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Elsevier R&D Solutions

The world has discovered more fossil fuels than we can safely use and any new oil and gas projects or infrastructure are inconsistent with the Paris climate goals. While Elsevier helps to lead in such badly needed areas as green and sustainable chemistry, we're abandoning our climate goals by offering data-driven analysis and services² intended to "stimulate global oil and [well] production for decades to come."³

NEW PARTNERSHIPS

Partnerships between data analytics services and fossil fuel companies are now found in every phase of oil and gas production. New information technologies are playing a key role in industry expansion, with advanced analytics and modeling estimated to add over \$400 billion in value to the oil and gas industry by 2025.⁴ Elsevier currently has a portfolio of solutions and data management services that are developing strategies to attain significant production gains for the fossil fuel industry⁵—including for 60% of Fortune 500 oil and gas companies.⁶

NEW FRONTIERS

Marketing our expertise and knowledge (including maps from Elsevier's Earth Science journal collection⁷) as tools to expand production, services such as **Geofacets**⁸ and **Knovel**⁹ guide companies in prioritizing opportunities to "accelerate their exploration efforts"¹⁰ and "maximize total recoverable volumes of oil and gas resources"¹¹ in established resource-rich areas.¹² But we also promote our applied R&D as playing a "critical role"¹³ in enabling the expansion of the fossil fuel industry into "riskier, more remote areas that had previously been inaccessible."¹⁴ With aims to open up ultra-deepwater development, expand exploitation of tar sand deposits, and unleash the "the petroleum potential of the Arctic... the last major frontier for conventional oil and gas exploration,"¹⁵ services like ours are now considered "a critical toolkit [for] fossil fuel companies."¹⁶

NEW TECHNIQUES

Our business empowers customers to "dig deeper and discover more"¹⁷ by helping them "identify new technologies and materials...for optimizing production and improving rates of recovery."¹⁸ Building on extraction advances, our services facilitate increased recoverability of heavier crude in oil sands, refracking opportunities, stimulation of declining wells, and other new techniques called enhanced oil recovery (EOR).¹⁹ With half the carbonate reservoirs in the world being fractured and resistant to EOR techniques, Elsevier asserts that there's much to be gained by new technologies that can locate "hydrocarbon accumulations that we couldn't find before" and unearth "opportunities to access and accelerate reserves."²⁰

The best available science from the Intergovernmental Panel on Climate Change shows that continuing the expansion of oil and gas production puts our climate goals well out of reach—and ceasing exploration is not enough. The reserves in currently operating oil and gas fields alone, even with no coal, would take us beyond 1.5°C.²¹ With oil company CEO pay linked to continued extraction of fossil fuels²² and only 1 of 8 oil majors committed to cutting oil and gas production over the next decade, companies that court fossil fuel firms with high-powered data computation capabilities are accelerating us towards catastrophic global warming.²³



■ Exhibitions

With the phasing-out of coal “advocated as one of the simplest and most effective means of reducing carbon emissions,”²⁴ former UN climate chief Christiana Figueres has observed that there’s “no space” for new coal developments.²⁵ The Lancet has called for a rapid exit from coal and our journals have observed that coal is the single largest source of global temperature increase.²⁶ Reed Exhibitions featured a blog post this year with a headline emphasizing that eliminating coal “needs to be a global priority.”²⁷

While not ignoring questions of cleaner methods and environmental regulations, our events that cater to extraction industries directly help participants expand global production of new fossil fuel reserves—especially coal.

Here are some examples:



MINING

MINING & ENGINEERING INDONESIA

This event helps participants gain “an increased share of Indonesia’s fast-growing mining industry.”²⁸ A 2020 deregulation initiative pushed by this industry stripped environmental protections around coal mining in Indonesia—one of the world’s top exporters of fossil fuels—in order to “maximize natural resource exploitation.”²⁹

WA MINING CONFERENCE AND EXHIBITION

ASIA-PACIFIC'S INTERNATIONAL MINING EXHIBITION (AIMEX)

QUEENSLAND MINING & ENGINEERING EXPO (QME)

These are mining events in Australia, the world’s biggest exporter of coal. With Australia’s six biggest coal producers creating more greenhouse gas emissions each year than the entire domestic economy,³⁰ these events are meant to help participants grow their businesses and boost productivity.

These businesses include:

BHP

Like many, BHP funds fossil fuel lobbyists in Australia; the government has subsequently granted BHP approval to repeatedly increase carbon emissions. Elsevier has an ongoing project with BHP that enables them to “rapidly respond to new opportunities.”³¹

Glencore

Despite promising investors it would cap production, Glencore is now using its government influence to try to open a new 35-year open-cut coalmine. It is also currently the subject of a human rights complaint in Chad due to the effects of toxic waste on locals.³²

Anglo American

The company’s operations in Latin America have brought pollution, water scarcity, disease, land degradation, destruction of glaciers and native species, food and water scarcity, disease, and death to local inhabitants. It has now submitted nearly 300 applications to mine in the Brazilian Amazon, in areas that overlap with the territories of indigenous peoples.³³

The 3 entities immediately above—BHP, Glencore and Anglo American—are also collectively being investigated for environmental and human rights abuses from operations in Latin America’s largest open pit mine.³⁴



Peabody Energy

America's biggest coal mining company works to deny the existence of climate change, extensively lobbying against regulations by claiming that rising CO₂ emissions are actually beneficial and "the elixir of life."³⁵

Adani

In 2022, our QME Mining Pavilion will host Adani,³⁶ owner of one of the world's largest untapped coal reserves (Carmichael coal mine)³⁷ where it plans to begin production this year on what's been called "the world's most insane energy project."³⁸ This is being done despite corporate pressure,³⁹ activist pressure,⁴⁰ and "significant data gaps and scientific uncertainties" found throughout their environmental assessment.⁴¹ Projected to add 4.6 billion tons of carbon pollution to our atmosphere,⁴² it will destroy Indigenous homelands⁴³ and facilitate additional coal mines in one of the largest proposed expansions of mining on Earth.⁴⁴

"Either we stop this addiction to coal or all our efforts to tackle climate change will be doomed."

Energy Geoscience, 2021
Elsevier ⁴⁵



OFFSHORE DRILLING

ARCTIC AND EXTREME ENVIRONMENTS INTERNATIONAL

A conference and exhibition for offshore exploration and production of the “90bn barrels of oil lying in Arctic territories and 30 per cent of the world’s undiscovered gas resources.”⁴⁶

ENGENIOUS

An event focusing on emerging products, services, and techniques.⁴⁷

SPE OFFSHORE EUROPE

A resource for construction of new facilities and attracting investment.⁴⁸

SANTOS OFFSHORE OIL & GAS EXPO

Supports the continuing growth of Brazil’s oil and gas industry.⁴⁹

BRAZIL OFFSHORE

Centers on the “development of the oil and gas sector” in Brazil, aiming to generate new business and “meet the demands and projects of operators winning auctions” for new oil and gas production.⁵⁰





BIOFUELS

FENASUCRO & AGROCANA

Fenasucro & Agrocana is “the main fair of bioenergy and the sugar-energy sector in Latin America.” It’s held annually in Brazil, touted as “the country with the highest production potential in the world.”⁵¹ Brazilian biofuels are considered a threat to the planet’s climate,⁵² with a 2019 decree enabling sugarcane production in the Amazon⁵³ that is capable of creating “a carbon debt that could take centuries to offset.”⁵⁴ Rejecting RELX’s interest in reducing deforestation and protecting rainforests,⁵⁵ this activity accelerates deforestation and is a major threat to the Amazon.⁵⁶

“Addressing climate change is a health and human rights priority, and action cannot be delayed.”

Annals of Global Health, 2015
Elsevier ⁵⁷



Books and Journals

Oil and gas production can decline at a pace aligned with 1.5°C by ceasing investments in new fields, stopping production of new reserves, and starting the phase-out of some existing production,⁵⁸ but Elsevier has positioned itself as a driver of fossil fuel production by explicitly marketing ScienceDirect, our journals, and our books as a means for the oil and gas industry to continue “accelerating their discoveries.”⁵⁹

While we publish an expansive array of books and papers that are firmly in line with our mission, including those dedicated to renewable energy, renewable energy sources are not replacing fossil fuels; it’s misleading to characterize the growth in renewable energy as a ‘transition,’ and doing so could inhibit the implementation of meaningful policies aimed at reducing fossil fuel use.⁶⁰

Many of our authors, editors, and journal advisory board members are current employees of fossil fuel companies failing to comply with the Paris Agreement*, presenting significant conflicts of interest as it pertains to our climate commitments. Here are some examples of publications that are instructing and expanding the exploration, development, and optimization of “vast new natural gas and oil resources.”⁶¹

BOOKS:

Arctic Pipeline Planning; Arctic Offshore Engineering; Handbook of Offshore Oil and Gas Operations; Deep Shale Oil and Gas; Unconventional Oil and Gas Resources Handbook; Dynamic Well Testing in Petroleum Exploration and Development; Deepwater Drilling: Well Planning, Design, Engineering, Operations, and Technology Application; Enhanced Recovery Methods for Heavy Oil and Tar Sands; Energy Potential of the Russian Arctic Seas; Petroleum Production Engineering; Hydraulic Fracturing in Unconventional Reservoirs: Theories, Operations, and Economic Analysis; Elsevier’s Developments in Petroleum Science 70+ volume book series.

JOURNALS:

Journal of Petroleum Science and Engineering
Editor-in-Chief works for: Quantum Reservoir Impact LLC (QRI has “a goal to create lasting value for our clients, helping them realize increases in production, reserves appreciation and capital efficiency...[They] currently partner with the largest national oil companies in the world.”⁶³) and has authored papers about the importance of data-science-derived technologies in enabling moves into more challenging and remote locations to explore and produce hydrocarbons.⁶⁴

Upstream Oil and Gas Technology

Editor-in-Chief works for: Shell International Exploration & Production Inc. (Oil and gas exploration and extraction services; not yet aligned to its net-zero pledge⁶⁵) and has co-authored an Elsevier paper on Shell-developed technology for EOR applications.⁶⁶

Journal of Natural Gas Science and Engineering

Editor-in-Chief works for: Shell Technology Center Houston (Currently focused on deepwater and exploration R&D and unconventional hydrocarbon resources for heavy oil and oil shale⁶⁷)

Petroleum Exploration and Development

Editor-in-Chiefs works for: PetroChina Research Institute of Petroleum Exploration & Development (Exploration and development of major plans of oil/gas production)

Unconventional Resources

Editor-in-Chiefs works for: Chevron (Chevron has been found guilty in an \$8 billion Ecuadorian human rights and environmental case⁶⁸; it currently meets none of the criteria related to net-zero ambition by 2050⁶⁹ and is currently being sued for greenwashing.⁷⁰)

*These companies include Abu Dhabi National Oil Company, BP, Chevron, ConocoPhillips Co., ExxonMobil, Kuwait Petroleum, PetroChina, Saudi Aramco, and Shell—all of which are among the 20 companies that, since 1965, have contributed to over a third of all worldwide energy-related carbon dioxide and methane emissions.⁶²

■ Political Action (U.S.)

“There isn't any real science to say we are altering the climate path of the earth.”

— Roy Blunt (MO)⁷¹
REPAC funds recipient

We hold that only governments “can realistically plan for and trigger every component of an orderly low-carbon transition”⁷², with their cooperation indispensable to effectively “eliminate economic, structural, and social barriers to change.”⁷³ Despite this, REPAC—RELX’s U.S. Political Action Committee—is providing financial support to U.S. federal candidates who are using their considerable power to actively work against the SDGs and the 1.5°C temperature limit.⁷⁴

RESEARCH

Elsevier’s *Sustainability Science in a Global Landscape* report explains that “policy that stimulates research to address the challenges in sustainable development is essential.”⁷⁵ Climate research is currently dominated by studies from the U.S. In addition to universities, the top 10 organizations that contribute the most to the literature on climate change are all U.S. agencies that have had budgets slashed under the guidance of RELX-supported political figures who publicly regard the climate emergency as a hoax.⁷⁶ (see Appendix A).

DENIAL

Politicians we empower inhibit urgently needed legislation by promoting the denial of climate change, engendering a U.S. population exceptionally high on climate denial and disengagement⁷⁷ and undermining the public support necessary to generate effective policy adoption.⁷⁸ Additionally, political agents that appeal to scientific uncertainty to prevent action may be causing scientists themselves to take positions on the crisis that they would be less likely to take in the absence of such outspoken opposition that our political activity amplifies.⁷⁹

POLICY

Beyond spreading open hostility to the scientific community,⁸⁰ building courts opposed to climate activism,⁸¹ writing anti-climate legislation,⁸² and blocking federal actions that would help displace oil, natural gas and coal,⁸³ U.S. politicians we support provide subsidies to the fossil fuel industry conservatively estimated to be at about \$20 billion per year.⁸⁴ Last year, \$70 billion in coronavirus relief funds went to support high-carbon activities, with \$10 - \$15 billion in direct federal support going to the fossil fuel industry.⁸⁵ These fossil fuel subsidies generate production from fields that would be unviable without government aid, further lock in fossil fuel dependency, and make investment in clean alternatives seem less competitive by artificially lowering the cost of producing dirty energy.⁸⁶ To help ensure these subsidies— and control, delay, or block climate policy⁸⁷—the five largest oil and gas companies have spent about \$200 million each year on climate-related branding and lobbying since the Paris Agreement.^{88,89} Of the top 15 recent recipients of funds from oil and gas, our PAC has financially backed a majority.⁹⁰ This activity muddles RELX’s assertion that we support progressive environmental legislation.⁹¹

As the Intergovernmental Panel on Climate Change (IPCC) has reported, “1.5°C implies very ambitious, internationally cooperative policy environments.”⁹² RELX is impeding this type of policy environment, despite recognizing that integration of climate change measures into national policies is critical to achieve climate action.⁹³ While RELX employees have been encouraged to take individual action in order to counter the impacts of REPAC’s work, for climate action to be effective, “individual-level mitigation...must be accompanied by mitigation efforts from industry, commerce, and government.”⁹⁴



“This whole global warming myth will be exposed as what it really is.”

— James Lankford (OK)
 REPAC funds recipient

■ Investments

Investors can drive climate action by implementing strategies built upon established responsible investment principles that filter out companies with poor environmental performance and utilizing portfolio companies willing to develop investment options in line with science-based targets. BlackRock, an investment firm that handles more money than any in the world, recently concluded that portfolios experience “no negative financial impacts from divesting from fossil fuels. In fact, they found evidence of modest improvement in fund return.”⁹⁵ Yet the current makeup of pension-fund investment positions suggests that fossil-fuel-related companies are highly prominent in their portfolios.⁹⁶

This barrier, as it pertains to investments such as our 401K plans (U.S.) and the Reed Elsevier pension (U.K.), will be considered in a future version of this report.

POLICIES

“ I don't think [profitability] stops us or absolves us from the responsibility of addressing the longer-term issues that society faces, like on the environment. So, what kinds of commitments can we make in terms of our indirect environmental performance?”

—Dr. Marcia Balisciano,
Global head of corporate
responsibility (RELX)¹

Beyond the immense environmental considerations, the above activities generate additional substantial risks for our business (see Appendix B). But the company has adopted ambitious policies and commitments that can guide us in overcoming these barriers. Successfully addressing any oversights being made regarding these policies will bring our collective goals within reach. Just like the SDGs, many of these policies are integrated and inter-related, so efforts to fulfill any one commitment intersects and interacts with efforts to meet others.

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■ Climate Policies

CLIMATE CHANGE STATEMENT² WE ARE STILL IN DECLARATION³ RESPONSIBLE MEDIA FORUM'S CLIMATE PACT⁴

These include pledges to:

Support climate action and the rapid reduction of greenhouse gases to meet the Paris Agreement

Implement challenging science-based targets in line with 1.5°C global warming

Drive climate-friendly behavior

Accelerate the transition to a clean energy economy

Advocating ambitious, robust, and equitable policies on climate change that respond credibly to the scale and urgency of the crisis

Transparent reporting and disclosure of climate performance

Partnerships with industry, government and non-governmental organizations to support mitigation of and adaptation to climate change

RELX GLOBAL ENVIRONMENT POLICY⁵

This policy commits all areas of the business to minimize “contribution to climate change, in line with the scale of action deemed necessary by science.” We’re meant to ensure that “each business unit [is] “accountable for ensuring compliance with the policy,” recognizing the impact of “consumer use of [our] products and services.”

REED EXHIBITIONS SUSTAINABILITY CHARTER

Reed Exhibitions UK’s Sustainability Charter is aligned to four of the UN Sustainable Development Goals, including SDG13’s 1.5°C target, and is being adopted as a minimum standard by Reed Exhibitions worldwide⁶ to ensure we’re working with “partners who demonstrate a responsible approach to managing their environmental impact.”⁷



■ UN Principles

The consequences of climate change, “which disproportionately affect low-income countries and poor people in high-income countries, profoundly affect human rights and social justice”⁸ and are addressed by these principles.

GUIDING PRINCIPLES ON BUSINESS AND HUMAN RIGHTS⁹

They require that we:

Identify and assess actual or potential human rights impacts with which we may be involved either through our own activities or as a result of our business relationships. This assessment should draw on internal and/or independent external human rights expertise and involve meaningful consultation with potentially affected groups. Particular attention is to be paid to the rights and needs of individuals from groups or populations that may be at heightened risk of becoming vulnerable or marginalized. If concerns are raised by or on behalf of affected stakeholders, the company should be prepared to communicate it externally.

Establish or participate in effective operational-level grievance mechanisms for individuals and communities who may be adversely impacted to focus on reaching solutions. Where formal judgment is needed, it should be provided by a legitimate, independent third-party mechanism.

UNIVERSAL DECLARATION OF HUMAN RIGHTS

As noted in an IPCC special report, “climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C.”¹⁰

RELX has committed to upholding the Universal Declaration of Human Rights,¹¹ which states that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security...”¹²

IDENTIFY
AND ASSESS
ACTUAL OR
POTENTIAL
HUMAN
RIGHTS
IMPACTS
WITH WHICH
WE MAY BE
INVOLVED
EITHER
THROUGH
OUR OWN
ACTIVITIES
OR AS A
RESULT
OF OUR
BUSINESS
RELATION-
SHIPS.

A MAJORITY OF PEOPLE CALL FOR WIDE-RANG- ING ACTION

U.N. GLOBAL COMPACT (UNGC)

RELX is a lead participant in the United Nations Global Compact, which states, at a minimum, businesses “must act with due diligence to avoid infringing the rights of others. This means they must address any negative human rights impacts related to their business.”¹³ Three aspects to note:

i. Precaution

We are to support a precautionary approach to environmental challenges, which emphasizes prevention rather than remediation. Any lack of full scientific certainty is not a reason to postpone measures “where there are threats of serious or irreversible damage.” With a reasonable suspicion of harm, deciding what’s acceptable risk is meant to consider “acceptability to the public.”¹⁴ (The world’s largest survey of public opinion on the climate emergency found “a majority of people call for wide-ranging action.”¹⁵)

ii. Complicity

The UNGC defines complicity as an act or omission that facilitates another, in some way, to carry out a rights abuse, and the knowledge by the company that its act or omission could provide such help. Complicity can arise from: (1) Direct complicity—when a company provides goods or services that it knows will be used to carry out the abuse. (2) Beneficial complicity—when a company benefits from human rights abuses even if it did not positively assist or cause them. (3) Silent complicity—when the company is silent or inactive in the face of systematic or continuous human rights abuse.¹⁶

iii. Reporting

RELX’s communication on progress regarding our adherence to the UNGC states that we have “place[d] responsibility for execution of sustainability strategy in relevant corporate functions (procurement, government affairs, human resources, legal, etc.) ensuring that no function is conflicting with company sustainability commitments and objectives.” The report also indicates we’ve met all criteria for the GC Advanced level, applying the GRI (Global Reporting Initiative) standards.¹⁷

These GRI standards call for disclosing an organization’s direct or indirect support for political causes and reporting “the extent to which an organization’s political contributions are in line with its stated policies, goals, or other public positions.”¹⁸

■ Additional RELX Policies

REPAC POLICY

In choosing politicians to support, the PAC’s policy is to consider a candidate’s leadership, interest, position, and/or voting record on issues that impact our business and its employees—currently defined as IP, technology, open access, and data issues. The exclusion of the SDGs, the climate crisis, and corresponding human rights issues indicates that we are falling short of upholding our commitments above and overlooking these issues as being important to the business and its employees. RELX and its employees are increasingly threatened by the same issues that will severely challenge or cripple the world’s diminishing capacity to support life and human flourishing. Potential benefits to risk assessment services, which we have theorized in a world of drastic climate change,¹⁹ will in all likelihood struggle to offset the disruption to business caused by rising sea levels, ecosystem collapse, mass migration, disease, food and water scarcity, and political turmoil; in considering how to engage on public policy, the process of evaluating what should be considered impactful to the business and its employees remains disengaged from the issues driving our goals.²⁰

RELX INCLUSION AND DIVERSITY POLICY

REPAC is an employee group that excludes non-exempt/hourly employees (who are generally lower-compensated) and all non-U.S. citizens in influencing policies that have impacts on our global workforce and their communities. This is at odds with the spirit of our current I&D policy, which reinforces “a workplace that is inclusive, fair and equitable, and where all employees are respected and valued and where our employees have equal opportunities.”²¹

ETHICS CODE

RELX maintains a robust Ethics Code²² that guides us to achieve our business goals in an open way, reiterates our support of the environmental and human rights goals of the UNGC, and endorses a sensitivity to the fact that our behavior defines our reputation. Because it is better to be accurate and uphold our reputation and credibility, we are prohibited from making false or misleading oral or written statements or omissions about our products, services, financial condition, policies, security, privacy, or compliance practices with whomever we communicate. The Ethics Code instructs that we always follow “the spirit of the Code” and suggests, if there’s a question about conduct, that we ask ourselves these or similar questions:

Will it promote or could it be detrimental to my ethical reputation or that of the company?

Could it potentially bring harm, embarrassment, or humiliation to a colleague, customer, or unfairly disadvantage a competitor?

Could it even give the appearance of being unethical or unlawful?

How would a report of my actions or decision appear to others if presented on the evening news?

Does it feel morally and ethically proper?

Will you have to lie or bend the truth to justify your action?

OPERATING PRINCIPLES

As reflected in this report, RELX promotes a culture where we can speak up and report concerns. These principles also ask that we act in conformity with our policies, hold ourselves and each other accountable, grow our business with integrity, incorporate ethics into all our actions, and speak out for what is right.²³



Respect each other
Incorporate ethics into our actions
Grow our business with integrity

Hold ourselves and each other accountable
Take time to ask questions and report concern

PROGRESS

“Corporate responsibility is definitely a work in progress. There’s no time when you can say you’ve reached an end point. It’s continually evolving, responding to changes in the company and the world.”

—Dr. Marcia Balisciano, Global head of corporate responsibility (RELX)

This report was compiled with the intention of helping to accelerate the environmental progress being made across RELX. To date we have exceeded certain 2010-2020 environmental targets, invested in environmental products and services, reduced location-based carbon emissions by 64%, and cut our energy and fuels by 52%. Great attention gets paid across RELX to such environmental achievements, but very little to the steep challenges that remain. This is unfortunate given that dissemination of more comprehensive analyses of our place in the climate emergency would create opportunities for more colleagues to constructively engage in the effort. Corporate behavior is known to improve when a company’s environmental, social, and governance information is exposed to greater internal and external examination, with a direct link between transparency and performance.¹ We will be slower to exercise our bias for acting fast and pivoting if wrong² if we are not collectively focused on the remaining critical gaps between our values and our performance.

Pledges will only deliver the 1.5°C target if plans are clear, robust and swiftly implemented, so that emissions fall substantially over this decade.³ The fossil fuel production we are currently accelerating is impacting greenhouse gas production that will be taking place through 2030 and well beyond. In order to play our part, we must take immediate ownership of the downstream impacts of the entire business. For many companies, more than 80% of their greenhouse gas impacts occur outside of their own operations,⁴ so tackling these emissions is the most important step that we can take to fighting climate change. Our aim to ensure the protection of society⁵ and prosperity for all people⁶ cannot be achieved without participating in a swift, managed decline for the fossil fuel industry, with a yearly decline in fossil fuel production.

Human activity is undermining the planet’s ability to sustain life, with the companies most responsible rendering governments ineffective at addressing it and utilizing perception management to continue business as usual. It would be tragic for RELX to go down that same path, overlooking our science-based pledges and the global community we serve. We can pivot by immediately winding down and disengaging from environmentally destructive aspects of our business, prioritized by climate impacts and whether they harmonize with corporate policies and commitments. This is an opportunity to differentiate ourselves as climate leaders, gain a competitive edge by moving to the forefront of the transition to a low-carbon economy, increase innovation, build resilience against regulation, raise investor confidence, safeguard our reputations, and secure our core mission to benefit society.



APPENDIX A**CLIMATE STATEMENTS****RELX**

"We agree with the overwhelming scientific consensus that human activity is contributing to climate change...The Paris Climate Agreement is our best hope for avoiding dangerous climate change...We support global efforts to mitigate climate change through the rapid reduction of greenhouse gas emissions, aiming to achieve net zero emissions before 2050."¹

CLIMATE POSITIONS OF RELX-SUPPORTED POLITICIANS (2019):**Mitch McConnell**

"For everybody who thinks [the planet's] warming, I can find somebody who thinks it isn't."

"Handcuff[ing] the U.S. economy through the ill-fated Paris deal will go nowhere here in the Senate."

Tom Cotton*

"Why would we change the way we live our life on a fundamental, civilizational level based on computer models?...We should be building more [coal plants]... We should be expanding exploration for oil and gas."

Steve Daines*

"To suggest that [climate change is] human-caused is not a sound scientific conclusion."

I think the jury's still out, in my opinion." Response to a question on whether human activity is contributing to climate change (NPR)

"Withdrawing from [the Paris Agreement] is good news for Montanans." "Coal keeps the lights on. It will continue to power the world for decades to come."

Marsha Blackburn

I don't think you will see me being persuaded that climate change is a genuine threat."

"I do not accept the theory of climate change."

Marco Rubio

"I don't think there's the scientific evidence to justify [climate change]."

Thom Tillis

Voted NO on an amendment that said changing global temperatures are the result of human activity. Was one of the senators who signed a letter urging President Trump to exit the Paris agreement.

Cory Gardner*

Voted five times to block limits on carbon pollution, seven times to protect billions in subsidies for fossil fuels, seven times to undermine scientific reviews, and 10 times to make it harder to establish or enforce environmental protections.

Roy Blunt*

"There isn't any real science to say we are altering the climate path of the earth."

In 2015, Blunt introduced an amendment to the Senate that sought to nullify a previous climate change agreement between the United States and China to reduce carbon emissions and in 2017 praised President Donald Trump's decision to withdraw from the Paris Climate agreement.

David Perdue

"The scientific community is not in total agreement about whether mankind has been a contributing factor."

Ron Johnson

"I absolutely do not believe that the science of man-caused climate change is proven. Not by any stretch of the imagination. I think it's far more likely that it's just sunspot activity, or something just in the geologic eons of time where we have changes in the climate."

James Lankford*

"This whole global warming myth will be exposed as what it really is—a way of control more than anything else."

Voted NO on an amendment that said changing global temperatures are the result of human activity.

One of four senators to condemn the National Science Foundation for funding a program designed to increase climate reporting by meteorologists, calling it "propagandizing."

Voted to prevent the Pentagon from considering the national security impacts of global warming.

Floated an amendment to an energy appropriations bill that would have blocked funding for research related to the social costs of carbon pollution.

** Signatory to the No Climate Tax Pledge, which opposes any legislation relating to climate change that includes a net increase in government revenue. Over 1/4 of 2019 REPAC recipients have signed the pledge.*

APPENDIX B

RISKS

“Without clarification — and real enforcement — net zero will become an empty slogan that governments, corporations and investors can use to greenwash emissions as usual...Fudging a net zero commitment doesn’t reduce emissions, exacerbates the climate crisis and emits cynicism, which threatens the political momentum generated by scientific warnings and popular demands for action.”²

— Rachel Kyte, dean of the Fletcher School at Tufts University and a climate adviser for the U.N. secretary-general

Besides deepening the climate emergency, any oversights pertaining to our policies or impacts of our broader corporate value chains carry substantial organizational risks. RELX recognizes that our customers “are increasingly aware of environmental issues and, as a provider of leading environmental information, it is incumbent on us to show good practice.”³ Backlash in such a marketplace pertaining to a company’s effect on greenhouse gas emissions can come from various sources such as consumers, investors, peers, suppliers, media, employees, and other stakeholders. As we market our value-based objectives, our aim to “meet the expectations of our customers and other stakeholders”⁴ becomes increasingly vulnerable to scrutiny.

BRAND

RELX is aware there exists a threat to our brands; as the impacts of ecological devastation become more apparent, we’ve acknowledged “public sentiment may favour those organisations that took action to limit the impacts of climate change.”⁵

The scientific community, which our business is dedicated to serving, may find objectionable any actions, services and products that ignore or have the effect of worsening the crisis to which the science is speaking. Our endorsement of the scientific consensus, “that we must reduce the quantity of absolute greenhouse gases in the atmosphere,”⁶ when contrasted with the company acting as a driver of new oil and gas production, creates sufficient dissonance to reasonably call our credibility into question. Certain short-term business priorities are a major threat to the long-term reputations, success, and value of our journals, especially those held up as our premium brands.

CUSTOMERS and PARTNERS

Our sales teams are encouraged to use our fidelity to the SDGs and the Corporate Responsibility report as a selling point, demonstrating the high level of interest that our partners, sponsors, and clients have in these issues.⁷ Many of the universities and customers we engage with are aligning themselves with the SDGs (such as Carnegie Mellon,⁸ University of California,^{9,10} University of Florida,¹¹ and United Nations University¹²) and requiring that suppliers are similarly conforming to these and other ethical standards. Many sponsors, speakers, and visitors to our conferences geared toward achieving a carbon neutral future likely share such concerns.¹³ These and other business relationships bring about potential hazards if any such individual or organization were to discern inaccuracies in the policies we endorse.

OWNERSHIP

As the emergency deepens, investor activism is becoming increasingly popular¹⁴ and investors are seriously weighing the risks that climate change and the low-carbon transition pose to their portfolios.¹⁵ The general public holds a 29% stake in RELX, which may be large enough to also make an impact on company policies if motivated to do so.¹⁶

The largest institutional shareholder of RELX is BlackRock, which owns about 10% of shares. With considerable ongoing pressure from environmental activists, last year BlackRock voted against 62 board directors that it felt were not taking climate change seriously enough and it has declared it would vote for shareholder resolutions on climate change. They announced this year that “greenwashing is a risk to

investors and detrimental to the asset management industry’s credibility” and that they are “ready to vote against the re-election of directors if companies had not effectively managed or disclosed risks related to the depletion of the world’s natural resources.”¹⁷ BlackRock intends to “flag these holdings for potential exit in our discretionary active portfolios because we believe they would present a risk to our clients.”¹⁸

WORKFORCE

Our corporate responsibility mandate to reduce any negative effects of conducting our operations helps us to strengthen our reputation and “attract and retain the best people.”¹⁹ However, we may fail to recruit or retain employees who feel too keenly the disproportion between our stated aspirations and some of the current impacts of our business.

Some workers at Elsevier are recruited to be brand ambassadors, as “the most trusted source of truth” about the company and “the values we add to society.”²⁰ This program may generate worker unease if any public statements they’re being asked to make about our businesses are in any way misleading. Given political support for actions that are impeding or threatening social equity—such as LGBTQ+ rights, women’s rights, voting rights, climate, and other concerns addressed by the SDGs—we may be putting brand ambassadors in a position to make public statements about the company that some could reasonably regard as inaccurate and thus be harmful to employee reputations.

ECONOMIC

Given all the investment of resources being put into building partnerships and products that empower the fossil fuel industry, RELX is also exposing itself to a collapse of the “carbon bubble”: the mass of fossil fuel-based assets which would largely become worthless if governments force through a transition to a “CO2-free” economy. While such a political sea change seems uncertain at present, such shifts in regulations and markets—essential to properly address this emergency—can happen very swiftly.

RELX has “incorporated [climate change] scenarios into our climate change risk assessment and [has] not identified any significant risks to the business emerging from scenario planning.” Yet the science that we publish is continually identifying “severe and irreversible impacts” that are destroying the “foundations of our future well-being.”²¹ These impacts will be felt across the global economy and will put extreme pressure on almost every revenue stream of our businesses. As the UNGC states, “it is more cost-effective to take early action to ensure that environmental damage does not occur.”²²

NOTES

SUMMARY

- 1 "FAQ Chapter 5." IPCC, <https://www.ipcc.ch/sr15/faq/faq-chapter-5/>
- 2 Huang, M. and Zhai, P., "Achieving Paris agreement temperature goals requires carbon neutrality by middle century with far-reaching transitions in the whole society." *Advances in Climate Change Research*, March 19, 2021, <https://www.sciencedirect.com/science/article/pii/S1674927821000435>
- 3 Bos, K. and Gupta, K., "Stranded assets and stranded resources: Implications for climate change mitigation and global sustainable development." *Energy Research and Social Science*, October 2019, <https://www.sciencedirect.com/science/article/pii/S2214629618305383>
- 4 "ScienceDirect Corporate Edition: Oil and Gas." Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0007/907549/SD_Fact-Sheet_Oil-and-Gas_WEB.pdf

"By harnessing the power of integrated knowledge, Oil & Gas researchers are accelerating their discoveries and developments. Our Oil & Gas customers are gaining increasing value from ScienceDirect, with unlimited access to an ever-expanding library of interdisciplinary content across a wide range of subject areas."
- 5 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>
- 6 "Climate change, uncertainty, mitigation and adaptation strategies." Elsevier, <https://www.journals.elsevier.com/economic-analysis-and-policy/call-for-papers/climate-change-uncertainty-mitigation-adaptation>

GOALS

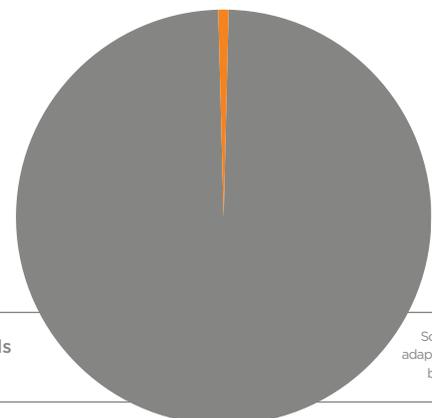
- 1 Addressing the World's Most Challenging Problems. RELX, <https://www.relx.com/corporate-responsibility/engaging-others/cr-news-and-viewpoints/addressing-the-worlds-most-challenging-problems>

"Across RELX Group there is strategic alignment with the SDGs."
- 2 "Human Rights and the 2030 Agenda for Sustainable Development." UN Human Rights Office of the High Commissioner, <https://www.ohchr.org/en/issues/SDGS/pages/the2030agenda.aspx>
- 3 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>

"We're committed to doing our part to advance these essential objectives for the world."
- 4 "Empowerment, Inclusion, Equality: Accelerating sustainable development with human rights." UN Human Rights Office of the High Commissioner, <https://www.ohchr.org/Documents/Issues/MDGs/Post2015/EIEPamphlet.pdf>
- 5 "The Media Climate Pact." Responsible Media Forum, <https://responsiblemediaforum.org/pactCommitments>
- 6 "These are the companies that have signed The Media Climate Pact." Responsible Media Forum, <https://responsiblemediaforum.org/pactSignatories>
- 7 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>

"We agree with scientific opinion, as reflected in our journals and other content, that we must reduce the quantity of absolute greenhouse gases in the atmosphere to avoid the most significant impacts of climate change."
- 8 "The Production Gap: 2020 Report." The Production Gap, https://productiongap.org/wp-content/uploads/2020/12/PGR2020_FullRprt_web.pdf
- 9 Huang, M. and Zhai, P., "Achieving Paris agreement temperature goals requires carbon neutrality by middle century with far-reaching transitions in the whole society." *Advances in Climate Change Research*, March 19, 2021, <https://www.sciencedirect.com/science/article/pii/S1674927821000435>
- 10 Bos, K. and Gupta, K., "Stranded assets and stranded resources: Implications for climate change mitigation and global sustainable development." *Energy Research and Social Science*, October 2019, <https://www.sciencedirect.com/science/article/pii/S2214629618305383>

Big oil and gas capital expenditure (2019)



■ Renewables, CCS, and biofuels 0.80%
 ■ Fossil fuels 99.20%

Source: IEA data, adapted from graph by Simon Evans

BARRIERS

- 1 Kusnetz, N., "What Does Net Zero Emissions Mean for Big Oil? Not What You'd Think." Inside Climate News, July 16, 2020, <https://insideclimatenews.org/news/16072020/oil-gas-climate-pledges-bp-shell-exxon/>
 - 2 R&D Solution for Oil and Gas. Elsevier, <https://www.elsevier.com/rd-solutions/oil-and-gas>
 - 3 R&D Solutions for OIL & GAS EXPLORATION & PRODUCTION: The Best Path to Operational Excellence May Require Being More Innovative. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0008/229373/RDS_OG_EP_WP_-Best-Path-to-Operational-Excellence_DIGITAL.pdf
 - 4 Digital Transformation Initiative: Oil and Gas Industry. World Economic Forum, January 2017, <http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/white-paper-2017-dti-oil-gas.pdf>
 - 5 R&D Solutions for OIL & GAS EXPLORATION & PRODUCTION: The Best Path to Operational Excellence May Require Being More Innovative. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0008/229373/RDS_OG_EP_WP_-Best-Path-to-Operational-Excellence_DIGITAL.pdf
- "[I]mprovement in scientific and engineering technologies has helped increase productivity and efficiency above ground (e.g., drilling fluid treatment and waste management), as well as below ground (e.g., horizontal drilling, proppant, and fluid makeup), which when taken together add up to significant gains in operational efficiency and production."**
- 6 Esri Partner Network: Elsevier. ESRI, <https://www.esri.com/partners/elsevier-a2Tf20000051RoEAI>
 - 7 Geofacets Connector for Petrel and Studio. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0003/91596/GeofacetsConnector_usermanual_2014.pdf
 - 8 "Geofacets helps oil and gas companies do more with less." Elsevier, <https://www.elsevier.com/solutions/geofacets/oil-and-gas>
- "Most of the top mining companies subscribe to Geofacets" (<https://www.mining-technology.com/features/qa-elsevier-on-bringing-mapstands-data-into-geofacets/>)**
- 9 "Knovel helps oil and gas companies achieve operational excellence and reduce risk in an unpredictable environment." Elsevier, <https://www.elsevier.com/solutions/knovel-engineering-information/who-uses-knovel/oil-and-gas>
 - 10 "Geofacets: Uncovering Diverse Insights." Elsevier, <https://www.elsevier.com/solutions/geofacets/geofacets-uncovering-diverse-insights>
 - 11 "Oil and Gas: Knovel." Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0003/96186/OG-EP-KN-BRO-for-Oil-and-Gas_Final-Web.pdf
 - 12 "Elsevier and the Bureau of Economic Geology collaborate to help oil and gas companies uncover new insights in Texas and the Gulf Coast." Elsevier, <https://www.elsevier.com/about/press-releases/-science-and-technology/elsevier-and-the-bureau-of-economic-geology-collaborate-to-help-oil-and-gas-companies-uncover-new-insights-in-texas-and-the-gulf-coast>

In 2019, shale oil production in the U.S. was projected to jump 67% from 2019 levels through 2030, thanks to various methods, such as hydraulic fracturing and horizontal drilling. (<https://www.aa.com.tr/en/energy/oil-up-stream/us-shale-oil-production-to-surge-67-by-2030/26577>) With nearly 40% of CO₂ emissions unlocked by new U.S. oil and gas drilling from 2018 to 2050 set to come from the Permian Basins, the greenhouse gas pollution enabled by production there through 2050 could exhaust close to 10% of the entire world's carbon budget for staying within 1.5°C of warming; by 2029, the Permian Basin could see nearly as much oil extraction as Saudi Arabia had in 2019 (<http://priceofoil.org/content/uploads/2019/01/Drilling-Towards-Disaster-Web-v2.pdf>) A 2020 Elsevier paper intended to inspire strategies for developing the Permian Basin declined to consider the global climate impact. (<https://www.sciencedirect.com/science/article/pii/S0301420719306804>)


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Gulf of Mexico oil: data rush

To offset diminishing oil output from Pemex, the Mexican government implemented landmark energy reforms in 2014. With the region now open to foreign investment, obtaining available data and information is critical for increasing the odds of exploration success.

In this article for Hart Energy, Phoebe McMellon, Director of Product Management, Geofacets, discusses the available blocks and why data is at a premium. ↗


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Gulf of Mexico crude oil production to increase with new projects in 2021, 2022

Crude oil production in the US Federal Gulf of Mexico will increase in the next 2 years, the US EIA forecast in its latest Short-Term Energy Outlook. By end-2022, 13 new projects could account for about 12% of total GoM crude oil production.

Author — OGJ editors

Apr 14th, 2021

- 13 R&D Solutions for OIL & GAS EXPLORATION & PRODUCTION: The Best Path to Operational Excellence May Require Being More Innovative. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0008/229373/RDS_OG_EP_WP_-Best-Path-to-Operational-Excellence_DIGITAL.pdf
 - 14 R&D Solutions for OIL & GAS EXPLORATION & PRODUCTION: The Best Path to Operational Excellence May Require Being More Innovative. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0008/229373/RDS_OG_EP_WP_-Best-Path-to-Operational-Excellence_DIGITAL.pdf
 - 15 “Arctic Petroleum Geology.” Elsevier, <https://app.knovel.com/web/toc.v/cid:kpAPG00019/viewerType:toc/>
 - 16 “Oil in the Cloud: How Tech Companies are Helping Big Oil Profit from Climate Destruction.” Greenpeace, May 19, 2020, <https://www.greenpeace.org/usa/reports/oil-in-the-cloud/>
 - 17 Knovel: Improving productivity and driving innovation. Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0006/183408/ELSV_12471-Large-Oil-And-Gas-Case-Study_DIGITAL.pdf
 - 18 “Data, answers and insights that enable confident investment in oil and gas exploration and production.” Elsevier, <https://www.elsevier.com/solutions/knovel-engineering-information/who-uses-knovel/oil-and-gas/exploration-and-production>
 - 19 “Majority of global CCS plants being used to extract more fossil fuels.” Global Witness, January 11, 2021, <https://www.globalwitness.org/en/press-releases/world-cannot-meet-climate-targets-relying-carbon-capture-and-storage/>
- To date, EOR has used 81% of carbon that’s been captured from carbon capture and storage (CCS) to extract more oil—meaning EOS enables the majority of CCS plants to engage in additional carbon emitting oil extraction that wouldn’t have otherwise been possible). It’s projected that planned CCS will continue to be dominated by EOR between now and 2030.**
- In driving the development of EOR, we’ve observed: “Right now CO2-enhanced oil recovery (CO2-EOR) is providing 284,000 barrels of oil every day in the U.S. – and it has the potential to do much more. Employing ‘Next Generation’ CO2-EOR technology will be key to unleashing that potential.”** (<https://www.elsevier.com/rd-solutions/industry-insights/oil-and-gas/the-next-generation-of-co2-enhanced-oil-recovery>)
- 20 “Deepwater Exploration” Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0007/97063/DR7480-Oil-and-Gas-Article-Deepwater-WEB.pdf
- R&D Solutions for OIL & GAS EXPLORATION & PRODUCTION: Enhanced Oil Recovery—Do You Have the Right EOR Strategy? Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0017/230831/RDS_OG_EP_WP_-EOR-Right-Strategy_DIGITAL.pdf
- 21 The Sky’s Limit. Price of Oil, September 2016, http://priceofoil.org/content/uploads/2016/09/OCI_the_skys_limit_2016_FINAL_2.pdf
 - 22 Watts, Jonathan. “Oil firm bosses’ pay ‘incentivises them to undermine climate action.’” The Guardian, April 15, 2021, <https://www.theguardian.com/environment/2021/apr/15/oil-firm-ceos-pay-is-an-incentive-to-resist-climate-action-study-finds>

Greenhouse gas emissions

Oil firm bosses’ pay ‘incentivises them to undermine climate action’

Lucrative pay and share options linked to continued extraction of fossil fuels by ExxonMobil, Chevron, Shell and BP



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White knights, or horsemen of the apocalypse? Prospects for Big Oil to align emissions with a 1.5 °C pathway

Dario Kenner^{a, b}, Richard Heede^c

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▲ An ExxonMobil refinery in Texas. The oil company allocated 0.22% of capital expenditure to low-carbon energy in eight years until 2018. Photograph: Jessica Rinaldi/Reuters

Jonathan Watts

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Thu 15 Apr 2021 00:00 EDT

- 23 Discussion Paper: Big Oil Reality Check – Assessing Oil And Gas Climate Plans. Oil Change International, September 2020, <http://priceofoil.org/content/uploads/2020/09/OCI-Big-Oil-Reality-Check-vF.pdf>

Along with other big names in the oil and gas industry, Elsevier sponsors the American Association of Petroleum Geologists' Imperial Barrel Award, a prospective basin evaluation competition. "If you are considering a career in upstream energy exploration, the chance to participate in this event should not be passed up.": <https://iba.aapg.org/sponsorship/sponsors>



- 24 Brown, B. And Spiegel S., "Resisting coal: Hydrocarbon politics and assemblages of protest in the UK and Indonesia." Geoforum, October 2017, <https://www.sciencedirect.com/science/article/pii/S0016718517302129>
- 25 Milman, O., "'UN climate chief says the science is clear: there is no space for new coal.'" The Guardian, May 4, 2015, <https://www.theguardian.com/environment/2015/may/04/un-climate-chief-says-the-science-is-clear-there-is-no-space-for-new-coal>
- 26 Emiliano, M., Valenzano, B., Surico, G., Piscitelli, P., and Missoni, E., "Decarbonisation, climate change, and human rights: a road map for the future of Puglia region." The Lancet, February, 2018, [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(18\)30005-6/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(18)30005-6/fulltext)
- Finkelman, R., Wolfe, A., and Hendryxc, M., "The future environmental and health impacts of coal." Energy Geoscience, April 2021, <https://www.sciencedirect.com/science/article/pii/S2666759220300706>
- 27 "Eliminating coal needs to be a global priority, according to IEA Head." Energy Forum, Reed Exhibitions Ltd., <https://forum.all-energy.co.uk/2021/02/08/eliminating-coal-global-priority-iea-head/>
- 28 Mining and Engineering Indonesia (M&E). Reed Exhibitions, <https://www.reedexhibitions.com/reed-panorama-exhibitions/mining-engineering-indonesia-me>
- Geofacets is also aiding this expansion by working to discover and assess the potential of new Indonesian extraction sites: <https://www.prnewswire.com/news-releases/elsevier-expands-in-indonesian-content-in-geofacets-mitigating-risk-in-upstream-oil-and-gas-research-efforts-684559931.html>
- 29 Jong, H., "Unbridled exploitation: Mining amendments a boon for Indonesia's coal industry." Mongabay, March 23, 2020, <https://news.mongabay.com/2020/03/indonesia-omnibus-coal-mining-permits/>
- 30 Morton, A., "Coal from six biggest miners in Australia produces more emissions than entire economy." The Guardian, October 31, 2019, <https://www.theguardian.com/australia-news/2019/nov/01/six-biggest-coalminers-in-australia-produce-more-emissions-than-entire-economy>
- 31 Fawthrop, A., "Investors hit out at BHP over continued association with fossil fuel advocates." NS Energy, December 13, 2019, <https://www.nsenerybusiness.com/news/bhp-climate-policies-review-shareholders/>
- Morton, A., "Australian government granted BHP repeated approval to increase carbon emissions." The Guardian, February 16, 2020, <https://www.theguardian.com/business/2020/feb/17/australian-government-granted-bhp-repeated-approval-to-increase-carbon-emissions>
- "Harnessing the "science of where" to unlock the value of geoscience data." Elsevier, August 5, 2020, https://www.elsevier.com/connect/harnessing-the-science-of-where-to-unlock-the-value-of-geoscience-data?_lrs=112331d7-e483-40c0-95d9-af26f3c92e98
- 32 Hodal, K., "Mining giant Glencore faces human rights complaint over toxic spill in Chad." The Guardian, January 28, 2021, <https://www.theguardian.com/global-development/2021/jan/28/mining-giant-glencore-faces-human-rights-complaint-over-toxic-spill-in-chad>
- 33 "Future Smart? COVID19 exposes mining giant Anglo American's true priorities." London Mining Network, May 4, 2020, <https://londonminingnetwork.org/2020/05/future-smart-covid19-exposes-mining-giant-anglo-americans-true-priorities/>
- 34 Lannin, S., "BHP, Glencore, Anglo American face OECD investigation over environmental damage and human rights abuses at Colombian coal mine." ABC News, January 18, 2021 <https://www.abc.net.au/news/2021-01-19/cerrejon-coal-mine-colombia-in-environment-rights-abuse-probe/13069168>

An Elsevier paper has observed: "The literature leaves little doubt that environmental and social injustice in relation to coal mining and coal combustion in coal fired power stations exist and are closely linked to each other, and to negative health impacts." (<https://www.sciencedirect.com/science/article/pii/S1353829212001852?via%3Dihub>)

- 35 Goldenberg, S., Bengtsson, H., "America's Biggest Coal Company Backed Dozens of Climate Change Deniers." Newsweek, June 15, 2016, <https://www.newsweek.com/peabody-energy-coal-company-backs-climate-change-deniers-470803>

Goldenberg, S., "The truth behind Peabody's campaign to rebrand coal as a poverty cure." The Guardian, May 19, 2015, <https://www.theguardian.com/environment/2015/may/19/the-truth-behind-peabodys-campaign-to-rebrand-coal-as-a-poverty-cure>

- 36 "QME Mining Pavilion" QME, Reed Exhibitions, <https://www.queenslandminingexpo.com.au/en-gb/visit/mining-pavilion.html>
- Adani recently rebranded as Bravus, a Latin word for "crook" or "bandit": <https://www.theguardian.com/business/2020/nov/05/crooked-not-courageous-adani-renames-australian-group-bravus-mistaing-it-for-brave#:~:text=According%20to%20an%20article%20from,meaning%20barbaric%2C%20foreign%20or%20uncouth>
- 37 "Adani wins final environmental approval for Carmichael mine in Australia." NS Energy, June 2019, <https://www.nsenergybusiness.com/news/adani-carmichael-coal-mine-australia/>
- 38 Goodell, J., "The World's Most Insane Energy Project Moves Ahead." Rolling Stone, June 14, 2019, <https://www.rollingstone.com/politics/politics-news/adani-mine-australia-climate-change-848315/>
- The project is set to begin after years of intimidating scientists (The Guardian, 7/15/2019) and activists (The Guardian, 10/28/2020)**
- 39 Libatique, R., "Travelers Europe rules out insurance for controversial Adani coal mine." Insurance Business Australia, February 13, 2021, <https://www.insurancebusinessmag.com/au/news/breaing-news/travelers-europe-rules-out-insurance-for-controversial-adani-coal-mine-246421.aspx>
- 40 Hall, M., "Adani's Carmichael coal mine controversy explained." Mining Technology, July 20, 2020, <https://www.mining-technology.com/features/adani-carmichael-controversy-explained/>
- 41 Currell, Matthew J., Werner, Adrian D., McGrath, C., Webb, John A., Berkman, M., "Problems with the application of hydrogeological science to regulation of Australian mining projects: Carmichael Mine and Doongmabulla Springs." Journal of Hydrology, Volume 548, May 2017, <https://ui.adsabs.harvard.edu/abs/2017JHyd..548..674C/abstract>
- 42 Libatique, R., "Travelers Europe rules out insurance for controversial Adani coal mine." Insurance Business Australia, February 13, 2021, <https://www.insurancebusinessmag.com/au/news/breaing-news/travelers-europe-rules-out-insurance-for-controversial-adani-coal-mine-246421.aspx>
- 43 Lyons, K., "Securing territory for mining when Traditional Owners say 'No': The exceptional case of Wangan and Jagalingou in Australia." The Extractive Industries and Society, July 2019, <https://www.sciencedirect.com/science/article/pii/S2214790X1830114X>
- 44 Hall, M., "Adani's Carmichael coal mine controversy explained." Mining Technology, July 20, 2020, <https://www.mining-technology.com/features/adani-carmichael-controversy-explained/>
- 45 Finkelman, R., Wolfe, A., and Hendryxc, M., "The future environmental and health impacts of coal." Energy Geoscience, April 2021, <https://www.sciencedirect.com/science/article/pii/S2666759220300706>
- 46 "Arctic oil and gas exhibition announced by Reed Exhibitions." CMW, October 26, 2010, <https://www.c-mw.net/arctic-oil-and-gas-exhibition-announced-by-reed-exhibitions/>
- 47 "SPE, Reed Exhibitions launch new technology event for the oil and gas industry." World Oil, August 29, 2017, <https://www.worldoil.com/news/2017/8/29/spe-reed-exhibitions-launch-new-technology-event-for-the-oil-and-gas-industry>
- 48 "About SPE Offshore Europe." SPE Offshore Europe, Reed Exhibitions, <https://www.offshore-europe.co.uk/en-gb/about.html>
- 49 "Reed Exhibitions Brazil acquires offshore oil and gas event." Exhibit City News, September 20, 2011, <https://exhibitcitynews.com/reed-exhibitions-brazil-acquires-offshore-oil-and-gas-event-2523/>
- 50 "About Brasil Offshore." Brazil Offshore, Reed Exhibitions, <https://www.brasiloffshore.com/en-us/the-event.html>
- 51 Fenasucro & Agrocana, Reed Exhibitions, <https://www.fenasucro.com.br/en-us.html>
- 52 Ferrante, L. and Fearnside, P., "The Amazon: biofuels plan will drive deforestation." Nature, January 7, 2020, <https://www.nature.com/articles/d41586-020-00005-8>

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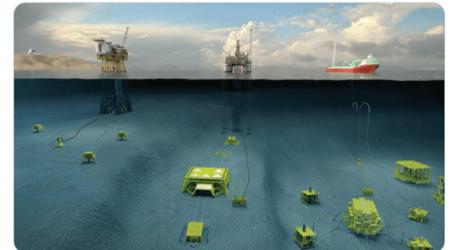
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9:37 AM - Apr 15, 2021 - Twitter Web App

- 53 Ferrante, L. and Fearnside, P., "Sugarcane threatens Amazon forest and world climate; Brazilian ethanol is not clean (commentary)." Mongabay, November 18, 2019, <https://news.mongabay.com/2019/11/sugarcane-threatens-amazon-forest-and-world-climate-brazilian-ethanol-is-not-clean-commentary/>
- 54 Lima, M. et al., "Sugarcane: Brazilian public policies threaten the Amazon and Pantanal biomes." Perspectives in Ecology and Conservation, July-September 2020, <https://www.sciencedirect.com/science/article/pii/S2530064420300262>
- 55 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>
- "We support mitigation activities to reduce climate change, including reducing deforestation and protecting rainforests."**
- 56 Kemeny, R., "In Brazil, a Sugarcane Rush Poses a New Threat to the Amazon Rainforest." Sierra, June 10, 2020, <https://www.sierraclub.org/sierra/brazil-sugarcane-rush-poses-new-threat-amazon-rainforest>
- 57 Levy, B.S. and Patz, J.A., 2015. Climate Change, Human Rights, and Social Justice. Annals of Global Health, <https://annalsofglobalhealth.org/articles/abstract/10.1016/j.aogh.2015.08.008/>
- 58 Discussion Paper: Big Oil Reality Check — Assessing Oil And Gas Climate Plans. Oil Change International, September 2020, <http://priceofoil.org/content/uploads/2020/09/OCI-Big-Oil-Reality-Check-vF.pdf>
- 59 "ScienceDirect Corporate Edition: Oil and Gas." Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0007/907549/SD_Fact-Sheet_Oil-and-Gas_WEB.pdf
- 60 York, R. And Bell, E., "Energy transitions or additions?: Why a transition from fossil fuels requires more than the growth of renewable energy." Energy Research & Social Science, May 2019, https://www.sciencedirect.com/science/article/pii/S2214629618312246?casa_token=g-jQHq95mOAAAAA:XWEO0G1_ESpLz9xiYBIK7DZxhTLaUc5XNjfpEz1F04DYqO9wwHMz-15esi-sIgdMTrcpxE



- 61 "Deep Shale Oil and Gas." Elsevier, <https://www.elsevier.com/books/deep-shale-oil-and-gas/speight/978-0-12-803097-4>
- 62 Cholteeva, Y., "17 of the worst 20 carbon emitters are oil companies, Guardian report shows." Offshore Technology, October 9, 2019, <https://www.offshore-technology.com/news/17-of-the-worst-20-carbon-emitters-are-oil-companies-guardian-report-shows/>
- 63 Delivering Solutions Through Augmented AI. QRI, <https://www.qrigroup.com/who-we-are>
- 64 Suicmez, V., "What Does the Data Revolution Offer the Oil Industry?" Journal of Petroleum Technology, March 2019, https://www.researchgate.net/publication/331450710_What_Does_the_Data_Revolution_Offer_the_Oil_Industry
- 65 Company Assessment: Royal Dutch Shell. Climate Action 100, <https://www.climateaction100.org/company/royal-dutch-shell/>
- 66 Ratnakar, R., Dindoruk, B., and Wilson, L., "Experimental investigation of DME-water-crude oil phase behavior and PVT modeling for the application of DME-enhanced waterflooding." Fuel, October 2016, <https://www.sciencedirect.com/science/article/abs/pii/S0016236116304112>
- 67 Shell Technology Center, Houston. Shell, <https://www.shell.us/about-us/projects-and-locations/shell-technology-center-houston.html>
- 68 "Chevron Found Guilty in \$8 Billion Ecuadorian Human Rights and Environmental Case." Business and Human Rights Resource Center, <https://www.business-humanrights.org/en/latest-news/chevron-found-guilty-in-8-billion-ecuadorian-human-rights-and-environmental-case/>

69 Mulvey, K., "Six Ways Chevron Imperils Climate, Human Rights, and Racial Justice." Union of Concerned Scientists, April 2, 2021, <https://blog.ucsusa.org/kathy-mulvey/six-ways-chevron-imperils-climate-human-rights-and-racial-justice>

70 Crowley, K., "Chevron accused of "greenwashing" by environmentalists in federal complaint." World Oil, March 16, 2021, <https://www.worldoil.com/news/2021/3/16/chevron-accused-of-greenwashing-by-environmentalists-in-federal-complaint>



71 Atkin, Emily. "The climate deniers Microsoft helped re-elect." Heated, February 11, 2021, <https://heated.world/p/the-climate-deniers-microsoft-helped>

72 Mercure, Jean-Francois. "Toward Risk-Opportunity Assessment in Climate Friendly Finance." One Earth, Volume 1, Issue 4, December 20, 2019, [https://www.cell.com/one-earth/fulltext/S2590-3322\(19\)30217-9](https://www.cell.com/one-earth/fulltext/S2590-3322(19)30217-9)

73 Semenza, J., et al., "Public Perception of Climate Change: Voluntary Mitigation and Barriers to Behavior Change." American Journal of Preventive Medicine, November 2008, <https://www.sciencedirect.com/science/article/abs/pii/S0749379708006831>

74 REPAC: A smart decision for our future. RELX, <http://reipac.info/>

75 "Sustainability Science in a Global Landscape." Elsevier, https://www.elsevier.com/_data/assets/pdf_file/0018/119061/SustainabilityScienceReport-Web.pdf

76 Zhang, Y., et al., "The withdrawal of the U.S. from the Paris Agreement and its impact on global climate change governance." Advances in Climate Change Research, December 2017, <https://www.sciencedirect.com/science/article/pii/S1674927817300849>

77 Wong-Parodi, G. and Feygina, I., "Understanding and countering the motivated roots of climate change denial. Current Opinion in Environmental Sustainability, February 2020, <https://www.sciencedirect.com/science/article/abs/pii/S187734351931009>

78 Yeganeh, A., et al., "Determinants of climate change policy adoption: A meta-analysis." Urban Climate, March 2020, <https://www.sciencedirect.com/science/article/abs/pii/S2212095519302871>

79 Lewandowsky, S., "Seepage: Climate change denial and its effect on the scientific community." Global Environmental Change, July 2015, <https://www.sciencedirect.com/science/article/pii/S0959378015000515>

80 Adams, R., et al., "Open letter: Climate change and the integrity of science." The Guardian, May 6, 2010, <https://www.theguardian.com/environment/2010/may/06/climate-science-open-letter>

81 Hasemyer, D., "The Supreme Court Hears Arguments on Climate Change. Is it Ready to Decide Which Courts Have Jurisdiction?" Inside Climate News, January 20, 2021, <https://insideclimatenews.org/news/20012021/supreme-court-climate-change-jurisdiction/?amp>

82 Lavelle, M., "How Congress Is Cementing Trump's Anti-Climate Orders into Law." Inside Climate News, July 31, 2017, <https://insideclimatenews.org/news/31072017/trump-climate-change-executive-orders-congress-turning-into-law-via-budget/>

83 Lavelle, M., "U.S. House Hacks Away at Renewable Energy, Efficiency Programs." Inside Climate News, July 27, 2017, <https://insideclimatenews.org/news/27072017/congress-budget-house-vote-renewable-energy-efficiency-programs-fossil-fuel-spending/?amp>

84 Coleman, C. And Dietz, E., "Fossil Fuel Subsidies: A Closer Look at Tax Breaks and Societal Costs." Environmental and Energy Study Institute, July 29, 2019 <https://www.eesi.org/papers/view/fact-sheet-fossil-fuel-subsidies-a-closer-look-at-tax-breaks-and-societal-costs#:~:text=Conservative%20estimates%20put%20U.S.%20direct,natural%20gas%20and%20crude%20oil.>

- 85 Kusnetz, N., "UN Report: Despite Falling Energy Demand, Governments Set on Increasing Fossil Fuel Production." Inside Climate News, December 2, 2020, <https://insideclimatenews.org/news/02122020/un-fossil-fuel-coronavirus-report/?amp>
- 86 Gerasimchuk, I., et al., "Zombie Energy: Climate benefits of ending subsidies to fossil fuel production." International Institute for Sustainable Development, 2017, <https://www.iisd.org/system/files/publications/zombie-energy-climate-benefits-ending-subsidies-fossil-fuel-production.pdf>
- 87 Grasso, M., "Oily politics: A critical assessment of the oil and gas industry's contribution to climate change." Energy Research & Social Science, April 2019, <https://www.sciencedirect.com/science/article/pii/S2214629618306376>
- 88 "An InfluenceMap Report: Big Oil's Real Agenda on Climate Change." Influence Map, March 2019, <https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc>
- 89 **Shell CEO Ben van Beurden said at the 2018 Elsevier Economics Lecture in a talk titled Non-Solus that "in the long term, we can only keep earning money if we provide the kind of energy that society asks for." He also noted, that a clean energy transition "requires regulation from government." Energy demand in the U.S. is highly skewed in the favor of fossil fuels for reasons outlined above and well documented elsewhere. Thus, Shell can still say its oil and gas production arm "has a strong development funnel of projects that offers long-life, resilient growth opportunities," promising "robust cash flow for decades to come."**

<https://www.shell.com/media/speeches-and-articles/2018/new-energy-for-the-netherlands.html>

<https://www.shell.com/investors/why-invest-in-shell.html#vanity-aHR0cHM6Ly93d3cuc2hlbGwvY29tL2ludmVzdG9ycy9zaGVsbC1hbmQtb3VyLXNOcmFOZWd5L291ci1zdHJhdGVneS5odG1s=true&iframe=L1dlYkFwcHMvV2h5SW52ZXNOSW5TaGVsbC9pbmRlcC5odG1s>
- 90 Oil & Gas: Top Recipients. Open Secrets, <https://www.opensecrets.org/industries/recips.php?ind=E01&cycle=2020&recipdetail=A&sortorder=U>
- 91 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>

"We support progressive environmental legislation."
- 92 "SPECIAL REPORT: Global Warming of 1.5 °C." IPCC, <https://www.ipcc.ch/sr15/>
- 93 The Climate Change Challenge: the global research landscape. RELX, December 2015, <https://sdgresources.relx.com/reports/climate-change-challenge-global-research-landscape>

"Science, technology and innovation are critical to achieve SDG 13 Climate action and to be able to integrate climate change measures into national policies strategies and planning."
- 94 Semenza, J., et al., "Public Perception of Climate Change: Voluntary Mitigation and Barriers to Behavior Change." American Journal of Preventive Medicine, November 2008, <https://www.sciencedirect.com/science/article/abs/pii/S0749379708006831>
- 95 McKibben, Bill. "The Powerful New Financial Argument for Fossil-Fuel Divestment." The New Yorker, April 3, 2021, <https://www.newyorker.com/news/daily-comment/the-powerful-new-financial-argument-for-fossil-fuel-divestment>.
- 96 Mercure, Jean-Francois. "Toward Risk-Opportunity Assessment in Climate Friendly Finance." One Earth, Volume 1, Issue 4, December 20, 2019, [https://www.cell.com/one-earth/fulltext/S2590-3322\(19\)30217-9](https://www.cell.com/one-earth/fulltext/S2590-3322(19)30217-9)



POLICIES

- 1 Insights on responsible business podcast, March 2021
- 2 RELX Climate Change Statement 2019, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/climate-change-statement-new.pdf>
- 3 <https://www.wearestillin.com/we-are-still-declaration>
- 4 “The Media Climate Pact.” Responsible Media Forum, <https://responsiblemediaforum.org/pactCommitments>
- 5 RELX Global Environment Policy 2019, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/environmental-policy-2019.pdf>
- 6 Cartwright, Gillian. “How Reed Exhibitions Is Committing To Sustainability.” March 2021, <https://www.reedexhibitions.com/blog/how-reed-exhibitions-committing-sustainability>
- 7 <https://www.reedsmartspace.co.uk/en-gb/sustainability-charter.html>
- 8 Levy, Barry S., and Jonathan A. Patz. “Climate Change, Human Rights, and Social Justice.” Annals of Global Health, No Longer Published by Elsevier, 27 Nov. 2015, www.sciencedirect.com/science/article/pii/S2214999615012242.
- 9 https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf
- 10 “Headline Statements from the Summary for Policymakers.” IPCC, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Headline-statements.pdf
- 11 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>
- 12 Universal Declaration of Human Rights, <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- 13 “Human Rights.” United Nations Global Compact, <https://www.unglobalcompact.org/what-is-gc/our-work/social/human-rights>
- 14 “The Ten Principles of the UN Global Compact—Principle Seven: Environment.” United Nations Global Compact, <https://www.unglobalcompact.org/what-is-gc/mission/principles/principle-7>
- 15 “World’s largest survey of public opinion on climate change: a majority of people call for wide-ranging action.” United Nations Development Programme, https://www.undp.org/content/undp/en/home/news-centre/news/2021/Worlds_largest_survey_of_public_opinion_on_climate_change_a_majority_of_people_call_for_wide_ranging_action.html
- 16 “Principle Two: Human Rights.” United Nations Global Compact, <https://www.unglobalcompact.org/what-is-gc/mission/principles/principle-2>
- 17 Communication on Progress 2019 (RELX). United Nations Global Compact, <https://www.unglobalcompact.org/participation/report/cop/create-and-submit/advanced/442092>
- 18 GRI 415. Global Reporting Initiative, <https://www.globalreporting.org/standards/media/1030/gri-415-public-policy-2016.pdf>
- 19 “Environmental Risks and Opportunities 2020.” RELX, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/enviro-risks.pdf>
- “As weather events cause more damage and disruption, there will be an increased need to accurately assess and price the risk of these events. This could increase the market for our products serving this part of the insurance market.”**
- 20 **Misaligned political contributions have affected companies in various ways:**
- Target, which built a reputation for gay-friendly policies, faced boycotts in 2010 after contributing \$150,000 to a super PAC backing a candidate who opposed gay marriage. The company apologized after initially saying the donation fit into Target’s strategy of giving to pro-business candidates ‘on both sides of the aisle.**
- Chevron was forced to adopt a policy in 2020 requiring that it disclose how its lobbying efforts align with the goals of the Paris Agreement.**
- After the riot at the U.S. capitol, many companies made statements indicating an intention to ensure their PACs reflect their values: Archer-Daniels-Midland, First Energy, McDonald’s, Valero Energy, Nike, Cisco, United Airlines, Edward Jones Investments, Mastercard, Microsoft, Delta, GM. Charles Schwab: will shut down its PAC with remaining funds from the PAC are being donated to the Boys & Girls Club of America and historically Black colleges and universities.**
- 21 “RELX Inclusion and Diversity Policy.” RELX, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/relx-inclusion-diversity-2020.pdf>
- 22 Code of Ethics and Business Conduct. RELX, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/-investors/corporate-governance/code-of-ethics/code-of-ethics-english.pdf>
- 23 “Do the Right Thing.” RELX, <https://reedelsevier.sharepoint.com/sites/relx-compliance/right-thing>

PROGRESS

- 1 Pei-yi Yu, E., Van Luu, B., and Chen, C.. "Greenwashing in environmental, social and governance disclosures." Research in International Business and Finance, April 2020, <https://www.sciencedirect.com/science/article/pii/S0275531919309523>
- 2 "Our Operating Principles." Elsevier, <https://nonsolus.elsevier.net/Home/Index/875f943d-8e9a-45aa-b6ed-9415ae87e980>
- 3 "TAKING STOCK: A global assessment of net zero targets." The Energy & Climate Intelligence Unit and Oxford Net Zero, https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?mtime=20210323005817&focal=none
- 4 Greenhouse Gas Protocol, <https://quantis-suite.com/Scope-3-Evaluator/>
- 5 "Unique Contributions." RELX, <https://www.relx.com/corporate-responsibility/being-a-responsible-business/unique-contributions>
- 6 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>

APPENDIX A and B

- 1 "Environment." RELX, <https://www.relx.com/corporate-responsibility/being-a-responsible-business/environment>
- 2 Kyte, Rachel. "Opinion: Don't be fooled by 'net zero pledges.'" The Washington Post, March 22, 2021, <https://www.washingtonpost.com/opinions/2021/03/22/net-zero-pledges-carbon-emissions/>
- 3 "Environmental Risks and Opportunities 2020." RELX, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/enviro-risks.pdf>
- 4 "People." RELX, <https://www.relx.com/corporate-responsibility/being-a-responsible-business/people>
- 5 Smith-Lopez, M., "Employer Brand Ambassadors." Elsevier, September 27, 2019, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/policies/enviro-risks.pdf>
- 6 RELX Corporate Responsibility Report 2020, <https://www.relx.com/-/media/Files/R/RELX-Group/documents/responsibility/download-center/2020-cr-report.pdf>
- 7 **RELX CR Report, 2019: "CR as a Sales Tool is our effort to support customer-facing staff in showcasing our CR commitments to their customers. As our CR as a Sales Tool curriculum demonstrates, the benefits include reassuring customers that we are an ethical supplier, while developing opportunities for deeper dialogue on shared values and increasing the potential for collaboration."**
- 8 "Sustainable Development Goals." Carnegie Mellon University, <https://www.cmu.edu/leadership/the-provost/provost-initiatives/sdg-definitions.html>
- 9 "Engaging with Sustainable Development Goals." UC Davis, <https://globalaffairs.ucdavis.edu/un-sdgs-uc-davis>
- 10 "SDG Policy Initiative." UC San Diego, <http://sdgpolicyinitiative.org/>
- 11 "Sustainable Development in the Classroom." University of Florida, https://dcp.ufl.edu/sbe/wp-content/uploads/sites/32/2021/02/UN-SDGs_inTheClassroomAtUF_2021-01-00.pdf
- 12 "UNU Sustainable Development Explorer." UNU, <https://unu.edu/explore>
- 13 "Exhibit at All-Energy." All-Energy, <https://www.all-energy.co.uk/en-gb/exhibit.html>
- 14 Mooney, A. and Temple-West, P., "It's been a landmark year for investor action on climate change." Los Angeles Times, July 26, 2020, <https://www.latimes.com/business/story/2020-07-26/investor-action-climate-change>
- 15 Mercure, Jean-Francois. "Toward Risk-Opportunity Assessment in Climate Friendly Finance." One Earth, Volume 1, Issue 4, December 20, 2019, [https://www.cell.com/one-earth/fulltext/S2590-3322\(19\)30217-9](https://www.cell.com/one-earth/fulltext/S2590-3322(19)30217-9)
- 16 "Here's What RELX PLC's (LON:REL) Shareholder Ownership Structure Looks Like." Simply Wall St, March 10, 2021, <https://simply-wall.st/stocks/gb/commercial-services/lse-rel/relex-shares/news/heres-what-relx-plcs-lonrel-shareholder-ownership-structure>
- 17 Minkoff, Y., "Is BlackRock changing the ESG investing landscape?" Seeking Alpha, March 19, 2021, <https://seekingalpha.com/news/3674307-is-blackrock-changing-the-esg-investing-landscape>
- 18 Pratt, N., "BlackRock vows to divest from climate change laggards." Funds Europe, January 27, 2021, <https://www.funds-europe.com/news/blackrock-vows-to-divest-from-climate-change-laggards>
- 19 "Corporate Responsibility." RELX, <https://www.relx.com/corporate-responsibility>
- 20 <https://nonsolus.elsevier.net/Content/Page/Index-/a38883af-bb03-4558-8e16-18a0a2d51cca?forceApprovalStatus=False&reviewComplete=False>
- 21 "Climate change, uncertainty, mitigation and adaptation strategies." Elsevier, <https://www.journals.elsevier.com/economic-analysis-and-policy/call-for-papers/climate-change-uncertainty-mitigation-adaptation>
- 22 "The Ten Principles of the UN Global Compact—Principle Seven: Environment." United Nations Global Compact, <https://www.unglobalcompact.org/what-is-gc/mission/principles/principle-7>

