



ESG and net zero emissions targets: accelerating climate action through private sector voluntary commitments in Brazil*

ESG e metas de emissões líquidas zero: acelerando a ação climática por meio de compromissos voluntários do setor privado no Brasil

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Abstract

The ESG discourse has gained track in Brazil lately, and with it, the awareness on the climate change emergency by the private sector. To tackle that issue, a global net zero emission target was set by science (IPCC) to 2050, and many campaigns and networks started to stimulate joint collective action from different stakeholders, including enterprises. The paper seeks to demonstrate, in that scenario, how and why many multinational companies and large Brazilian enterprises, started to set net zero emissions goals, in line with the Paris Agreement. It is analysed two case studies, exemplifying that course of action. The research concludes by pointing that to be credible those net zero targets should detail which short and medium term actions would be taken to achieve climate neutrality, and include all sources of emissions from the companies.

Keywords: Net zero emissions. Climate Neutrality. ESG and Climate. Climate Action.

Resumo

O discurso ESG ganhou espaço no Brasil nos últimos anos, e com ele a conscientização sobre a emergência das mudanças climáticas por parte do setor privado. Para enfrentar a questão, uma meta global de emissão líquida zero foi definida pela ciência (IPCC, 2018) para 2050, e muitas campanhas e redes começaram a estimular a ação coletiva conjunta de diferentes partes interessadas, incluindo empresas. O artigo busca demonstrar, nesse cenário, como e por que muitas empresas multinacionais e grandes empresas brasileiras, passaram a definir metas de emissões líquidas zero, em linha com o Acordo de Paris. São analisados dois estudos de caso, exemplificando essa linha de ação. A pesquisa conclui apontando que para serem credíveis, essas metas de emissões líquidas zero devem detalhar quais ações de curto e médio prazo serão tomadas para alcançar a neutralidade climática, e também incluir todas as fontes de emissões da empresa.

Palavras-chave: Emissões líquidas zero. Neutralidade Climática. ESG e Clima. Ação Climática.

1. Introduction

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Climate change starts to be finally recognized as the main challenge of our era. To face it, the global economy will have to speed up a major shift towards decarbonisation. That transformation will require a huge amount of resources, hence the role of the private sector is crucial. The financial market has recently awakened to the need of prioritizing investments in companies, which have a sound management of their environmental, social and governance (ESG) aspects. The ESG discourse has gained strength in Brazil, and is being increasingly used by financial advisers, banks and managers to select assets according to their impacts and performance in those areas.

The climate emergency is at the forefront of that trend, with many enterprises pledging emissions reductions and carbon neutrality goals. This study explores the interplay between the emerging ESG agenda, and the corporate climate change action in Brazil. It analyses the main concepts involved, exploring the literature on the subject, but also looking to recent facts involving the creation of networks, which stimulate companies to reach net zero emissions in the long run. The results point to the fact that the net zero movement is just beginning, and despite large businesses start to announce net zero commitments, in doing so they have to show how they would reach that, and also enable immediate action, without postponing the problem.

2. Environmental, Social and Governance: the ESG boom in Brazil

The term ESG was first coined in 2005 in a landmark study entitled “Who Cares Wins”. The study was demanded by the United Nations (UN) Secretary General Kofi Annan to the UN Global Compact and the International Finance Corporation. The query was how to integrate environmental, social, and governance concerns into capital markets. The report concluded that embedding ESG criteria in capital markets makes good business sense, bringing sustainability to the markets and better outcomes for society². In parallel, the United Nations Environment Programme Finance Initiative (UNEP-FI) produced the so-called “Freshfield Report”, which showed that modern interpretation of fiduciary duty includes “the consideration of ESG issues in investing decision-making”³.

² UN Global Compact (2004). Who Cares Wins: Connecting Financial Markets to a Changing World. <https://bit.ly/2pcK1>

³ FRESHFIELDS, Bruckhaus, Deringer (2005) A Legal Framework for the Integrations of Environmental, Social, and Governance Issues into Institutional Investment. Study for the Asset Management Working Group of the UNEP Finance Initiative. http://www.unepfi.org/fileadmin/documents/freshfields_legal_resp_20051123.pdf



Looking to the market news, moves that are more recent have taken ESG to the spotlight. BlackRock is the world's largest investment fund manager, managing around US\$ 9 trillion in assets in major global markets. In his 2018 annual letter to clients and investors, Blackrock CEO Larry Fink stated "to thrive, every company will have to deliver not only financial performance, but also show how it makes a positive contribution to society"⁴. In his 2020 letter, Fink places sustainability at the heart of corporate-managed investments, stating "sustainability-integrated portfolios can provide better risk-adjusted returns to investors"⁵.

This is just an example that symbolizes how capital market players have started to understand the compelling need to prioritize investments on companies that have solid management from an environmental, social and governance (ESG) point of view. Since then, best ESG practices have been receiving more and more attention worldwide, as they are associated with businesses with better results, given the multiplication of risks associated with reputation, climate and environment as a whole⁶.

Considering the Brazilian scenario, it is clear that part of the private sector started to take the lead on ESG actions, especially in the area of climate change, also due to the negotiations position of the current Brazilian administration and other controversial environmental policies⁷.

In fact, in July 2020, 17 former finance ministers and presidents of the Brazilian Central Bank (with different political views) proposed, in an open letter, guidelines for the development of a low-carbon economy in Brazil⁸. "We defend that the criteria for reducing emissions and the stock of greenhouse gases in the atmosphere, and for resilience to the impacts of climate change, are integrated into the management of economic policy. These criteria are and will increasingly be based on technologies compatible with increasing the productivity of our economy, generating jobs and reducing inequality in Brazil", they have stated. "The damage caused by deforestation has led several important commercial partners and foreign investors in

⁴ FINK, Larry. Larry Fink's 2018 letter do CEOs. <https://www.blackrock.com/corporate/investor-relations/2018-larry-fink-ceo-letter>

⁵ FINK, Larry. Larry Fink's 2020 letter do CEOs. <https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter>

⁶ World Economic Forum (2020). *Global Risks Report* <https://reports.weforum.org/global-risks-report-2020/>

⁷ Struck, Jean-Philip. (2019). Em Berlim, Salles questiona contribuição humana na mudança climática. Deutsche Welle. <https://bityli.com/qRShZ>

⁸ Instituto Clima e Sociedade (2020). 17 ex-ministros e presidentes do Banco Central assinam carta coletiva pela recuperação econômica <https://www.climaesociedade.org/post/convergencia-pelo-brasil>



Brazil to vehemently express their discontent and concern, which will certainly translate into lower trade and investment flows in the country”, highlights the document⁹.

In the same month, more than forty companies and institutions delivered to Vice President Hamilton Mourão, a Statement of the Brazilian Entrepreneurial Sector, which proposes coordinated action from different economic sectors towards sustainable development in Brazil. Signed the document giant companies such as Ambev, Grupo Boticário, Itaú, Natura, Lojas Renner, Klabin, and others¹⁰. The initiative, articulated by the Brazilian Business Council for Sustainable Development (CEBDS), sought to mark the position of the business sector after a letter signed by 29 foreign investors, managing assets of US\$ 4.5 trillion, questioning their investments in the country if the government does not change its environmental policy¹¹.

As seen, ESG is gaining importance as investors decide which project to invest their money in it. This agenda has been considered a way to identify which organizations take risk management seriously, affecting the company's sustainability and resilience in the long term, and therefore, revealing those who would have greater capacity to face market challenges in the future. This way, not only the company's financial health, but also social, environment and associated ethical considerations become part of the investment analysis.

That considered, disclosing ESG data nowadays is not only a sign of a company's transparency, but also a strategy that aims to positively affect the organization's reputation and competitiveness in the market for both consumers and investors.

3. Climate Change action

In 1992, the United Nations Organization established the Framework Convention on Climate Change (UNFCCC), which aims to contain the emission of gases that accelerate the greenhouse effect, so that it is possible to control global warming while there is still time to act. Within the scope of the UNFCCC, an international panel was created, composed of experts in the area, the IPCC (Intergovernmental Panel on Climate Change).

⁹ Idem.

¹⁰ CEBDS (2020). Em reunião com Mourão, empresários cobram medidas sobre desmatamento ilegal. <https://cebds.org/em-reuniao-com-mourao-empresarios-cobram-medidas-efetivas-de-combate-ao-desmatamento-ilegal/#.YSbR5o5KiUk>

¹¹ Philips, T. (2020). Trillion-dollar investors warn Brazil over 'dismantling' of environmental policies. *The Guardian*. <https://www.theguardian.com/environment/2020/jun/23/trillion-dollar-investors-warn-brazil-over-dismantling-of-environmental-policies>



The IPCC has the objective of providing adequate and relevant scientific, technical and socioeconomic information for the understanding of climate change and its potential impacts, and the options available for their mitigation, as well as adaptation to their unavoidable effects. The panel won the Nobel Peace Prize in 2007 along with former US Vice President Al Gore, for their work to raise global awareness on climate change. It does not carry out its own research, only conducting periodical review of all research published on the subject in the world, and summarizing its main conclusions.

Thus, the IPCC publishes periodic scientific reports on the “state of the art” on climate change in the world, creating syntheses of these reports for the media and decision makers. The 5th IPCC Report, published in 2014, pointed out that the climate system is being disturbed by human action, and climate change poses serious risks to natural and human systems. Changes in climate have been impacting natural and human systems on all continents. Among the evidence detected are changes in trends of rainfall, reduction in permafrost areas, reduction in glaciers, and changes in migration and habitat of various animal species, both on land and at sea. Moreover, climate change is already impacting food production, with extreme weather events affecting crops and putting in risk food security in different countries, especially the most vulnerable ones.

Recently, in August 2021 it was published the first part of the 6th IPCC assessment. In a nutshell, it has found that unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to 1.5°C or even 2°C, will be beyond reach. The report also projects that in the coming decades climate change will increase in all regions, increasing heat waves, and in case of 2°C global warming, some regions can reach critical tolerance thresholds for agriculture and health in the next 20-30 years¹².

In addition, the water cycle is being severely affected, unbalancing rainfall and causing more frequent floods and droughts; coastal areas will see continued sea level rise, contributing to more frequent and severe coastal flooding in low-lying areas and coastal erosion; changes to the ocean, including more frequent marine heatwaves, ocean acidification, and reduced oxygen levels will affect both ocean ecosystems and the people that rely on them; and many cities will suffer more frequent heat waves and flooding from heavy precipitation events¹³. Needless to

¹² IPCC, Working Group I (2021). Climate Change 2021: the Physical Science Basis. *First instalment of the IPCC's Sixth Assessment Report (AR6)*, to be completed in 2022. <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>

¹³ Idem.



say, those continuous events will cause incalculable damages for people and institutions, costing a huge number of financial resources, including from companies of all sizes and sectors.

The response of the world to confront this catastrophic scenario relies on the Paris Agreement, signed in December 2015, in which the international community has pledged to limit the temperature rise to “well below 2°C”, and to continue efforts to limit the temperature rise to 1.5°C, a limit of what is considered relatively safe by the science. The basic mechanism of the Paris Agreement consists on each State disclosing its voluntary national goals, the so-called Nationally Determined Contribution (NDC). Each country’s NDCs contain the targets of emissions reduction and the goals each government considers feasible to achieve, considering the national social and economic scenario. It was also agreed that developed countries will fund US\$ 100 billion a year in measures to combat climate change and adaptation in developing countries, starting from 2020.

Brazil has a privileged starting point within the global movement of reducing carbon emissions, considering it has an electric matrix of around 82% from renewal sources¹⁴, one of the cleanest in the world, apart an ethanol fleet operating for decades. In addition, the country has a large territory with potential of investments on afforestation and reforestation, which if properly conducted can lead to immediate carbon sequestration from the atmosphere.

In Brazil, inclusion and diversity is also an important part of the ESG agenda, considering the country’s rooted racial and gender inequality. Globally, the ESG discussion has climate change as its main driver. In that scenario, many Brazilian companies started to announce plans to decarbonize their operations, following different initiatives, networks and campaigns that have been set up, as demonstrated below.

4. Net zero emission: the 2050 target

Net-zero emissions by 2050 is the level of ambition the IPCC found is necessary to hold global warming to 1.5°C and avoid some of the worst impacts of climate change¹⁵.

Considering the acceleration of the ESG agenda in the last five years, connected to the Paris Agreement and the emergence of a new climate economy, the corporate world started to see the multiplication of carbon neutrality pledges by large companies.

¹⁴ Empresa de Pesquisa Energética (2020). <https://www.epe.gov.br/pt/abcdenergia/matriz-energetica-e-eletrica>

¹⁵ IPCC (2018). Special Report Global Warming of 1.5 °C. <https://www.ipcc.ch/sr15/>



In 2019, Nestlé, Repsol, ThyssenKrupp and Vale were among the companies, which announced their intention to become carbon neutral by 2050, and in 2020 Ford, Foxconn, BP and American Airlines did the same¹⁶.

Those targets carry several different climate action initiatives, such as reducing considerably GHG emissions, investing in clean energy to reach zero emissions electricity in the balance, and compensating the residual emissions with carbon offsets, acquiring carbon credits in the market.

5. Collective initiatives do stimulate joint climate action

An interesting development of the corporate decarbonisation strategy has become the creation of partnerships, networks and global movements which gathers and promote the adoption of ambitious net zero targets. Before looking to net zero plans of individual enterprises, it is noteworthy to look to the most important of such initiatives, and how they have been operating.

a) Climate Ambition Alliance

An important initiative fostered by the UNFCCC is the Climate Ambition Alliance. Launched in the 2019 Climate Action Summit by the Governments of Chile and United Kingdom, the Alliance was soon joined by 120 governments, which have committed to come forward with plans to reach net-zero emissions by 2050, and to submit more ambitious subsequent NDCs. Since then, countries covering around 70% of global GDP have made net-zero commitments.

Brazil was among them, after the Brazilian President has announced the anticipation in 10 years of the country's previous target of climate neutrality. It has passed from 2060, in the updated NDC issued in December 2020, to 2050 as declared in the Leader's Summit on Climate, convened in April 2021 by President Biden.

¹⁶ Geck, M. (2020). Seven major companies that committed to net-zero emissions in 2020. <https://www.unpri.org/pri-blog/seven-major-companies-that-committed-to-net-zero-emissions-in-2020/6909.article>



However, the current Brazilian administration is seen as unreliable in that respect, given its heavily criticized performance in the area of environmental protection, with deforestation levels rising especially in the Amazon region¹⁷.

In any case, it seems unlikely that Brazilian institutions, civil society and business sector ignores that goal in the long term, considering the country in practice is an ecological power, with a huge potential to monetize its environmental services, mainly through forests conservation, clean energy and the generation of carbon credits.

b) Race to Zero

In parallel to those governmental pledges, which are often vague and in practice depend on a number of other actors to become reality, it was very opportune the launch of the business oriented Global Campaign “Race to Zero”.

Led by the High-Level Climate Champions for Climate Action, Nigel Topping from United Kingdom, and Gonzalo Muñoz from Chile, Race to Zero mobilizes actors outside national governments to join the Climate Ambition Alliance, targeting companies, cities, regions, financial and educational institutions, and encouraging all of them to take immediate action to halve global emissions by 2030, with the aspiration to deliver a zero-carbon world in time to prevent a disastrous climate future¹⁸.

Those who join the campaign commit with “reducing emissions across all scopes swiftly and fairly in line with the Paris Agreement, with transparent action plans and robust near-term targets”¹⁹. Up to now, over 3,000 organizations have joined the Race to Zero campaign, and as net zero commitments start to proliferate, the UN-supported campaign has published the minimum standards to be considered by businesses, investors, cities and regions for credible net zero commitments.

Moreover, considering the technical complexity and the continuous science development in the area, there was a review process led by the University of Oxford and the independent “Expert Peer Review Group”, whose outcomes were reinforcing the need for clear

¹⁷ Spring, J. (2021). Brazil’s Amazon deforestation surges 67% in May as Bolsonaro pledges fall flat. *Reuters*. <https://www.reuters.com/business/environment/brazils-amazon-deforestation-surges-67-may-bolsonaro-pledges-fall-flat-2021-06-11/>

¹⁸ More information available at: <https://racetozero.unfccc.int/>

¹⁹ UNFCCC. Campaign Race to Zero (2020). <https://www.theclimategroup.org/join-race-to-zero>



midterm targets, emphasizing the focus on immediate climate action, and clarifying some specificities regarding the technical language to be used²⁰.

c) Business Ambition for 1.5°C

In addition, the United Nations Global Compact, in partnership with the campaign Race to Zero and others, have created the “Business Ambition for 1.5°C”, a call to action from a global coalition of UN agencies, business and industry leaders.

It calls on companies to commit by setting ambitious science-based emissions reduction targets, through the Science Based Targets Initiative (SBTi)²¹. By setting a net-zero target in line with a 1.5°C future, businesses can make their critical contribution by limiting the worst impacts of climate change. So far, over 600 companies, representing more than US\$13 trillion in market cap, have responded to the open letter and signed the Business Ambition for 1.5°C commitment²².

d) We mean Business Coalition

Coming from the non-profit sector, there is also an important movement being developed in the area of climate action, called “We mean Business Coalition”. With the purpose of driving collaborative leadership to solve the climate crisis, the Coalition is composed of a core group of seven business-oriented climate non-profit institutions, united for the goal to catalyse business and policy action to halve emissions by 2030, and accelerate an inclusive transition to a global net-zero economy by 2050²³.

We mean Business Coalition is composed by the most active third sector organizations in the area of private climate action, like the World Business Council for Sustainable Development (WBCSD) and CDP (former Carbon Disclosure Project)²⁴. They orient business leaders and organizations to adopt good practices such as giving carbon an internal price, in order to plan and manage the organizations’ investments on emissions mitigation and

²⁰ UNFCCC. Campaign Race to Zero (2020). <https://racetozero.unfccc.int/the-race-to-zero-strengthens-and-clarifies-campaign-criteria/>

²¹ The Science Based Targets initiative (SBTi) drives ambitious climate action in the private sector by enabling companies to set science-based emissions reduction targets. Available at: <https://sciencebasedtargets.org/>

²² UN Global Compact (2020). Business ambition for 1.5°C. Secretariat, *Caring for Climate*. <https://www.unglobalcompact.org/take-action/events/climate-action-summit-2019/business-ambition>

²³ We Mean Business Coalition. Available at: <https://www.wemeanbusinesscoalition.org/about/>

²⁴ CDP was created in 2000, departing from the need of investors and equity managers to understand the risks associate with carbon management. CDP creates transparency on environment impact, by asking the institutions to disclosure on their climate performance. <https://www.cdp.net/>



compensation; engage responsibly in the ongoing discussions on climate policy; and implement the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD)²⁵.

e) Climate Action 100+ Net-Zero

Climate Action 100+ is a 5-year investor-led initiative aimed to engage systemically important greenhouse gas emitting companies, accounting for two-thirds of global industrial emissions, and other companies which have a long way forward to advance a transition to a low-carbon economy and contribute to the Paris Agreement objectives.

Climate Action 100+ builds on pioneering investor engagements conducted since 2012 by the regional networks of investors that, together, form the Global Investor Coalition on Climate Change. The initiative covers the companies responsible for more than 80% of the global industrial emissions, engaging nowadays 600 investors managing \$ 55 trillion dollars, with 167 participant companies. The list counts with big and well-known corporations from different sectors, especially in the oil and gas industry, but also electronics and transport, such as: Airbus, Bayer, ENEL, Exxon Mobil, Nestlé, Panasonic, PEMEX, Philips, Procter & Gamble, Toyota, Petrobras, Siemens, Total, Vale, Volkswagen.

The Climate Action 100+ requires three basic steps from the companies: implementing a governance structure to address climate change, in connection with the board of directors; take actions to reduce GHG emissions in the value chain, consistent with the objectives of the Paris Agreement; adopt dissemination practices in line with the recommendations of the Taskforce on Climate-Related Financial Disclosures - TCFD²⁶.

The most important contribution of the Climate Action 100+ so far is the development of the “Net-zero Company Benchmark”, which creates a metric capable of providing scores to companies against a set of criteria of climate change data disclosure. Among the indicators, the initiative seeks to understand if the companies have or not a decarbonisation plan, a clear climate governance, and net zero ambitions for 2050 or before.

What the Climate Action 100+ Benchmark has revealed so far is that, as of today, no focus-company is in line with what is needed, according to the best available science

²⁵ Task Force on Climate Related Financial Disclosures (TCFD) releases climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation. <https://www.fsb-tcfd.org/>

²⁶ Climate Action 100+ Available at: <https://www.climateaction100.org/approach/the-three-asks/>



(IPCC), to stabilize the climate at relatively safe levels for humanity²⁷. In addition, some companies are setting net-zero commitments by 2050 or earlier, but many more have not implemented short and medium-term GHG reduction targets as required.

Those conclusions are very relevant for grounding the analysis of the companies who have been setting net zero commitments. Below we can see a chart in which the indicators set by the initiative are mensurated among the participant companies.

6. Setting a net zero commitment

When a company discloses that it has a carbon neutral target, it means that it has made a calculation on the amount of carbon dioxide emitted during its activities, and that it has a plan to absorb that carbon. There are three kind of emissions (called scopes) that can be neutralized by companies:

a) Emissions over which the company has control. They come from operations that use fossil fuels such as diesel, natural gas, coal, gasoline, for example. One way to reduce these emissions is to replace fossil fuel used in individual transportation to other means.

b) Emissions indirectly caused by the purchase and consumption of electric or thermal energy to carry out the company's activities. To reduce emissions on this front, the company should seek energy efficiency measures, such as installing thermal insulation for hot surfaces to consume less energy during the heating process, or opting for energy-efficient lamps instead of incandescent ones.

c) Emissions that occur from sources that do not belong or are not controlled by the company. They occur in the value chain, that is, they are emissions from suppliers, outsourced transport and other external stakeholders. If the company has service providers, one way to reduce emissions is to opt for carriers that only use biofuels.

Noteworthy, the search for carbon neutrality does not oblige the company to reduce emissions in all scopes at the same time. It can choose which source is going to be prioritized to start with. The emissions which for some reason cannot be reduced, due for instance to a lack

²⁷ Climate Action 100+ (2020) Progress Report. <https://www.climateaction100.org/news/climate-action-100-progress-report-records-accelerated-company-commitments-to-net-zero-emissions-but-gaps-remain/>



of applicable technology, can then be compensated through external emission reduction projects and carbon credits.

It is important to understand that what the companies should do in the first place is to reduce their emissions as much as possible. Only the amount of GHG emissions which was not possible to reduce, it can compensate through carbon removal projects such as afforestation.

7. Example of companies with net zero targets in Brazil

Some companies lead the climate change agenda in Brazil. They have come out ahead, anticipating the current momentum in which concern about climate change is on the rise and has finally become mainstream. Among them is Natura and Votorantim, whose cases are studied below.

7.1 Natura

Among them is Natura, a cosmetics company that uses most of its raw material from the Amazon region. Natura focuses on biodiversity protection and commits to use its resources in a conscious manner, combining the cosmetic science with the traditional knowledge of the communities involved, making its Brazilian social and biodiversity supply chain as sustainable as possible.

As early as 2007, Natura launched the Carbon Neutral Programme to measure, reduce and neutralize its GHG emissions, reaching 100% of carbon neutrality in its products through consistent emissions reductions, but also providing support to 38 compensation projects in the areas of energy efficiency, agroforestry, forest restoration and conservation²⁸.

The company measures the emissions from the entire value chain, encompassing scopes 1, 2 and 3 (indirect emissions), whereas most companies only measure scopes 1 and 2. And in an early stage, since 2009 the company links its GHG emissions indicators to the company's profit share plan, rewarding their executives and employees in case of improvements in the area of climate change action²⁹.

Moreover, in an innovative way, the company undertakes the valuation of the socioenvironmental impacts generated by its offsetting projects through the SROI – Social

²⁸ Natura (2019). Carbon Neutral Programme Report.
https://static.rede.natura.net/html/2019/carbono_neutro/natura_co2_en.pdf

²⁹ Idem.



Return on Investment. That methodology of social impact measurement departs from observation that “evaluations or monitoring of projects and programs often focus on the number of beneficiaries or other metrics that do not tell the story of change of these beneficiaries, that is, the real impact generated by an intervention in people's lives”³⁰.

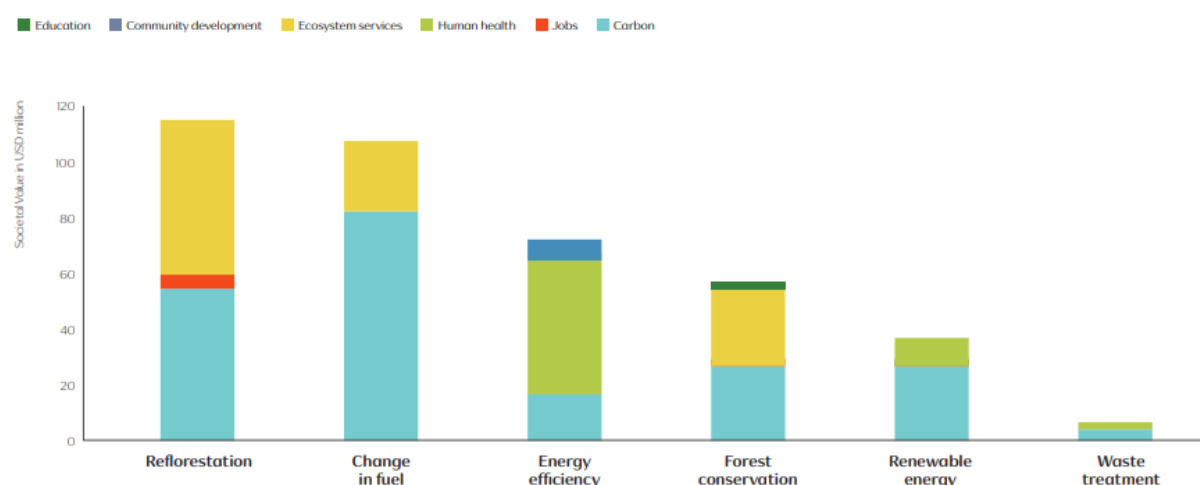
In fact, the figures seek to reveal the positive impact of the measures taken or financed by Natura on the ground, in addition to the emissions reduction, like community development, education, human health, and ecosystem services. The mensuration of the “co-benefits” generated by the carbon compensation projects is no doubt a good practice. In fact, that poses a benchmark capable of influencing future impact projects financed by the market, as new corporate initiatives of climate action can start to pay more attention to the potential of co-benefits that each project can create, either in terms of job and income creation, as on social and cultural impact.

In the chart below, we can see the valuation of the co-benefits varying by the nature of projects:

Figure 1: Valuation of benefits by type of project

Valuation of benefits by type of project

CO-BENEFITS GENERATED BETWEEN 2007 AND 2018 (millions)



Source: Natura Carbon Neutral Program Report, 2019.

7.2 Votorantim

³⁰ Kisil, M., & Fabiani, P. (2016). Retorno Social do Investimento (SROI): Metodologia que Traduz o Impacto Social Para o Investidor. *Revista Pensamento e Realidade* v, 31(1) <https://revistas.pucsp.br/index.php/pensamentorealidade/article/view/27020>



Another company which has pledged to achieve carbon neutrality by 2050 is Votorantim, a Brazilian multinational cement producer, founded in 1918 and present in 19 countries. Cement is the main material to produce concrete, which is the most consumed material in constructions all over the world.

The problem is the cement industry is one of the three primary producers of carbon dioxide, together with energy production and transportation industries. That might be the reason why some companies of the sector are making increasing efforts to transform their environmental performance, with an eye on the growing public scrutiny³¹.

In December 2020, Votorantim released their Sustainability Commitments for 2030, in which it announced the goal to “implement technologies that make it possible to deliver carbon-neutral concrete to society by 2050”³². The company disclosed that it has reduced emissions in 25% per ton of cement from 1990 to 2020, and intends to reduce another 12% until 2030, as intermediate target to the final goal of carbon neutrality by 2050.

In fact, Votorantim has disclosed in details the way how it intends to achieve that mark:

1. through co-processing, meaning the replacement of fossil fuel in cement production, especially for biomass and urban solid waste;
2. reduction of the percentage of clinker in cement, application of materials with hydraulic properties, called cementitious, for the production of cement;
3. energy efficiency and use of renewable energy sources, reaching 45% of electricity from renewable sources;
4. recycling of concrete, making this chain more circular and maximizing the absorption of CO₂ by the concrete through recarbonation;
5. efficient use of concrete on site; and
6. scale-up application of technologies of carbon capture, sequestration and use of the carbon³³.

Although operating in an intensive emissions sector, Votorantim has been standing out in the cement industry for its sustainability practices. It was recognized three times in a row as one of the best companies in the Climate Change Program 2020 of the CDP. Votorantim achieved grade “A-” in the program, and was the better rated cement industry in Brazil in the Climate category, composing also the group of the four best cement companies in the world³⁴.

³¹ Vidal, J. (2019). Concrete is tipping us into climate catastrophe. It's payback time. *The Guardian*. <https://www.theguardian.com/cities/2019/feb/25/concrete-is-tipping-us-into-climate-catastrophe-its-payback-time-cement-tax>

³² Available at: <https://www.votorantimcimentos.com.br/noticia/nossos-compromissos-para-2030/>

³³ Votorantim (2020). Relatório Integrado 2020. <https://www.votorantimcimentos.com.br/download/br/relatorio-integrado-2020.pdf>

³⁴ Idem.



There are many other companies in Brazil which are trying to make a difference in the national climate scenario. This study brought succinctly the example of two of them, considering they have become a benchmark for others. It may be useful for the interested readers to look deeply into those and other examples, and a good starting point can be the companies engaged in one of the campaigns mentioned before. Their avantgarde experience in a relatively new area is certainly capable of inspiring action from other enterprises, leading to the development of similar and other innovative decarbonisation initiatives.

8. Concluding remarks

It seems that the Covid-19 pandemic has accelerated, among other things, the awareness of managers on the importance to have a solid risk management, as most of these risks are directly related to serious concerns about the growing destruction and scarcity of natural resources³⁵.

That emerging mindset, manifested in the many calls to a “green recovery”, makes some CEOs realize that the more a company invests in a preventive and proactive ESG agenda, the more it can excel in dealing with sustainability, diversity and inclusion, and ethical governance. And as a consequence, it is more likely that the reputation of the company is positively affected, what is becoming crucial due to the rise of the Z Generation, more aware in regard to environmental matters, especially climate change³⁶.

As some initiatives seek to enable companies to adopt ESG-related principles, such as the PRI - Principles for Responsible Investment and the UN Global Compact, and more specific metrics start to emerge, the development, evaluation and review of the projects created by companies in that area will require specialized professionals, in order to ensure that solid technical criteria are followed, adequate targets are set, and appropriate action is taken.

One could be asking if the existence of all those initiatives would be a sign that much is said and promised, and little is actually done. In fact, a credible net-zero commitment requires more than a pledge, it also requires companies to outline practical measures and take immediate action, bringing investors and other stakeholders the confidence that the targets will be met.

³⁵ As demonstrated by the severe water supply crisis in the state of Paraná (2021), which demands weekly rationing in the region of Curitiba.

³⁶ Barbiroglio, E. (2019). Generation Z Fears Climate Change More Than Anything Else. *Forbes*. <https://www.forbes.com/sites/emanuelabarbiroglio/2019/12/09/generation-z-fears-climate-change-more-than-anything-else/?sh=63f5eb41501b>



As a matter of fact, some net-zero commitments disclosed up to now lack key details on how the company plans to achieve their ambitious goals, reason why not many examples were found to serve as benchmark in this brief study. Some companies make net-zero commitments that sound good at first, but leave much to be desired upon closer inspection. Examples include net-zero commitments that exclude large portions of the company's emissions profile, or which promise herculean emissions reductions in the future without posing any short-term accountability. Therefore, the interested stakeholders will need to closely scrutinise each company's net-zero commitment, in order to determine their credibility and push for improvements whenever necessary.

The fact that so many coalitions and partnerships coming from the private sector are emerging is a good sign. Not all of them, most probably, will deliver all the ambitions declared. In any case, it is clear that with so many companies being engaged somehow, not to show commitment over the mainstreamed net zero agenda required by the Paris Agreement, which is based on the best science available, is becoming not an option.

That said, and considering the recent climate change news, there is a good chance that from now on, investors, financial institutions and clients will start to require real and verifiable commitments of decarbonisation, forcing companies to learn how to add value while demonstrating due respect for the environment, and showing they are capable of generating positive socioenvironmental impacts, which is what more consumers tend to ask for, and what the world really needs.

Finally, this study did not have the aim to exhausting the topic, but rather to put it on the table for further research and debate. Much more empirical research can and certainly will be made to compare data, identify patterns, and analyse the different decarbonisation pathways that companies can put in place, in order to adapt to a new climate economy which is starting to be drawn globally.

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