Energy governance in Brazil: meeting the international agreements on climate change mitigation

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CHAPTER 2
HISTORICAL OVERVIEW OF CLIMATE GOVERNANCE: TOWARDS ENERGY TRANSITION

Climate change is the greatest challenge humanity has ever faced. For almost five decades, all nations have been joining forces toward an appropriate global governance to mitigate its effects now and in the future. Many international gatherings have been organized to discuss how every country can commit and contribute to this effort. The first part of this chapter presents an overview of the international community's agreements on climate change issues under the United Nations coordination's since international concern emerged in the early 1970s. The second section shows Brazil's endeavour to contribute to the international effort to tackle climate change.

2.1 Global climate change mitigation and energy governance

Since 1972, when the United Nations (UN) convened for the first World Conference on the Human Environment in Stockholm, many other international conventions took place to pursue solutions for an ecologically responsible economic development. Right from the beginning, energy supply has been a critical factor in the debate on environmental issues. The Stockholm declaration adopted by the assembly in 1972 contains twenty-six principles, and its action plan is composed of 109 recommendations. The fifth principle of the declaration draws attention to fossil fuels' finitude, while the recommendations 57, 58 and 59 stress the importance of studying "the environmental effects

of energy production and use" (UN, 1972). Another important outcome of the conference is the creation of the United Nations Environment Programme (UNEP). This leading agency sets the environmental agenda and promotes sustainable development considering an array of environmental issues such as the energy production and consumption.

The first conference on the human environment in the early 1970s would become the first of many other gatherings under the UN's flag, aiming to drawing attention to international environmental responsibilities. For this study, it is important to mention a few of these assemblies and their respective outcome documents to point out their goals regarding the energy production and consumption. These relevant events and their respective documents are presented below.

Under the command of the Norwegian Prime Minister Gro Brundtland, the World Commission on Environment and Development (WCED) was created in 1983. The commission produced the document *Our common future*, also known as The Brundtland rapport published in 1987. This rapport solidified the concept of sustainable development as the one that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987: para. 30). The 'Our common future' document dedicates a whole chapter with thirty-one pages on energy and the choices that should be made to make energy production and consumption compatible with environmental preservation and economic development. Back in the 1980s, it was already clear that the increasing energy demand forty years later – and high CO_2 emissions as a result – would require an energy efficiency revolution to avoid an aggravation of environmental problems.

From June 3 to 14, 1992 was held in Rio de Janeiro the United Nations Conference on Environment and Development (UNCED) – also known as Earth Summit, Rio conference, and Rio 92 – when 172 heads of state adopted the Agenda 21, a global action plan to promote sustainable

development. The document's fourth chapter, "Changing consumption patterns," focuses on reducing the use of energy and materials in the production of goods and services. Another important outcome of the Rio conference was the creation of the United Nations Framework Convention on Climate Change (UNFCCC). This treaty entered into force in 1994 with the ultimate objective of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system (UN, 1992). The treaty stresses that all countries, especially the developing ones need to address their energy consumption, considering the need for improving energy efficiency and greenhouse gas emissions control. The signatory counties of the UNFCCC have been meeting annually since 1995, when the first conference of parties (COP 1) took place.

In 1997, at the UNFCCC conference in Kyoto, Japan (COP 3), the assembly approved the Kyoto Protocol, in which industrialized countries agree to stabilize the emissions of greenhouse gases. Concerning the energy sector, the Protocol emphasizes the necessity of enhancing energy efficiency and development and use of renewable forms of energy. In 2001 at COP 7 in Morocco with the 'Marrakesh Accord', the Kyoto protocol's implementation rules were approved and came into force in 2005. The first commitment period to the Kyoto protocol started in 2008, finishing in 2012. The second period was agreed to start after the amendment made at COP 18 in 2018, and it ended in 2020. In total, 192 parties have ratified the treaty.

Twenty years had passed after the first Earth Summit in Brazil when in 2012, the conference Rio+20 took place. Back in Rio de Janeiro for the United Nations conference on sustainable development (UNCSD), 122 heads of states agreed on the outcome document *The future we want* which renews UN member countries' commitment to sustainable development and the promotion of an economically, socially, and environmentally sustainable future for the planet and present and future generations. In the Agreement, the assembly decided, among other

things, that a set of Sustainable Development Goals (SDGs) to build upon the MDGs.[10] The document acknowledges that since the Rio 92 conference, there has been insufficient progress for achieving sustainable development and stresses the urgency to tackle the challenge of access to sustainable energy services for all. The *Future We Want* agreement also remarks the launching of the "Sustainable Energy for All" initiative by the Secretary-General, Ban Ki-moon in 2011, which focuses on energy efficiency, renewable energies, and universal access to energy. It also stresses the determination of the signatory countries to make it a reality.

As of January 2015, the UN's general assembly started the negotiations on the post-2015 development agenda, which would be presented at the World Summit on Sustainable Development in September 2015. These events resulted in the adoption of the 2030 Agenda for Sustainable development centred on 17 SDGs (UN, 2018a). The energy issues are dealt with within SDG number 7, which is entitled *Ensuring access to affordable, reliable, and modern energy for all*. Another important event in 2015 was COP 21, which took place from November 30 until December 12 in Paris. Before the event, 187 states voluntarily submitted their Intended Nationally Determined Contribution (iNDC). At the conference, a new international agreement was made and detailed in the outcome document *Adoption of the Paris Agreement*. The accord's main goal is to hold the increase in global average temperature below 2°C above pre-industrial levels by reducing anthropogenic CO_2 emissions. Concerning the energy issue, the document Acknowledges "the need to promote universal access to sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy" (UN, 2015: 2).

[10] As of September 2000, at the United Nations Headquarters in New York, was held the Millennium Summit where the world leaders set out a series of eight targets known as the Millennium Development Goals (MDGs) (UN, 2015).

At COP 22/2016 in Marrakech, Morocco, the attention went to the matters related to the Paris agreement's implementation. COP 22 was the first gathering after the Paris conference in 2015, which was broadly considered a success, based on the promises to address the problem. The Marrakesh conference was expected to be the event that would turn all those pledges into action. "Yet environmental campaigners said the Morocco summit was again heavy on rhetoric and light on real progress, with rich countries failing to do enough to help the developing world" (Worley, 2016: para. 2). Regarding energy issues, the conference organized a keynote panel with the following discussion topics: decarbonisation of energy supply, the development of climate-resilient and energy-efficient infrastructure, the opportunities and challenges around renewables expansion, and the use of carbon markets, pricing, and other policies to increase renewables markets. Furthermore, energy is one of the multi-stakeholder engagement proposal themes, which serves as structures to facilitate climate action and for tracking actions registered in NAZCA (Non-state Actor Zone for Climate Action), a web portal Launched in 2014 by UNFCCC, Peru, and France. The portal is meant to track the outcome of actions towards achieving the purpose and goals of the Paris Agreement and supporting the delivery of NDCs and the SDGs (UN, 2016). Broad-based actions by all segments of society, public and private, can be registered in NAZCA.

At COP 23 held in Bonn, Germany, in 2017 was launched *The Talanoa Dialogue*[11] "a traditional approach used in Fiji and the Pacific to engage in an inclusive, participatory and transparent dialogue" (UN, 2017). The initiative was designed to help countries implement and enhance their iNDCs. It was planned to start in January 2018 and should be constructive, facilitative and solution-oriented. The dialogue consisted of a preparatory and a political phase. The preparatory phase was intended

[11] In Paris, nations agreed that there should be a unique effort in 2018 to assess climate action progress. This one-off process which in 2015 was initially called the "facilitative dialogue", has been changed to *The Talanoa Dialogue* in 2017 under the Fijian presidency during COP 23.

to build a solid evidence-based foundation upon these three queries: Where are we? Where do we want to go? How do we get there? Preparatory phase resulting reports were to be used as a foundation for the Political phase. Another relevant event at COP 23 was Ukraine's proposal, which suggested that energy corporations should be brought closer to the UN climate actions. That should happen by placing them into an "intermediate layer" between the UNFCCC and national governments. The proposal raised the concern that such an initiative could enhance corporate influence over the UN talks (Timperley, 2017).

The Conference of the Parties (COP 24) took place in Katowice, Poland, in 2018 when the assembly conducted the negotiations for the entry into force of the Paris Agreement. Throughout the year, *The Talanoa Dialogue* was conducted. The preparatory phase was closed with a meeting on December 6, 2018, when synthesis of the preparatory phase was presented together with the Special Report on Global Warming of 1.5°C of the Intergovernmental Panel on Climate Change (IPCC). These results were considered the primary input from the preparatory phase into the political phase. However, the IPCC report launched in South Korea in October 2018 was a reason for disagreement among the Parties as the USA, Saudi Arabia, and Russia (gas/oil-producer countries) objected to the conference to welcome the report. The document pointed out that the world is currently completely off track, moving towards 3°C instead of 1.5°C this century. The three countries against the report supported a more laid-back position on the matter and that the conference would consider the results. As no consensus was reached under UN rules, the text did not pass, an outcome that caused a lot of frustration and disappointment among several Parties (McGrath, 2018). A dispute emerged during the discussion about Article 6 of the Paris Agreement, which regulates voluntary carbon markets. The most significant controversy was around the rules to avoid "double counting" of emissions cuts by the emitter country as well as the one buying carbon offsets. Brazil was at the centre of the discussion as Brazilian delegates

advocate that emissions reductions should account at the same time for the seller and the buyer of offsets (Carbon Brief, 2018).

Despite the dispute around the IPCC report, the political phase of *The Talanoa Dialogue* resulted in a declaration called *The Talanoa Call for Action*, the outcome of twenty-one ministerial round tables held on December 11, 2018, when the question "how do we get there?" was considered. The document highlights the need for multilateralism and cooperation in order to find solutions and build consensus for the common good. On the energy-matter, it requests initiatives towards universal access to sustainable and affordable energy sources, zero-emission transport systems, energy-efficient industries (UN, 2018b). It is indeed urgently necessary to put The Talanoa Call for Action into practice as the IPCC's sixth assessment report (AR6) published in August 2021 estimates that the world may pass the 1.5°C somewhere between 2030 and 2035, depending on the future emissions scenario (Hausfather, 2021).

The next Conference of Parties would take place in Brazil in November 2019, but the then President Jair Bolsonaro pulled the country out of hosting the event. Chile came forward, becoming the new host. However, social unrest due to anti-government protests led to the country's withdrawal from hosting the conference. Eventually, COP 25 took place in Madrid, Spain. Under the Chilean COP presidency. Negotiations around Article 6 of the Paris Agreement were resumed, and again Brazil was the centre of it. The root of the disagreement during COP 24 is the particular Brazilian understanding of the meaning of an iNDC, which leads to questions about the double-counting rules. Brazil's firm position on the issue was determinant for the agreement shortcomings over the Article 6 rulebook at COP 24 (Carbon Brief, 2019). Parties at COP 25 were unable to reach a consensus about this and other issues that therefore were postponed to COP 26 in 2020, when countries were required to increase their ambition efforts. However, due to the COVID-19 pandemic, the

event initially scheduled to take place in Glasgow in November 2020 was postponed to November 2021.

For more than four decades, since 1972, the United Nations have been making a lot of effort to tackle environmental issues. The Rio92 conference strongly mobilized public opinion, governments, and entrepreneurs. At first, all countries were alert and committed to environmental issues, and many promises were made through conventions and protocols. However, the Rio+20 conference was not successful. According to Dowbor (2012), its official documents are insufficient and timid, a disappointment to many. The conference took place in a less favourable context to reiterate previous agreements and provide an assessment opportunity for the current unsustainable and unequal economic growth. Europe was facing an economic crisis and the United States had started the presidential elections process. As a result the conference was not a priority. The American president and the German chancellor were expected until the last moment, but they did not attend, they only sent representatives. The Rio+20 scenario was different from the one of Rio92 as the United States refused to make any binding commitment to reduce greenhouse gas (GHG) emissions despite its high *per capita* emissions rate, and the least developed countries claimed their right to pollute until the developed ones take responsibility for their extensive damage to the environment (Magalhães de Moura, 2016). Despite many international meetings and agreements to develop strategies worldwide for climate change mitigation, results have not been satisfactory yet. In truth, some agreements have been rejected.

With the Kyoto Protocol, the United States would be forced to reduce its total emissions by an average of 7% below 1990 levels. However, Congress has not ratified the treaty even though President Clinton signed it. In 2001, the Bush administration expressly rejected the Agreement. As of June 1, 2018, President Trump announced the US's withdrawal from the Paris Climate Agreement. Besides scepticism about global warming being attributed to human activities, Trump's decision was based on

several economic, political, and legal reasons. It seems that the most significant cause for the withdraw has economic and financial grounds as declared the US president: "the United States will cease all implementation of the non-binding Paris Accord and the draconian financial and economic burdens the agreement imposes on our country" (The White House, 2017). After the withdrawal announcement, a wave of analysis emerged considering that the most effective approach to address climate change issues will be conducted by the market and its investments in technologies, instead of political agreements (Jenkins, 2017; Corneliussen, 2017; *UK's Telegraph*, 2017; *The Australian*, 2017).

Even though at the end of April 2021, 197 UNFCCC members had signed the Paris agreement and 191 of them had ratified it, there are lots of questioning about the treaty's effectiveness. Keuzenkamp states: "we are failing to honour the Paris Accord within the current economic paradigm. Only a paradigm shift seems an adequate solution (2019: para. 1)". In fact, there is an emerging consensus among political science scholars that diplomats should move beyond the 2°C goal due to inconsistencies between science and international commitments and that a feasible global agreement is idealistic (Levitt, 2011; Victor & Kennel, 2014; Rockström, 2017). Victor & Kennel (2014) argue that the 2°C goal is politically and scientifically misguided. Politically, it has enabled some governments to give the impression of taking global warming mitigation seriously while executing almost nothing. Scientifically, there are more effective ways to assess anthropogenic effects on the climate system other than the increasing average in global temperature. Jenkins states that in the last three decades, global warming has been on the daily news worldwide, yet "there is no appetite in the body politics for the kind of energy taxes and prohibitions needed to make a meaningful change in atmospheric CO_2" (2017: 1) and, indeed, according to the UN SDGs' platform there has been some advance on the energy issue (SDG 7) "due to recent progress in electrification, particularly in LDCs,[12] and improvements in industrial energy efficiency. However, national

[12] Least Developed Countries.

priorities and policy ambitions still need to be strengthened to put the world on track to meet the energy targets for 2030" (UN, 2018: 7).

In November 2019, The Universal Ecological Fund (Fundación Ecológica Universal FEU-US) published a report entitled The Truth behind the Climate Pledges, which concludes that almost 75 per cent of the current commitments to decreasing GHG emissions by 50 per cent by 2030 are partially or totally insufficient and some of the pledges are unlikely to be accomplished. At COP 25 in 2019, Parties recognized the vast gap between the current progress and the urgency to limit global warming. In Madrid, a multitude of protesters called attention to this discrepancy; among them was the climate activist Greta Thunberg who said that the conference of parties "seems to have turned into some kind of opportunity for countries to negotiate loopholes and to avoid raising their ambition" (Ruptly, 2019, 00:32). In fact, José Ferreras, an activist from Fridays for Future, says that corporates sponsors are among the conference attendees. He argues, "If you want to solve climate change, you don't meet the people who are destroying the planet" (in an interview with Marta Rodríguez Martínez from *Euronews* in 12-12-2019). According to Cárdenas (2019), for most scientists and members of civil society attending the conference, the results of this climate summit were meagre. Aden Meyer from the American non-profit organization Union of Concerned Scientists said: "In my almost 30 years in this process, I have never seen the almost total disconnection that we are seeing here in Madrid, between what science requires and people demand, and what the negotiations are giving, in terms of meaningful action".

The defeat of Trump in the American elections held in November 2020 could be light at the end of the tunnel. The new American president Joe Biden declared that his country would join international efforts to mitigate climate change and reaffirmed the US commitment to the Paris Agreement. Nevertheless, the Coronavirus pandemic that has affected the entire world since its appearance in China at the end of 2019 has

drawn the energies and resources worldwide to the fight against it, leaving all the nations unable to deal with the climate issue. Negotiations went on during Cop 26, held in Glasgow in November 2021. All nations present at the conference have agreed to phase down coal and some countries made a pledge to stop financing fossil fuel project. However, after the invasion of Ukraine by Russia, European countries have reactivated coal plant to address the shortage of Russian gas. At COP 27, held from 6 November until 18 November 2022 in the city of Sharm El Sheikh, in Egypt, the main development was that the parties have agreed for the first time on the need for funding arrangements to address loss and damage related to climate change. Nations are invited to contribute with the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF). New Zeeland, Austria, Germany, and Denmark already announced a funding of more than $ 240 million.

2.2 Brazilian governance: climate change mitigation and energy

Up to now, Brazil has participated in all UN general assemblies and UNFCCC gathering and has signed all their outcome agreements. Right from the start, Brazil has played a significant role in global environmental governance. Brazil was among the twenty-seven countries that took part in the first World Conference's preparatory committee on the Human Environment and worked actively during the gathering, suggesting amendments to the assembly's proposals. As a WCED or Brundtland Commission member, Brazil hosted one of its deliberative meetings and had a special participation in the advisory panel on industry.

In 1992 Brazil took a leading role in the global environmental agenda by hosting Eco 92. Prior to the conference, the environmental issue in Brazil was dealt with by a few different agencies and laws, e.g. The National Environmental Policy (Law No. 6.938/81) established in 1981 which

created the National Environmental System (SISNAMA); Ministry of Urban Development and Environment created in 1985, with the task of defining policies and coordinating governmental activities on environmental issues. Under this ministry, environmental quality control was dealt with by the National Environment Council (CONAMA) and, the Brazilian Institute of Environment and Natural Resources (IBAMA) created in February 1989. In 1990 the environmental issue was on the rise. With the prospect of organizing Rio-92 in Brazil, the Secretariat of Environment of the Presidency of the Republic (SEMAM/PR) was created. After the conference, that secretariat gave place to the Ministry of the Environment (MMA in Portuguese), created in November 1992. As of February 1997, a presidential decree created, the Sustainable Development Policy Commission (CPDS), to coordinate the preparation and implementation of Brazil's own Agenda 21. Regarding the energy issue, the country's Agenda 21 emphasizes the need to promote energy production and consumption efficiency. It calls for establishing norms and regulations for the rational use of energy by integrating the various sectors to reduce losses and waste of energy in large urban centres and points out the possibility of improving the efficiency of architectural projects and transportation systems. The document aims to stimulate the creation of economic and financial mechanisms to promote the use of energy from renewable sources, to seek innovative technologies and technical cooperation. Furthermore, it seeks to promote and finance energy research and development programmes, to stimulate the use of energy conservation technologies and reduction of energy intensity.

At COP 3 in 1997, Brazil had protagonist participation in creating the Clean Development mechanism (CDM), which is one of the procedures established in the Kyoto Protocol to promote clean development in developing countries. The CDM concept emerged from a proposition of creating a "Green Development Fund (GDF)" by the Brazilian delegation. The GDF was intended to encourage mitigation initiatives in developing countries. Despite the G77 and China's endorsement, the fund was not

implemented because developed countries opposed its non-compliance penalties. To reach an agreement, Brazilian and American representatives reorganized the original GDF proposal into the CDM, which is still in force. At COP 15 in 2009, Brazil undertook the voluntary commitment to achieve GHG emission reduction targets by reducing the deforestation in the Amazon which was significantly recorded in previous years. In order to meet this commitment, the National Policy on Climate Change (PNMC in Portuguese) was instituted and made official the objective of reducing greenhouse gas emissions from 38.9% to 36.1% compared to projected emissions by 2020. As of December 2017, the Brazilian Senate approved the Legislative Decree No. 178 of 11/12/2017, which ratifies the Kyoto Protocol amendments, formalizing the country's accession to the second period of the Agreement, which continued until the end of 2020.

As of June 2012, Brazil hosted for the second time the UN conference on the environment. The Rio+20 conference was a 20-year follow-up to the first Earth Summit, and its outcome document 'The future we want' mainly reaffirms prior Agenda 21 agreements. In November 2011, The National Commission for the United Nations Conference on Sustainable Development –created by Decree 7.495 of June 7, 2011– presented the document Brazilian Contribution to the Rio+20 conference, which was elaborated based on extensive consultations with society and government agencies. According to the Brazilian commissioners, the document presented a series of twenty-five themes that could not be ignored by the assembly because "they are the core of inclusive sustainable development for the planet" (National Commission for the United Nations Conference on Sustainable Development, 2011: 7). The theme of number 13 which deals with energy, reiterates the objectives of the Brazilian Agenda 21. Another five themes mention the energy sector regarding access to energy and the job opportunities that a new market in renewable energy sources represents. In addition, the document draws attention to the importance of the use of landfills for energy production and also presents suggestions for the promotion of

innovative research for the production of bioenergy from algae and forest biomass. The Brazilian commission also includes in its document eight proposals to be discussed by the assembly. Proposal number 2 suggests that access to adequate sources of energy should be one of the SDGs, which has been materialized in the form of SDG7 in the '2030 Agenda for Sustainable Development' adopted by the UN General Assembly in January 2015. Proposal number 3 is a 'Global Compact for Sustainable Production and Consumption'. Its item A – Sustainable Public Procurement – suggests that public sector consumption has the role of initiating changes in the sustainability standards of production and consumption by adopting criteria for the bidding of goods and services which inter alia privilege the lower consumption of raw materials and energy. Item B, also in proposal number 3, entitled "Consumption Classifications and Energy Efficiency' advocates the promotion of consumption labelling programmes and energy efficiency of products to evaluate and optimize both energy and fuel use.

Anticipating the country's participation in the COP21 in Paris, Brazil submitted its new climate action plan to the UNFCCC on September 28, 2015. The country's iNDC itself highlights its aspiring aspect: "Brazil will reduce greenhouse gas emissions in the context of continued population and GDP growth, as well as income per capita increase, making, therefore, this contribution unequivocally very ambitious" (Ministry of Foreign Affairs, 2015: 2). On September 21 and November 4, 2016, Brazilian iNDC was ratified and entered into force, respectively. The document presents Brazil's goal of reducing GHG emissions by 37% in 2025 and 43% in 2030 below 2005 levels. The FEU-US 2019 report considers Brazil's pledge sufficient[13] but:

> this climate pledge, however, was put forward by the previous administration. The current one, which took office last January,

[13] "Of 184 climate pledges, 36 were deemed sufficient (20 per cent), 12 partially sufficient (6 per cent), 8 partially insufficient (4 per cent) and 128 insufficient (70 per cent)" (Watson, McCarthy, Canziani, Nakicenovic & Hisas, 2019: para. 4).

> reversed key environmental and climate change-related policies and measures. This political reversal jeopardizes Brazil's chances of meeting its climate pledge. Furthermore, deforestation in Amazonia, as well as the destruction of other ecosystems, has accelerated the reduction of carbon sinks, impacting regional climate (Watson, McCarthy, Canziani, Nakicenovic & Hisas, 2019: 11).

Concerning *The Talanoa Dialogue* launched at COP 23, two Brazilian non-party stakeholders submitted their input to the UNPCCC. Brazilian Business Council for Sustainable Development (CEBDS) submitted its contribution on October 29, 2018. The document addresses the three queries: Where are we? Where do we want to go? How do we get there? On the energy-matter, it highlights Brazil's commitment to improving the renewable profile of its energy system as a priority in the medium and long terms. They acknowledge feed-in tariffs for renewable energy as a valuable tool to achieve energy transition (CEBDS, 2018). Furthermore, the document emphasizes the need to eliminate subsidies to fossil fuels and improve energy governance systems. It also suggests that energy efficiency auctions could promote efficiency. The second stakeholders to submit a contribution was WWF. The document *Talanoa Brazil: the São Paulo kick-start* is a report of the first *Talanoa Dialogue* in Brazil, entitled "São Paulo no Clima," a conference organized by São Paulo State Environmental Company (CETESB) in June 2018. The event brought together stakeholders from the public and private sector, academia, and civil society, with the purpose to share experiences, discuss challenges and potential of the State São Paulo in its strategy of tackling climate change. Took part in the event mister Mark Lutes, Specialist in the Climate Change and Energy Programme of WWF Brazil (CETESB, 2018).

Even though Brazil has been actively committed to international agreements on sustainable development, in practice, environment-friendly initiatives have not been implemented as effectively as intended. In the years following Rio 92, initiatives related to environmental issues in Brazil declined remarkably due to several factors, such as the return to the institutional routine and lack of financial resources; public opinion

disinterest; organizational conflicts, budget cuts for NGOs; political crisis[14] (Viola, 1998). The initiative of hosting the conference benefited and elevated the Brazilian environmental movement to an international context. However, the public policies developed in the period did not strengthen the country's commitment to environmental sustainability considerably. In truth, the processes of establishing environmental management and control proved to be not only peripheral to the central power but also inefficient (Rissato & Spricigo, 2010). Despite Brazil's leading role in the organization of the Rio92 conference, the preparation of the Brazilian Agenda 21 started only five years later in 1997 and took another five years to be launched in 2002. The complex and time-consuming process involved a series of studies and public consultations, which resulted in a final document that reflects the country's vision of its environmental problems. Nevertheless, the Brazilian Agenda 21 has been overshadowed by new priorities and therefore, not being used for its original purpose: guiding the country's environmental policies and development initiatives (Moura, 2016).

Under the Kyoto protocol's agreements, the Brazilian government committed to reducing its GHG emissions by reducing deforestation in the Amazon, which is Brazil's leading source of emissions. However, according to WWF Brazil (2018), deforestation in the Amazon had an increase of 13.7% in comparison to the previous 12 months. The data are the preliminary rates recorded between August 2017 and July 2018 by the Project for Deforestation Monitoring in the Legal Amazon by Satellite (PRODES in Portuguese). Furthermore, the announcement of the country's oil reserves pre-salt by the federal government at the end of 2007, among other reasons, led to a prioritization of this sector to the detriment of other renewable sources (Cortez, 2016), including the sugarcane ethanol sector as it is further elaborated in the subsequent sections.

[14] As of September 28, 1992, Brazilian president Fernando Collor de Mello was impeached.

Despite the Brazilian government's effort to organize and host the Rio+20 conference, it was not as successful as expected. In addition to the adverse economic and political conjuncture in different countries, the discourse prior to the conference was based on unproductive theoretical and conceptual discussions about the meaning of the green economy. It lacked focus, which did not add to the event's goals to advance actual actions towards necessary substantial improvement (Moura, 2016). Likewise, the Brazilian contribution document presented to Rio+20 had no specific focus and presented an array of 24 sustainable development challenges but did not elaborate on practical solutions.

Brazil's difficulty in implementing climate policies does not stimulate non-state actors to take actions on their own to help the county achieve its emissions reductions goals. Up to now, actions from Brazil registered in NAZCA are 471, representing 285 actors.[15] Far behind the United States (3,592 actions representing 2,113 actors), United Kingdom (1,679 actions representing 1,005 actors) and France (1,111 actions representing 537 actors).

Since 2015, when Brazil presented its iNDC to the executive secretary of UNFCCC, the country's political, economic, and social circumstances have indicated a discrepancy with the country's pledges to reduce GHG emissions. In fact, Brazil was a protagonist in the failure of agreements around article 6.4 of the Paris Agreement Rulebook at COP 24 and COP 25. The origin of the dispute is the way Brazilian delegates understand the goal of the iNDC. José Domingo González Míguez, a Brazilian representative at the conference, believes that an iNDC is formed by a range of government programmes and policies while there is a consensus that the document is intended to present the nations' target to cut CO_2. The overall Agreement is that each country has the duty to adjust its iNDC in the case of any CO_2 saving being sold abroad. As Brazil advocates for double counting the carbon offsets, the adjustment would not be necessary. Most Parties agree that double-counting put the

[15] For details go to https://climateaction.unfccc.int/views/country.html?country=BR

environment in jeopardy because it would give the impression that countries have met their targets even when CO_2 emissions increase. Furthermore, Míguez believes that any private initiative to cut CO_2 emissions should add to the country's effort to reduce emissions. He sees private initiatives as extra contribution as they are not part of the government programmes and policies. Another reason there is no need to alter the iNDC (Carbon brief, 2019). One way or another, Brazil found a way to keep its promises and still seems even more efficient in reducing its emissions. According to the Observatório do Clima (2020), a strategy they call carbon pedalling has increased the acceptable margin of CO_2 emissions in Brazil. In its first iNDC, Brazil was committed to reducing its greenhouse gas emissions by 37% by 2025 and 43% by 2030, compared to 2005 levels. Countries that signed the Paris Agreement agreed that countries with targets by 2025 should present a new iNDC by the end of 2020. Brazil presented its new iNDC in December 2020 and confirmed its previous targets. With the pedalling strategy, the initial percentage for reducing emissions proposed by Brazil has not changed, but the basis for calculating the percentage has changed significantly. The methodology for estimating emissions from land use in the country has been improved, which resulted in a significant increase in net emissions in the base year 2005 (from 2.1 to 2.8 billion tons of CO_2). The 43% reduction in the increased calculation base raises the target for 2030 from 1.2 to 1.6 billion tons of CO_2. This change allows Brazil to reach 2030, emitting approximately four hundred million tons of CO_2 more than the target proposed in 2015.

Even though other Parties have considered Brazil an obstacle to the Agreement over the carbon market, the Brazilian new iNDC presented by Bolsonaro's administration says:

> Brazil considers it essential that the negotiations on Article 6 of the Paris Agreement be concluded promptly and that the sustainable development mechanism (SDM) provided for, under Article 6, paragraph 4 of the Agreement be operationalized as soon as possible (…) in the event of a failure to conclude the negotiations and regulation

> of Article 6, the entire architecture of the Paris Agreement would be seriously jeopardized, to the detriment of the implementation of its objectives (MRE, 2020: 9).

The Observatório do Clima (2020) considers this statement little diplomatic and suggests a threat to the international community.

Between 2003 and 2010, during the two terms of former President Luiz Inácio Lula da Silva, Brazil experienced significant economic and social changes. However, with Lula's successor's impeachment, President Dilma Rousseff and her replacement by Vice-president Michel Temer, Brazil faced several corruption scandals and deep political crises. Since President Jair Bolsonaro took office on January 1, 2019, the country's political, economic, and social conjuncture has not improved. In fact, it has worsened with the Coronavirus pandemic. Right from the start of Bolsonaro's presidency, environmental agencies and policies have been restricted. Bolsonaro began his government by announcing the provisional measure 870 of January 1, 2019 (Medida provisória or MP in Portuguese) that established his Ministries. The MP provides essential information regarding the environmental policies that the current administration has implemented. According to the Socio-environmental Institute (ISA), the MMA not only lost political power but is now subordinated to economic interests and other areas of the government. With the changes announced, the ministry loses its competence to combat deforestation, forest fires, and desertification. An analysis of the first 100 days of the Bolsonaro government made by the Brazilian forum Observatório do Clima reveals that climate governance has been dismantled, and despite what the president said in Davos[16] regarding working with other nations to reduce GHG emissions, both his ministers for Environment and Foreign Affairs think the climate change does not exist. Bolsonaro's initial proceedings on the environment matter are anything but promising. He has even declared that Brazil could leave the

[16] Bolsonaro was at the annual meeting of the World Economic Forum in Davos, Switzerland, in January 2019.

Paris Agreement. Such a statement makes it difficult to predict how his governance on climate change will unfold. Up to early 2021, halfway through Bolsonaro's administration, Brazil has faced a lot of problems regarding environmental issues. In 2020 Brazil made headlines in the international media because of the vast fires that occurred in the Amazon and the Pantanal. According to Greenpeace, this happened due to a combination of severe droughts and neglect by the federal government. The aggravation of the situation is the result of the destruction project conducted by Bolsonaro's administration. The current government's policy has been causing the dismantling of structures and projects aimed at preserving the environment. On this matter, the Brazilian new iNDC says:

> As of 2021, Brazil will require at least US$ 10 billion per year to address the numerous challenges it faces, including the conservation of native vegetation in its various biomes. Further decisions regarding Brazil's indicative long-term strategy, especially the definition of the final date to be considered to this end, will take into account financial transfers to be received by the country (MRE, 2020: 9).

The Brazilian government blackmails other countries in saying that it requires at least $ 10 billion a year to preserve its biomes. Again, Brazil's current administration shows a lack of diplomacy (Observatório do Clima, 2020).

The Covid-19 pandemic in Brazil has taken on enormous proportions and has shown signs that it is out of control. Since the impeachment of President Dilma Rousseff in 2016, Brazil has been facing a severe political and economic crisis. The pandemic has further aggravated the ongoing crises. Without political and economic stabilization, Brazil's goals regarding the mitigation of GHG emissions will be hard to achieve within the period proposed.

Bolsonaro's presidency, which ended on December 31, 2022, had little or no commitment with climate governance (Observatório do Clima, 2022;

Ferris, 2022). The newly elected President Luiz Inácio Lula da Silva has pledged in his speech at COP 27 in Egypt, that his government will be fully committed to facing climate change with determination (Arlota, 2022; Harris and Hodgson, 2022).

Since the beginning of the 1970s, when an international summit was held to address the anthropogenic impact on the climate, the international community has met annually at different conferences to seek global governance policies that can curb the rise in temperature on the planet. Different agreements have been signed by most countries. The need for low GHG emissions at a global level is a known fact worldwide. In 1997, industrialized countries agreed to take initiatives to stabilize their emissions by ratifying the Kyoto Protocol. Since then, 192 nations have committed themselves to reduce their emissions. The Paris agreement, the last and most promising Agreement signed in 2015, has been endorsed by 191 of the 197 nations so far. Brazil has been present in all assemblies since the first international initiative in 1972. Since then, Brazil has been an active participant in attempts to contain global warming, being a signatory to both the Kyoto Protocol and the Paris Agreement. After leading two significant conferences (Rio92 and Rio+20), the country continues to contribute to the search for solutions. The international community has encountered numerous obstacles to implementing the signed agreements. Likewise, Brazil has had difficulties, especially in recent years, in implementing the policies agreed at a global and local level.