

## ANNEX

### REPLY OF THE GOVERNMENT OF BRAZIL REGARDING THE CALL FOR INPUTS: EXTRACTIVE SECTOR, JUST TRANSITION AND HUMAN RIGHTS, DATED APRIL 4<sup>TH</sup> 2023

Replies to the questionnaire from the Ministry of Mines and Energy:

1. To ensure that the energy transition is carried out in a fair and equitable manner, it is necessary that the communities affected by these changes be included by the Government in the process of designing policies for the energy transition. Energy policies must be designed to protect human rights, including the right to housing, to food, to water and to health. In this sense, public policies must establish guidelines, both for sectoral agents and for the financial market, in order to prioritize the development of projects and programmes that establish effective means of mitigating negative effects and enhancing positive ones.

2. At the subnational level, the southern Brazilian state of Santa Catarina published Law n° 18,330, dated January 5<sup>th</sup>, 2022, which establishes Santa Catarina's Policy for Fair Energy Transition, which aims to promote the sustainable development of Santa Catarina's production chains and boost a fair energy transition in this particular state. At the federal level, Law n° 14,299, also of January 5<sup>th</sup>, 2022, created the Fair Energy Transition Programme (TEJ), "with a view to promoting a fair energy transition for the coal region of the State of Santa Catarina, observing the environmental, economic and social effects". The implementation of these Programmes is underway. Therefore, an evaluation of the implementation of these public policies is to be made later.

3. For an effective development and implementation of government mechanisms or processes, a multilevel governance model must be adopted, allowing better communication among different government levels and many stakeholders from civil society (local and regional). Once the fair energy transition process has been developing over several years and involves a plurality of stakeholders and different levels of government, the planning, implementation, monitoring and control are essential for its good management. Government work must be guided by a plan that takes into account, in a short, medium and long term perspective, the scope, guidelines, objectives, governance structure, responsible persons, indicators, goals, stages, schedules, the resources and other elements necessary for the proper functioning of the just energy transition program.

4. States may require companies in the extractive sector to regularly report their greenhouse gas emissions, energy use and energy transition strategies. Another alternative is to create certification programmes for companies that meet certain energy transition, sustainability and compliance standards. Certification can help consumers identify reliable and responsible businesses. States can also impose penalties and fines on companies that make misleading or unsubstantiated claims about their energy transition efforts. However, these measures may not be sufficient to ensure the adequacy, accessibility, reliability and accuracy of the information. It is important that States also carry out regular monitoring and audits to ensure that companies are meeting their obligations and that their information is

accurate. In addition, it is important that information is disclosed in a way that is accessible and understandable to consumers and other interested parties.

5. The current concessions, contracts and bilateral investment treaties in the extractive sector allow for States to comply with their national and international human rights obligations in connection with energy transition. Brazil has a very robust and consolidated legislative framework that covers social, labour and environmental protection issues for the implementation of projects. However, it is necessary to strengthen public institutions in order to increase the inspection and control of the activities of the companies.

6. The energy transition is not simply a matter of replacing fossil energy sources with renewable sources; the transition must be guided by the principles of sustainable development, the protection of nature and respect for human rights. For an effective implementation of action plans, a multilevel governance model must be adopted, which allows for better communication among government levels and a wide range of interested parties, comprising public officials (federal and subnational) and civil society organizations (regional and local). The just energy transition is not a particular situation, but a dynamic and constant progression towards sustainability. The process is dynamic, open, and it is influenced by changes in social, economic, technological, environmental and political scenarios.

7. National companies involved in energy transition must ensure that their activities do not violate human rights along the supply chain, in particular in developing countries. To this end, it is important to regularly monitor the activities of companies belonging to the energy transition-related supply chain to ensure that human rights are being respected in their jurisdictions and that, in case of violation, such foreign companies involved are held accountable. It is also important that States establish cooperation agreements to ensure that companies involved in energy transition also respect human rights in all countries where they operate.

8. The values and guidelines of the energy transition based on the prospect of a low-carbon economy should seek social well-being, work, employment, income and protection for those affected, promotion of quality of life, social inclusion, poverty eradication, preservation and generation of quality jobs and capacity building. Through the appropriate governance structure and setting of public policies by the Government of Brazil aimed at eradicating poverty, justice and social inclusion, it will be possible to contribute to solving problems, delivering the results expected by society.

9. Governments around the world have demanded corporate governance in line with obligations and commitments to protect and promote human rights in all their activities and operations, with mandatory due diligence on human rights. In line with this vision, Brazilian law requires companies to comply with the protection and promotion of human rights in their activities and operations. The mitigation of risks in their production chains has to be an ongoing practice, which often demands a change in the mindset of the organization. In February 2023, under the UN Global Compact in Brazil, the Working Group on Human Rights in the Electricity and Energy Sector was launched under the Global Compact's action

platform. Among the 17 Sustainable Development Goals (SDGs), priority will be given to Good Health and Well-Being (SDG 3), Gender Equality (SDG 5), Decent Work and Economic Growth (SDG 8) and Reduction of Inequalities (SDG 10). The Working Group's objectives are to support companies in the sector engaged in the UN human rights platform; identify opportunities on the business agenda, produce and share knowledge collaboratively, taking into account the particularities of the sector. The Group will also seek to inspire the supply chain to act positively on the human rights agenda; to be a mechanism for reflection on the subject and to map tools for the promotion of rights, in particular regarding health, gender, race and salary.

10. Despite the fact that current rules and bilateral investment contracts already provide for the protection of human rights, it is necessary to have independent monitoring mechanisms to ensure that human rights protection clauses are observed. In addition, companies should be required to publish information about their operations, risk management practices, environmental and social impact and measures taken to prevent human rights violations.

12. Minerals play a key role in the transition to a future low-carbon economy. Brazil has enormous challenges to overcome in order to take advantage of the opportunity of this new market that is opening up. In this context, the integration and strengthening of sectoral, social, environmental and assistance policies for the sustainable development of artisanal and small-scale mining should be encouraged, encouraging best practices, bringing the activities to be conducted under the rules and regulations, promoting health, assistance and the dignity of the communities involved. This way, Brazil will be able to explore its great potential in the energy transition.

13. The energy transition is the key process to secure the path to the decarbonisation of the economy. To fulfill this transformative role, the energy transition should progress within a regulatory framework that guarantees compliance with national, regional and international standards with regard to corporate due diligence and respect for human rights and for nature. The energy transition does not preclude companies from complying with human rights due diligence. The energy transition must not be carried out at any cost. The participation of civil society must be ensured from the stages of designing and planning to the effective implementation of projects.

14. Such entities should be encouraged to work together to develop ethical and performance standards for companies in the extractive sector. These standards should include requirements regarding human rights, environment and social issues. Higher education institutions, for example, can play a key role in training future leaders in the extractive sector, providing them with knowledge and skills in the field of human rights, environment and social issues. It is important to make public good examples of companies in the extractive sector that are adopting commercial practices with regard to human rights. These success stories can serve as inspiration and encouragement for other companies.

15. At first, access to Justice for people affected by extractive activities must be ensured. This may include the right to a fair and impartial trial, as well as the right to judicial

and extrajudicial remedies. In addition, dispute settlement mechanisms are important to allow parties to resolve their disputes more quickly and effectively. The participation of communities affected by extractive activities in the decision-making process is essential for guaranteeing their rights, a process that can be conducted, for example, through prior, free and informed consultations (ILO 169).

16. In 2018, the Constitutional Court of Peru ruled that the mining company Cerro Verde shall pay compensation to communities affected by the environmental and social damages caused by the company. The Court's decision was praised by human rights groups as an example of justice for communities affected by mining projects. However, these measures are not always effective in terms of corrective processes and results. Lawsuits are sometimes slow and bureaucratic, and reparations may not be sufficient to fully compensate affected communities. Therefore, States and companies should put in place robust mechanisms to investigate and remedy human rights abuses related to business in the extractive sector. This may include creating specialized courts, safe and reliable reporting mechanisms, and involving affected communities at all stages of the process.

19. For additional information, see the publication of the “Instituto Mineração do Brasil”: GREEN BOOK ON MINING IN BRAZIL at <[https://ibram.org.br/wp-content/uploads/2022/11/IBRAM\\_LivroVerde-digital-030123ld.pdf](https://ibram.org.br/wp-content/uploads/2022/11/IBRAM_LivroVerde-digital-030123ld.pdf)>.

20. Companies and States must ensure that affected communities have access to information and are also consulted about renewable energy projects that may affect them. Communities must be able to voice their concerns and participate in decisions that affect their lives and livelihoods. From a socio-environmental point of view, before starting a renewable energy project, it is important to carry out a comprehensive environmental and social impact assessment to identify the potential impact on the health, environment and human rights of affected communities. Companies and States should carefully consider the results of the assessment and take measures to minimize or mitigate negative effects. Also, a fair energy transition involves ensuring access to electricity. States and companies must ensure that the transition to renewable energy does not leave communities without access to energy. Businesses and States should consider adopting decentralized renewable energy technologies that can power remote or isolated areas. Regarding the rights of indigenous and traditional communities, States and companies must respect the rights of indigenous and traditional communities and their local knowledge about the land and biodiversity. Companies should obtain the free, prior and informed consent of indigenous and traditional communities before starting a renewable energy project on their lands. Finally, companies and states must ensure transparency and accountability at all stages of the renewable energy project. This includes disclosing information about the companies' activities, implementing monitoring and follow-up measures, and accountability for any negative effects on human rights.

21. Yes. The following are examples of recommendations:

a) For States: to promote public policies that encourage a fair energy transition and that take into account human rights and the environment; strengthen national human rights institutions to monitor and hold companies accountable for human rights abuses in the

extractive sector; and ensure that affected communities have access to information and participate in decisions related to energy transition projects.

b) For companies and investors: adopt transparency in their operations, including the disclosure of relevant information about extractive activities and their effects; work together with affected communities to ensure that their needs and concerns are heard and respected; encouraging the company's spirit to incorporate issues related to increasing corporate sustainability.

c) For civil society: raising awareness of the social, environmental and human rights effects of extractive activities and the energy transition; monitor the operations of companies and hold them accountable for human rights abuses; and pressuring states and companies to adopt more responsible business practices.

d) For UN bodies: promote international policies and guidelines that encourage a fair energy transition and that take into account human rights and the environment; and support the capacity-building for national human rights institutions to deal with issues related to the extractive sector.

e) For national human rights institutions: strengthen their capacities to monitor human rights policies and actions in the extractive sector; work together with affected communities to ensure that their needs and concerns are heard and respected; and promote awareness of the social, environmental and human rights effects of extractive activities and the energy transition.

Replies to the questionnaire from the Ministry of Human Rights and Citizenship:

1. Energy transition is related to changes in the structure of the global energy matrix, which, in turn, are dependent on several factors, such as sustainable development, climate change, technological innovations, digitization, efficient use of energy resources and low-carbon sources.

In Brazil, with the publication of Decree nº 2652 of July 1<sup>st</sup>, 1998, which incorporated the 1992 United Nations Framework Convention on Climate Change into domestic legislation, the National Congress has been discussing the matter with civil society, companies and the government, as well as enacting regulations that aim to reduce the negative effects of climate change and its impact on the population. Since then, Brazil has played a prominent role in climate negotiations.

In 2007, Decree nº 6,263 established the Interministerial Commission on Climate Change, which functions as the national authority for the United Nations Framework Convention on Climate Change (UNFCCC) and is responsible for approving Clean Development Mechanism (CDM) projects in the country and for formulating the National Policy on Climate Change (PNMC, in Portuguese).

The PNMC was established in 2009 by Law nº 12,187, with the aim of identifying, planning and coordinating the measures that may be undertaken to mitigate greenhouse gas emissions generated in Brazil. Under the PNMC, presidential Decree No. 7,390 of 2010 set regulations regarding climate change policy and established the development of sectoral mitigation and adaptation plans at local, regional and national levels.

Decree nº 9,578 of 2018 set regulations for the National Fund on Climate Change (FNMC) with guidelines for the origin of resources, the use of fund and the composition of the management committee.

The Brazilian Panel on Climate Change (PBMC) which aimed to take stock of the policies and measures adopted under the 2009 PNMC and present updated data on emissions in the country. According to the PBMC, Brazil has a "clean energy matrix" with low GHG emissions.

In 2015, under the Paris Agreement, Brazil presented its intended Nationally Determined Contribution (NDCs), which entered into force in November 2016, with actions and measures for the fulfilment of the established goals. Global estimates are mainly based on the impact of the temporary reduction in 2020 (COVID-19 pandemic) in the use of fossil fuels which account for about two thirds of global GHG emissions.

Therefore, globally the oil and natural gas sector is certainly the biggest contributor to climate change. The Brazilian case is different from other countries, since in Brazil the contributor is largely the changes in land use, mainly deforestation in the Amazon and in the Cerrado accounting for more than two thirds of the total.

In this context, Brazil works on the development of new public policies, having as reference the National Adaptation Plan (PNA) which establishes guidelines and goals for 11 sectors or topics: agriculture; biodiversity and ecosystems; cities; natural disasters; industry and mining; infrastructure (energy, transport and urban mobility); vulnerable populations; water resources; health; nutrition and food security; and coastal zones. The PNMC sets for that national measures to face climate change be integrated with actions at subnational levels by public and private entities.

Recently, Decree nº 11,124 of July 7, 2022, as per required by Article 4 of Law nº 14,299, of January 5, 2022, sets the principles that will guide the decisions of the National Council on the Fair Energy Transition Program (TEJ Council) and regarding the Just Transition Plan, in particular monitoring of the environmental, economic and social effects of energy transition, with a view to sustainable social development, to the recognition of the importance of energy and mineral resources, to the energy transition in line with carbon neutrality reached in accordance with the goals established by the federal government; and to the proper allocation of costs.

Under discussion in Congress is now Bill nº 327/2021, which sets the National Energy Transition Policy (PONTE, in Portuguese) to regulate the transition from the current energy model to a new standard based on renewable sources and low carbon emissions.

Currently under consideration by the Commission on Environment and Sustainable Development of the Low House of Congress, the Bill establishes that the pattern of energy transition will involve structural changes with the planned change from the current model, mostly based on fossil fuels, to a matrix supported by renewable sources. In that connection, public policies are aimed at: reducing the socioeconomic impact caused by global warming, in compliance with the establishment of ten-year climate targets; the implementation of an energy standard with low carbon emissions, observing the constraints of environmental, social and governance development, with an emphasis on renewable energies; the establishment of a fiscal policy that reflects the social costs of carbon emissions, to finance public policies and appropriate tools, which make it possible to reduce global warming; the elaboration of ten-year scientific plans with emphasis on the production and distribution of renewable energies; the inclusion in school and university curriculum, at various levels, a subject that stimulates the debate on the climate impact of the sustainable development of the country; the formatting of the ten-year national infrastructure project, organizing the civil construction norms, aimed at the lowest environmental impact with low carbon emissions, and the definition of the ten-year plan for research and development of technologies, as a public policy at the three levels of government, for carbon capture and reversal of the effects of global warming.

2. The boom in the exploitation of natural resources occurred throughout Latin America, favoured by the high earnings of commodities. Called “neoextractivism”, this development model based on the overexploitation of natural resources, increasingly scarce and largely non-renewable, has also expanded frontiers to territories previously considered unproductive from the point of view of capital. That applies to large-scale exports of commodities including hydrocarbons (oil and natural gas), metals and minerals (copper, gold, iron, bauxite, etc.).

This expansion was possible thanks to new economic relations in the region, in particular the exchanges between Latin America and China. In this connection, both the boom period and the post-commodity boom are marked by socio-environmental conflicts in territories, led by indigenous movements, traditional and peasant communities, as well as the emergence of new forms of popular mobilization in defence of common goods and collective rights. This process gave rise in Brazil, in 2012, for example, to the National Movement for Popular Sovereignty in Mining (MAM), which coordinates communities affected by mining projects throughout the country.

In this sense, questions about a fair and sustainable energy transition for Latin America still have gaps for discussion, as clearly GHG emissions are not a problem caused by Latin America. Therefore there may be an unfair side to the energy transition in which the South American region is requested to make a greater sacrifice.

Some aspects addressed refer to the negative effects of these activities, adaptations to climate change, transparency and the role of civil society, in addition to raising and suggesting alternatives for adapting extractive activities. In this sense, companies and their businesses should be organized in such a way that the risk of their operations does not violate rights. And this is even more demanding when it comes to companies involved in extractive

sector, since their operations not only put people at risk, but also the environment. Extractive companies' human rights risks are limited to business activities that directly affect them. However, companies must undertake an expanded risk management that minimizes the real and/or potential consequences of affecting human rights and the environment, which are intensely debated. Based on the question regarding the obligation of companies to respect human rights, the efforts mentioned by the UN and the ILO (Tripartite Declaration of principles concerning multinational enterprises and social policy), show that the effort to achieve normative regulation by international organizations has been a non-exhaustive concern.

3. A Compliance Program can address risk prevention work and be in accordance with normative requirements. Companies must implement an effective compliance culture to avoid activities that could lead to violations of human rights and damage to the environment. For companies to adopt an adequate compliance programme, several aspects must be taken into account: national and international law in specific areas for labour and environmental risks; good corporate governance against the abuse of corporate power; codes of ethics from organizations such as the UN or the OECD, as a means of preventing crimes committed by global companies; development of corporate social responsibility; expansion of internal audit systems; quality standards certification mechanisms. The adoption of the prevention model for a company should not be voluntary, but mandatory. The prevention model should establish the legal obligation to prevent environmental damage (environmental compliance), damage to workers (labour compliance) or human rights in general (compliance in human rights). Under international law, legal obligations for companies in terms of human rights are not in place, and there are only non-binding recommendations for the respect of fundamental rights. In this connection, prevention models (compliance) constitute a valuable tool for companies to use in addressing risks that, in the course of their operations, may lead to events with repercussions in the field of human rights. In Brazil, Bill 572/2022, currently under consideration by the Economic Development Commission of the Lower House of Congress, sets the national framework on human rights and companies, establishing guidelines for the promotion of public policies for that. Although the Bill does not provide specifically for a particular industrial sector only (such as the extractive sector), it contains guidelines on large corporations (Art 9, item VI - ensuring that large corporations and infrastructure projects respect human rights, from the planning stage, in accordance with ILO Convention No. 169) and on the extent of liability to companies and their value chain (Art. 5, § 1. Responsibility for the violation is joint and extends across the entire production chain, including the controlling company, controlled companies, as well as public investors and private, including subcontractors, branches, subsidiaries, economic and financial institutions operating outside the national territory, and national economic and financial entities that participate by investing or benefiting from any stage of the production process, even when there is no formal contractual relationship.)

4. In the capital markets, investors are increasingly demanding that environmental issues are considered in portfolios, adapting and differentiating services that incorporate environmental, social and governance (ESG) factors. Numerous studies identify procedures that must be adopted by companies, even anticipating the discussions that take place in Congress. In this connection, from the second half of 2020, the Energy Research Company



of Brazil (EPE), a state-owned enterprise under the Ministry of Mines and Energy, the Inter-American Development Bank (IDB) and the Brazilian Centre for International Relations (CEBRI) developed the Energy Transition Programme with the purpose of providing a forum to discuss, elaborate and disseminate long-term energy transition scenarios in Brazil. The Program has three phases: Divergence, Convergence and Quantification of Scenarios.

The forum has already delivered two products: i) "Scenarios for the efficient transition in Brazil"; and ii) "Executive Notebook of the Energy Transition Program". In this connection, from 2012 to 2015, companies such as B3 (Sao Paulo Stock Exchange), recommend that corporations publish sustainability reports or, if not, companies should explain why they did not do so, given that sustainable business and governance have already become parameters to determine the performance of companies. In this sense, B3 itself has undertaken sustainability commitments, for example, by setting two goals: i) to create by 2024 a market index that measures the performance of companies with good diversity indicators; ii) to reach the level 35% of women in leadership positions in the company by 2026.

5. Resolution n° A/HRC/RES/17/4 of the United Nations Human Rights Council, of July 6, 2011, sets the fundamental principles for corporate responsibility in matters of human rights and the duties of due diligence for all companies, regardless of sector, size, operational context or structure. These Guiding Principles are founded on the recognition of States' existing obligations to respect and protect human rights and fundamental freedoms; on the role of business to perform specialized functions necessary for compliance with all applicable laws and respect human rights; on the need for rights and obligations to have appropriate and effective remedies, in the case of violations. These Guiding Principles apply to all States and to all commercial, transnational and other enterprises, regardless of their size, sector, location, ownership and structure. These Principles must be understood as a coherent whole and must be read, individually and collectively, in terms of their objective to improve standards and practices with respect to business and human rights, in order to achieve tangible results for affected individuals and communities, thereby also contributing to a socially sustainable globalization. These Guiding Principles should not be construed as creating new obligations under international law or as limiting or weakening any legal obligations that a State may have taken or be subject to under international law with regard to human rights. Rather, they serve as guidance and must be implemented in a non-discriminatory manner, with particular attention to the rights and needs as well as challenges faced by individuals from groups or populations who may be at greater risk of becoming vulnerable or marginalized, and with due consideration of the different risks that may be faced by women and men. In particular, Principle n° 21 establishes the responsibility to communicate the risks of human rights violations, which, must include sufficient information to assess the measures taken by companies to address the possible human rights effects by their operations.

6. In Brazil, the energy transition is both challenging and promising for the economy and for national development. The realities of global emissions bring the need to rethink the entire production model. Transitioning from fossil energy production to an energy matrix based on clean sources is a complex and medium to long-term challenge, which requires the

improvement of synergies among the multiple stakeholders. However, the window for climate action is small and requires structural changes in a short period of time, which is challenging today. The situation in the world, such as the conflict between Russia and Ukraine, adds to the challenges of ensuring energy security. Large emerging economies – China, for instance – have a large capacity for wind and solar power generation. However, the need for a post-COVID-19 recovery of the economies have required several developing countries to pay increased attention to measures to stimulate economic growth, which make an energy transition more challenging. For that reason, public authorities and the market need to find ways to work side-by-side, driving decisions to invest in infrastructure and innovation projects to jointly guarantee the maintenance and creation of jobs in strategic sectors.

In Brazil, although droughts in 2021 led to an increase in the need to use thermoelectric plants and a reduction in power generation from hydroelectric dams, the renewable energy market has continued to grow, given the country's natural conditions and its important agricultural production (biofuels). Brazil, at the 2<sup>nd</sup> meeting of the G20 Working Group on Energy Transitions (ETWG), defended the development of policies and strategies to support the global transition to clean and sustainable energy sources. Brazil has been playing a significant role in the topics discussed under the G20 Working Group, such as: technological gaps and low-cost financing for the energy transition; energy security and diversified supply chains; energy efficiency, low-carbon industrial transitions and responsible consumption; fuels for the future and universal access to clean energy.

7. States have the obligation to prevent transboundary environmental damage that may affect the human rights of people outside their territory. Thus, States must adopt all necessary measures to prevent activities carried out in their territories or under their control from having negative transboundary effects. For the Inter-American Court of Human Rights (CIDH), the concept of jurisdiction is not limited to territory. Therefore, the obligations of the States are not restricted to the geographic space corresponding to their territory, and may include conduct with extraterritorial effects. However, the question remains of how to determine the exercise of jurisdiction due to misconduct in extraterritorial matters. For the Court, the exercise of jurisdiction outside the territory of a State is an exceptional possibility and the application of it must be evaluated by the factual and legal circumstances of each specific case and in a restrictive manner. In the face of transboundary damage, a State can be held liable for damage caused to people outside its territory, as a result of non-compliance with its international obligations in environmental matters within its territory or under its control or authority. To this end, the Inter-American Court interprets that people affected by non-compliance with state environmental obligations, in relation to activities carried out in the State's territory, are under the jurisdiction of the State of origin, with regard to international responsibility. This obligation includes the duty to notify other potentially affected States of significant harm originating from within their jurisdiction. The duty to notify exists, where a State is aware that an activity planned to be carried out within the State's jurisdiction may risk significant transboundary damage and where significant damage may arise as a result of activities planned by the notifying State or by individuals under the authorization of the notifying State, as well as as in cases of environmental emergencies. According to the Court, the notification must be made in a timely manner and

prior to the development of the planned activity and without delay, in case of environmental emergencies, and accompanied by the relevant information. Compliance with agreements in force sets conditions for mitigating potential risks and, in the event of damage, consultation and negotiation between the States involved should be conducted.

8. The different energy transformations that the world will go through mean different possibilities regarding their nature, specificity, rhythm and results. There is a set of possible course for the energy transition, considering the differences in the economy, institutions and energy matrix of the BRICS countries (Brazil, Russia, India, China and South Africa), which comprise about 42% of the the world`s population, almost a quarter of the global GDP and more than a third of world`s energy consumption and production. The energy transition challenges for these countries are heterogeneous, distinct and strategically complex. Although each country has particular objectives and different energy policy instruments, these countries will be leading economic growth and energy consumption, having the largest share of the global energy consumption already in 2050. Despite the fact that the energy systems and the energy policy challenges are quite different among the BRICS countries, the solutions may show common trends in the energy transition agenda. The diversity and abundance of energy sources, as well as the high share of renewable sources, especially in the electrical grid and in the transport sector, demonstrate the particularities of the Brazilian case. China, on the other hand, is experiencing a slowdown in economic growth and energy demand, resulting from the transition of its growth model, but remains the largest energy market in the world. India has a high growth rate in energy demand and has the challenge of transforming its energy matrix, with a strong participation of coal, as it expands its population's access to energy. South Africa has much smaller energy needs today and is seeking to transition from its matrix highly dependent on coal. Russia, with abundant fossil resources, especially natural gas, is less engaged with the energy transition, despite its potential in renewable resources. Although each member has its peculiarities, the BRICS countries share the main common objective of making the energy matrix cleaner, understanding that those peculiarities mean opportunities for complementarity and cooperation gains in several areas, in addition to the energy transition. The cooperation initiatives among the countries that should take place in terms of trade in energy and clean technology equipment, investments, financing and research are important, as well as the different complementary capabilities that can be explored through cooperation not only in disruptive technologies, but in joint work to overcome economic inequalities and to protect and promote human rights.

9. At least 155 States recognize their citizens' right to live in a healthy environment, either through national legislation or international agreements. In despite of that, the World Health Organization estimates that more than 20% of all deaths are related to environmental hazards such as air pollution, water contamination and exposure to chemicals. The main obstacle to promoting greater respect for human rights in extractive companies is the lack of dialogue between these companies and the communities residing in areas where there are minerals to be exploited. Some authors talk of a social license for operations, which complements the license provided by the State. In scenarios that indicate that the operations of extractive companies promote different negative effects on human rights, it is necessary to pay attention to studies that enhance knowledge about the violation of human rights in

this sector. The negative effects affect workers and the communities residing near the exploitation sites (deaths caused by chronic diseases resulting from the products used by the industry and the deprivation of certain natural resources). Starting from the recognition that this industry – the extractive sector – causes human rights violations, a precise analysis must begin with the assessment of the different types of violations. It is important that transnational companies that do not operate directly in the exploitation of resources, but buy products without verifying their origin or the methods used in the exploitation – often meaning child labour, forced labour or inhumane treatment conditions – take responsibility. The present Administration in Brazil – since January 2023 – has been working on advancing these agenda. There is much to be done in many areas to address the causes of environmental disasters and violations of human rights and the causes of deforestation, noise pollution, contamination and pollution of water and soil resources leading to the loss of diversity and violations of human rights. The Government has many case studies that show measures that were not adopted to guarantee access to Justice. Case studies can help the international community find new answers to change abusive practices and to set moral, political and humanitarian principles capable of guiding Governments and regulators to be on the right path towards the preservation of rights and equality for peoples.

10. The corporate social responsibility of foreign investors and companies has been a subject of complex consensus, resulting in debates on neoliberalism, development theory and human rights defenders, as well as on investment cooperation and facilitation agreements. Direct foreign investment leads to the operations of transnational companies and bilateral investment treaties have become popular as a mechanism for state regulation of these investments. In past decades, these treaties focused greater attention on protecting investors, since investment flows were unidirectional North-South. Concerns with the protection of human rights was mostly concentrated in international human rights law, with a set of principles, norms, rules and decision-making procedures around which the expectations of stakeholders converge in a given area or topic. It has been difficult to enforce rules and have the law effective, especially in the face of violations committed by transnational corporations. International human rights law are is on the principles of dignity, equal value and equal rights "of all members of the human family", without any type of distinction "on grounds of race, sex, language or religion", as well as in the inalienability, universality, interdependence and indivisibility of human rights.

The articles of the Universal Declaration of Human Rights establish a wide series of concrete rights, whose holders are individuals, which necessarily imply obligations for States. Under the terms of the International Covenant on Civil and Political Rights (ICCPR), for example, its Member States undertake to respect and guarantee to all individuals who are within their territory and are subject to their jurisdiction the rights recognized in the ICCPR, and, to that end, undertake to adopt the appropriate measures that may be necessary to give effect to the rights of the Pact. Currently, the inclusion of corporate social responsibility clauses into bilateral investment treaties aims to add the human rights agenda to those instruments. In this connection, questions arise about human rights protection clauses that can go beyond voluntary commitments and actually ensure the effective protection of the human rights of the population affected by investments. Such questions arise within a neoliberal context in which the corporate social responsibility movement proposes a process

of deregulation by the State and self-regulation by private actors through voluntary mechanisms. That leads to difficulties in accepting human rights clauses by companies, either by investors or by producers of goods or services, especially those in the extractive chain. Brazilian investment cooperation and facilitation agreements have some characteristics that differentiate them from traditional bilateral investment treaties. Demands for reforms in the international investment regime comes from the wish for more balanced relations between the parties involved, in particular in regard to the stakeholders that benefit from those agreements.

12. The Brazilian population can directly benefit from the role of our country in the global energy transition, in particular workers in the informal economy, who can also transition to better paid and safer jobs. This whole process require very strong coordination between national and regional governments. That coordination does not always happen in Brazil, and business is not very proactive. A joint strategy is needed for several economy sectors that will be affected simultaneously. The government can design and implement policies that facilitate this transition, such as educating younger people, building infrastructure and providing adequate funding, that is, guaranteeing that the country will have the capacity to respond and adapt to changes even in lower-value economic sector. The issue with a transition is that it has to be prepared and the country cannot simply wait for its arrival. The country has to work in anticipation of it. This is not an easy debate. And there is a political cost. In this context, talking among governments, companies and trade unions is necessary, so that to establish policies that mitigate the negative social impact on the informal economy and that offer alternatives to support people in need. While the global majority suffer disproportionately from the effects of the climate crisis and the extractive model, the legacy of colonialism of the Global North, the excess of the world's richest and the power of large corporations are responsible for these interrelated crises. The climate change mitigation commitments made so far by countries in the Global North are insufficient, not just in terms of reducing emissions, but in its failure to address the root causes of the crisis – systemic and cross-sectoral inequalities and injustices. This failure to take inequality and social injustice seriously can be seen in even the most ambitious climate mitigation models. The only way to prevent decarbonisation from leaving a stranded workforce behind is to put workers at the forefront of negotiations on just transition strategies. Investments and trade in the extractive sector, if managed responsibly, can have positive effects in terms of income generation, growth and prosperity, sustaining livelihoods and promoting the local economy and development. Because the informal economy operates in areas characterized by socio-economic tensions and insufficient management, control, regulation and accountability of security services, there are also risks associated with the way these services are provided for in informal operations.

13. In order to guarantee the human rights of workers, adjacent communities and the protection of the environment, companies must previously carry out due diligence, which consists of assessing the risks associated with their activities, operations and effects on the local environment. Adequate due diligence will depend mainly on the social context and the time available for its implementation, and must be guided by rules and regulations, facts and circumstances related to the personnel, location and environment in which the company operates. Thus, regardless of context, time and space, the methodology for carrying out due

diligence in human rights will be the same applied in other fields of science, consisting of identifying relevant facts and evaluating them in the light of a standard of maximum preservation, as John Ruggie, UN Special Representative for Business and Human Rights has put it. In this connection, the norms and certifications that govern the corporate world are in evolution, so that companies can respond to challenges such as the expansion of responsibilities, the requirement of transparency and long-term continuity, mainly in the sphere of sustainability and human rights, in such cases, care should be taken when applying due diligence. The analysis and conclusion found in a due diligence investigation should not be restricted simply to the legal nature, but rather be a realistic assessment of the situation, offering creative ways of risk management, and management of possible damage to the people or companies involved. In this way, an adaptation or review of business policies and practices may help in the production of viable inclusion solutions, and will require effort from employees and from various business partners, such as NGOs and governments. The challenge to be overcome will be to integrate the control of corporate risks, so that to meet the need for corporations to respect the normative requirements of sustainability and human rights obligations, and that will mean a change in corporate behaviour with regard to their operations, requiring the prevention of harm to those that may directly or indirectly affected. Although the responses to risks mean different approaches, it is essential that there be a common understanding about a 'doing no harm' approach, and risk management concepts and practices reach directly local business sustainability, in line with the notion of due diligence. Another important factor to be observed is the risk of violation. This will occur in the corporate world whenever there is any type of involvement in the practice of abuses of human rights and cause of environmental damage either directly – through company operations – or indirectly – through joint venture partners, contractors, and others with which the company is actively associated.

15. In questions related to the environment, the concept of "compensation" is used, in general, in two senses. In a broad sense, it is a form of reparation that includes the recovery of an environment altered by the company's operations or activities, without prejudice to other measures adopted – monetary or otherwise. The expression "compensatory measures", has a more restrictive meaning, referring to measures of a non-pecuniary nature. Compensatory measures are those intended to offset negative environmental effects, voluntarily taken by those responsible for those effects or required by the competent environmental agency. They aim to compensate for irreversible and unavoidable effects. They are different from the so-called "mitigating measures", aimed at preventing adverse effects or reducing those that cannot be avoided. Today, environmental compensation is understood as a financial instrument to offset the environmental effects that occurred or were foreseen in the environmental licensing proceedings. It is, however, an instrument related to the impossibility of mitigation, imposed by law on business, under the Polluter-Pays Principle. In this connection, the environmental license eliminates the illicit character of the environmental damage caused business operations, but does not exempt business from the duty to indemnify. Under the Brazilian Federal Constitution (Article 20, §1) , subnational states, the municipalities, as well as the federal Union, have the right to receive financial compensation as a result of oil or natural gas exploitation, use of water resources for electric power generation and mining operations in the respective territories, including offshore exploitation. Proceeds received are to be used in projects that – directly or indirectly – benefit

the local communities. In this case, priority is given to projects related to infrastructure, good environment, health and education. The proceeds cannot be used to pay debts or permanent staff. The Compensatory Measure is a legal instrument to mitigate the negative environmental effects caused by the implementation of a potentially polluting project. The idea is, for instance, to offset carbon emissions by means of environmental compensatory efforts. The planting of trees, for example, is one of the existing compensatory measures.

18. As per Art. 129, item III, of the Federal Constitution, the Public Prosecutor's Office (Public Ministry) has taken a prominent role in the defence of the environment as a public good by initiating lawsuits related to environmental protection. On the importance of preventive action, the Constitution sets forth legal means for the protection of the environment. Environmental protection from the perspective of prevention is key, although repression measures are also possible. In any case, it is prevention that matters most both for the preservation of an ecologically balanced environment and for life on Earth, notably human life, given the difficulties in restoring a balanced environment after years of its degradation. Such preventive action is also consistent with the responsibilities, introduced by the 1988 Brazilian Federal Constitution, of the Public Prosecutor's Office (Public Ministry) as an agent for social transformation by being an institution dedicated to the defence of the country's democratic system and social interests. In this connection, the Public Prosecutor's Office (Public Ministry) is responsible for mediating conflicts, including those involving public authorities and existing in civil society. The role of the Public Prosecutor's Office (Public Ministry) is also to ensure the application of human rights law and, in the courts, to defend economically and socially vulnerable groups deserving special protection to exercise their social rights. There is still not, in international human rights courts, the recognition that the violation of the right to a clean and healthy environment amounts to a violation of human rights. However, in some decisions of international courts of human rights it is possible to recognize a move in this direction, the so-called greening of human rights. Apart from the violation of environmental rights, violations of human rights are commonplace in the extractive industry. The Brazilian Network of the Global Compact met to discuss the possibilities of the contribution of the extractive industry sector for the realization of the objectives of the 2030 Agenda (ONUBR, 2016). The Government can work on the prevention of the violations that can potentially occur in different sectors and on the due reparation for cases in which it is not possible to prevent them. As for the existence of international institutions related to trade that determine global strategies, there is, for example, the G20, comprising 20 countries from developed and emerging economies setting economic standards and policies, which should be submitted to the World Trade Organization, so that they could be considered by all countries of the world.

20. There are several government policies in place to encourage the transition to a cleaner and more sustainable energy matrix. These policies are intended to encourage the adoption of more sustainable practices and reduce dependence on fossil energy sources, contributing to the mitigation of environmental effects and climate change. Among the policies adopted, the following stand out: financial incentive programs, such as credit and subsidies for companies and individuals that invest in renewable energy sources; establishment of goals and commitments to reduce greenhouse gas emissions, such as the Paris Agreement and the Brazilian National Policy on Climate Change, which seeks to

encourage the adoption of cleaner and more sustainable technologies; establishment of standards and norms for the production and selling of more sustainable products, such as electric vehicles, LED lamps and equipment with lower energy consumption; research to improve renewable energy generation and storage technologies; tax incentives for companies to adopt sustainable practices and reduce their carbon footprint.

The Environment and Safeguard Compliance Policy builds on the Inter-American Development Bank's past and recent experience in the area of the environment and seeks to support environmental sustainability objectives in the Latin American and Caribbean region. The Inter-American Development Bank was the first multilateral development bank to adopt an environmental policy. In this context, sustainability goals depend on aligning social and economic development goals with long-term environmental sustainability. In this policy, the term "environment" is used in its broad sense, which includes physical and chemical (geophysical), biological (biotic) factors and associated social (anthropic) factors. This policy covers social, cultural and economic aspects as they result from geophysical and/or biotic changes associated with an operation. This policy identifies the environment as a dimension of development to be incorporated into all sectors.

21. Prepared in collaboration among the Brazilian Centre for International Relations (CEBRI), the Inter-American Development Bank (BID), the Energy Research Company of Brazil (EPE) and the Centre for Energy and Environmental Economy (Cenergia/Coppe) of the Federal University of Rio de Janeiro (UFRJ), a pioneering report shows the challenges for Brazil in energy transition to achieve carbon neutrality by 2050. After having made already considerable progress in the energy transition, Brazil needs to adopt new technologies and energy sources to reach the ambitious goal of net neutrality in greenhouse gases (GHG) by 2050. The research points to the urgent need for a radical transformation in emissions resulting from changes in land use and deforestation. The lack of an effective solution for illegal deforestation by the end of this decade makes the goal of GHG neutrality by 2050 unfeasible, as originally set by Brazil in the Paris Agreement. The study presents three energy transition scenarios by 2050: "Transition Brazil", "Alternative Transition" and "Global Transition", each one of them exploring different emission mitigation strategies to achieve carbon neutrality in the country. Each scenario is based on different assumptions about the evolution of public policies, social consensus, business and consumer behaviours, and the development and spread of new technologies.

Despite having an energy matrix already quite advanced with around 50% of its primary energy coming from renewable sources, Brazil's decarbonisation paths over the next 30 years suggest a different dynamic for the energy matrix as compared to the last three decades, bringing new challenges and opportunities. The proposed decarbonisation scenarios include structural changes in energy supply and demand sectors, as well as in land use, to achieve climate neutrality in Brazil by 2050.

For the "Transition Brazil" and "Alternative Transition" scenarios, approximately 30 billion tons of CO<sub>2</sub> equivalent would be avoided, while in the "Global Transition" scenario, the emission mitigation effort would be even greater, reaching around 40 billion equivalent tons of CO<sub>2</sub>. To achieve GHG neutrality by 2050, emissions of CO<sub>2</sub>, the main GHG, need



to become negative around 2035-2040, that is, a decade before the target year for GHG neutrality. In the three decarbonisation scenarios, CO<sub>2</sub> emissions become negative by around 500 million tons, underlining the magnitude of the challenge. In addition, the research highlights the need to review and even create regulatory frameworks for the energy transition, as well as the demand for development, scaling-up and competitiveness of new technologies and infrastructure. The report shows the relevance of the Government's "Energy Transition Program" and how it contributes to reaching consensus on dilemmas, uncertainties, challenges and opportunities for interested parties and society as a whole. In this connection, the Inter-American Development Bank continues to support Brazil's energy transition efforts technically and financially.

The report also warns of significant costs, which could reach US\$3.4 trillion, if Brazil fails to eliminate illegal deforestation. If that happens, the country will have to offset its emissions by becoming a buyer of carbon credits instead of a seller. The study calculates that eliminating illegal deforestation could prevent the emission of 21 billion tons of greenhouse gases by 2050. Brazil's emissions profile is quite different from other emitters worldwide. While the energy sector is responsible for 76% of total greenhouse gas emissions in the world, in Brazil, the energy sector accounts for only 31% of net emissions and 18% of gross emissions, due to the high percentage of renewable sources in the country's energy matrix. A partner in the research, the CEBRI underscores the importance of nature-based solutions for carbon removal. According to CEBRI, Brazil has 20% of the best opportunities for these solutions. One of the priorities for the 2020-2030 decade should be to take advantage of this potential, generating value from existing forests, reconciling the climate and social agendas. The report also addresses the evolution of the Brazilian energy matrix in the coming decades. The demand for primary energy is estimated to increase from 268 million tons of oil equivalent (toe) in 2020 to around 400 million toe in 2050. On the other hand, there will be a decrease in the use of fossil fuels and an increase in the use of renewable sources, mainly advanced biofuels. The survey indicates that the share of renewable sources will exceed 70% of the primary energy matrix. In the three scenarios analysed, by 2030, ethanol and biodiesel, conventional biofuels, will represent the largest share of bioenergy supply. However, from 2040 onwards, advanced biofuels, such as green diesel, aviation biofuel, green gasoline and biofuels for marine use, gain prominence as the main sources of energy for replacing fossil fuels. Finally, the study points to the rapid growth in demand for electricity in the coming years driven mainly by sectors such as transportation, with the electrification of vehicles, and industry, with greater electrification of processes. The forecast is that electricity demand will nearly double by 2050, reaching 1,000 TWh. The report also foresees a great diversification in the generation of electric energy. Hydroelectric power, which has historically been the backbone of power generation in Brazil, will see its share gradually reduced. In contrast, solar and wind power generation is set to increase substantially. The study estimates that wind energy could provide up to 24% of Brazil's energy needs by 2050, while solar energy could provide 20%. In addition, the research points to the need for investments in energy transmission and distribution networks, as well as in energy storage technologies, to deal with the growing share of intermittent renewable energy sources in the energy matrix. In terms of public policies, the study recommends that Brazil promote energy efficiency, diversify its energy matrix, invest in energy infrastructure and promote the development of low-carbon technologies. The report also suggests the need for

greater integration of energy and climate policies, as well as the adoption of a more holistic approach to the energy transition, which considers economic, social and environmental aspects. In conclusion, the study reinforces the need for Brazil to be at the forefront in terms of transition to a low-carbon economy. This will require the adoption of ambitious policies, the development of new technologies and a major transformation in its energy matrix. The transition can bring great benefits to the Brazilian economy and society, including job creation, increased competitiveness and improved health and quality of life for the people.