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GLOBALIZATION OF ENVIRONMENTAL RISKS IN AFRICA IN THE CONTEXT OF THE ENERGY TRANSITION

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Abstract: The aim of this article is to reflect on the globalization of environmental risks in Africa in the context of the contemporary energy transition. The data collection methods were based on bibliographical and documentary research, which provided support for reflection on the subject under study, using a qualitative analysis and exploratory research approach. Thus, in order to better frame the reflection, a summary was first made of the genesis of environmental preservation concerns; then, to understand the biases of energy policies in the face of environmental risks; and finally, to reflect on the globalization of environmental risks in Africa and the location of national economic and social benefits in oil exporting and consuming countries. The results indicate that the participation of African countries in greenhouse gas emissions is almost insignificant compared to the nations that have been exploiting and using fossil fuels for thousands of years, and that they are therefore mere participants in the sharing or globalization of environmental risks caused by countries in developed and emerging economies. We therefore believe that Africa must pay attention to its internal economic needs, rather than simply adhering to energy transition agreements. This finding is in line with the assumption of the theory of ecological modernization, which advocates a certain caution in the energy transition process, given the enormous challenges that arise from this process, hence we argue the need for a pre-assessment of economic and political convergence whenever measures and agreements on environmental preservation have an impact on the energy security of countries and on the economic conditions of corporations and their peoples, as is the case in African countries.

Keywords: Globalization of environmental risk; Energy transition; Localization of benefits; Emissions reductions; Africa.

INTRODUCTION

The environmental impact of the global oil industry is extensive and expansive due to the multi-purpose nature of oil and the global economy's dependence on the resource. Today's world is highly dependent on oil and other fossil fuels. According to the International Energy Agency (IEA) (2020), fossil fuels account for more than 80% of the world's total energy supply, made up mainly of oil, natural gas and coal. And around 86% of the world's carbon dioxide emissions come from burning fossil fuels (oil and its derivatives, coal and natural gas) to produce energy and materials. This means that as well as using exhaustible natural resources, energy produced by burning fossil fuels is less sustainable because it emits large quantities of greenhouse gases (GHG) with direct environmental impacts.

As you can see, while oil exploration is necessary for society to meet its energy demands, from an environmental perspective it is undeniable that oil production and consumption are issues of great concern to the world.

It is in this context that various climate conferences have been held since 1972, with the aim of seeking solutions to reduce or neutralize the emission of greenhouse gases generated during the production and consumption of oil and other fossil fuels. Thus, at the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), held in Paris in 2015, the Paris Agreement on climate change was signed, which provides a framework for achieving decarbonization and reducing the environmental risks arising from it.

The Paris Agreement, in its main elements of the action plan to limit global warming, requires nations to report precisely on their efforts to achieve the goal of limiting the rise in temperature.

Although each country has the autonomy to set its own targets, some premises are common to all, such as limiting global warming to below 2°C above pre-industrial levels and striving not to exceed 1.5°C; reducing GHG emissions and organizing the economy to contribute to GHG reductions or to the global (energy) decarbonization effort, by reducing the production and consumption of fossil fuels and increasing the share of fuels from renewable sources, in the belief that this would contribute to achieving carbon neutrality in the second half of the century and containing environmental risks.

From this perspective, this article seeks to reflect on the globalization of environmental risks in Africa in the context of the energy transition, i.e. a look at global emissions from fossil fuels and their environmental impact on African countries and the biases between the energy transition (moving from fossil fuels to renewable, clean and environmentally friendly energies) and the reduction of emissions to mitigate environmental risks, from the perspective of analyzing developed countries and emerging economies that have been exploiting and using fossil fuels for thousands of years versus African countries that are vulnerable to environmental risks and often affected by the consequences of climate change.

In order to achieve this goal, three specific objectives will be pursued, namely: to summarize the genesis of environmental preservation concerns; to understand the biases of energy policies in the face of environmental risks; and finally, to reflect on the globalization of environmental risks in Africa and the location of national economic and social benefits or interests in oil exporting and consuming countries.

As for the methodological framework selected to address the problem raised, the research is qualitative, of a comprehensive nature, i.e. it is concerned with deepening the understanding of the object of study. This predominantly qualitative nature is consistent with the theoretical approach adopted. From the point of view of its nature and objective, the research is basic and explanatory respectively, so it does not seek to solve any problems, but is solely aimed at understanding and producing knowledge around the reflection on the globalization of environmental risks in Africa in the context of the energy transition.

PROBLEM

Among the various target activities for reducing emissions, the energy sector has undoubtedly been one of the main focuses for action due to its variety of transformation alternatives. As a result, since the premises of the Paris Agreement are concentrated in the electricity, industrial and transport sectors, the decarbonization of economies conflicts with economic growth, since, historically, increases in Gross Domestic Product (GDP) have been accompanied by an increase in fossil energy consumption and, consequently, GHG emissions.

The extractive industry is the main source of income in sub-Saharan Africa and this part of the African continent holds, according to World Bank data (2021), 7% of the world's oil reserves. However, this is the poorest region in the world. And the oil potential that exists in the region, especially in Mozambique, is a source of hope for sub-Saharans *to take off* their economic growth.

In line with this assertion, the African Energy Chamber argued in 2022 that African oil and gas producers will continue to rely on industry revenues to sustain economic growth and ensure a just and inclusive energy transition, and should *lobby* for knowledge transfer, training, gas monetization programs and other strategic opportunities so that their oil and gas operations can create pathways for sustainable development and diversification.

In other words, Africa needs to respond to the imperative of energy transition and the containment of environmental risks caused by GHG emissions from fossil fuels, without losing sight of the fact that the continent faces unique challenges and needs to make its "energy transition" according to its needs.

Indeed, for obvious reasons, the energy transition in Africa should not be seen from the same perspective as nations with developed and emerging economies that have been exploiting and using fossil fuels and polluting the planet for thousands of years. In this context, and faced with the challenge between reducing environmental risks and the economic stability of nations, there is an urgent need to reflect on the globalized environmental risks in Africa to the detriment of locating economic and social benefits in the context of the contemporary energy transition.

THEORETICAL FOUNDATIONS

The process of energy transition is not new. The advance of capitalism, according to Erwin Brose (2021), demanded other major changes, such as the shift from wood to coal in the 19th century and from coal to oil in the 20th century. What differentiates the current energy transition from previous ones is the urgency of protecting the planet from the threats of climate change and the urgency of decarbonizing electricity generation.

Looking at the assumptions, the contemporary energy transition has a political motivation, born out of the Paris Agreement (2015), as a response to the reduction of GHG emissions and with the main focus on decarbonizing energy production and consumption (with the shift from fossil fuels to renewable energies), with the aim of containing environmental risks. On the other hand, the first and second energy transitions were technologically motivated, aiming to respond to the demands of society, the market and industries regarding the availability and accessibility of energy. Isn't this one of the reasons why the contemporary energy transition is facing a number of factors that are antagonistic to the process, due to the economy's dependence on fossil fuels, despite the associated environmental risks? Well, the economic growth and social development of any nation depend significantly on the sufficiency of its energy sector.

The ambitious climate action of keeping global warming as far below 2°C as possible is an imperative stemming from agreements made at international level. However, there are choices to be made about how to manage the contemporary energy transition, given the dependence of any nation's economic growth and social development on the sufficiency of the energy sector.

Adewuyi et al (2020), develop a sustainable energy transition approach, which they see as a concept of robust, effective and efficient development of the energy sector without, however, compromising the present and future socio-environmental security of a given country or region. The authors bring together the experiences of several countries that have made notable efforts to achieve this very important goal, in line with modern energy needs and supply requirements. For example, the assessment made of Nigeria's resources from the point of view of socio-environmental infrastructure for a sustainable energy transition, taking into account the reliability and cost-effectiveness of technologies for using renewable energy, the authors conclude that, both quantitatively and qualitatively, the dependence of Nigeria and other sub-Saharan African countries on energy from conventional fuels for electricity and locomotion can remain unchanged.

A study by AVILA et al (2017) on the Energy Challenge in Sub-Saharan Africa explains that although the Sub-Saharan African re-

gion's contribution to greenhouse gas emissions is the lowest in the world, it is the most vulnerable to the impacts of climate change, such as droughts and poor agricultural yields. These authors argue that this complex challenge represents an opportunity for sub-Saharan countries to design energy systems with low fuel consumption and low carbon emissions, based on wind, geothermal and solar energy technologies. However, they draw attention to the fact that the sub-Saharan region of Africa, despite having abundant sources of fossil and renewable energy, is limited from the point of view of developing electrical energy in the region, conditioned by the lack of effective technical, political and financing mechanisms to enable the development of these resources.

Now, there is a broad consensus in the international community, at least in terms of discourse, that climate change is the most urgent, most serious and most profound dimension of the environmental crisis of the 21st century and that, therefore, the current development model is a threat to humanity and human civilization. However, Martin Jänicke (2008) apud Olivieri (2020), believes that "an environmental problem is generally less difficult to solve politically when there is a (technological) solution within the market". On the other hand, according to the author, if a solution to an environmental problem requires, above all, an intervention in established patterns of production, consumption, transportation, lifestyles, etc. it will probably encounter a lot of resistance, which seems to be the case with the contemporary energy transition, which, despite the environmental risks associated with the use of fossil fuels, is becoming increasingly clear that the task of transforming energy systems is complex and necessarily involves the challenge of making it coherent with socio-economic and sustainable development.

In this vein, Kraan, Kramer, Haigh & Laurens, (2019), present a reflection on the challenges of transforming the global energy matrix and point out that the task of building and reshaping the world's energy system focuses on two major challenges of the current century, namely: meeting the economic aspirations of a growing world population, while drastically reducing CO_2 emissions to limit environmental risks and global warming.

METHODOLOGICAL DESIGN

As for the methodological framework selected to address the problem raised, the research is qualitative, of a comprehensive nature, as it is not concerned with numerical representativeness, but rather with deepening the understanding of the object of study. This qualitative nature is consistent with the theoretical approach adopted, which is why it does not seek to solve any problems, but is solely aimed at producing knowledge around the reflection on the globalization of environmental risks in Africa in the context of the contemporary energy transition.

RESULTS AND DISCUSSION

THE STARTING POINT OF ENVIRONMENTAL CONCERN AND PRESERVATION

The processes of extracting, transporting, refining and using oil have great economic potential to boost the development of nations that have this energy resource. However, due to the emission of gases that pollute the atmosphere, oil is seen as an environmental aggressor.

The damage caused by environmental pollution resulting from oil operations and tanker ecological disasters has a direct and negative impact on tourism operators, fishing activities, marine species, habitats and ecosystems, among others.

However, the harmful impacts caused to the environment and the fight for its preservation and protection date back to ancient times. According to Philip Cafaro (2019), we can't talk about concerns about protecting the environment without mentioning biologist and writer Rachel Carson, who is considered to be the founder of the US environmental movement, and whose intervention became plausible with the publication of her book *Silent Spring* in 1962. This work drew public attention to the problem of pesticides and other chemical pollution, and was the starting point for landmark legislation such as the US Clean Water Act.

By turning to his earlier writings on natural history, we gain a more complete understanding of his environmental ethics, which can be seen in one of the reflections in Carson's *Silent Spring* (1962) apud Cafaro (2019, p. 69):

> "I believe that most popular books about the ocean are written from the point of view of a human observer and record their impressions and interpretations of what they saw. I was determined to avoid that human as much as possible [...]. I decided that the author, as a person or human observer, should never enter the story, but that it should be told as a simple narrative of the lives of certain sea animals. As much as possible, I wanted my readers to feel that they were, for a while, living the lives of sea creatures." (our translation)[1]

By defending marine creatures, which are often the target of human actions that put their lives at risk, the author invites her readers to become incarnate, even if only in their imagination, in the lives of marine creatures, in order to raise awareness that marine creatures are innocent of any human harm, and that man destroys himself by destroying marine species, animal life (wild or domestic) and their habitats.

Silent Spring's point of reflection, according to Cafaro (2019) is based on the importance of three main evaluative premises, namely: (i) preserving human health; (ii) respecting the moral consideration of non-human beings; and (iii) promoting human happiness and flourishing. These premises are the three legs of an environmental ethic where a healthy and diverse environment provides the means for human and non-human flourishing.

Although Rachel Carson is mainly known for *Silent Spring*, it was her fourth book to enter the New York Times bestseller list. Carson's other first three natural history writings are: *Under the Sea-Wind* (1941), the number one bestseller; *The Sea Around Us* (1951/1961); and *The Edge of the Sea* (1955). These works explored the diversity of coastal and marine ecosystems; the strange, dark depths of the ocean; microscopic planktonic worlds; the fine structures and hidden beauties of jellyfish.

Cafaro points out that the environmental protection laws, the use of pesticides that spread around the world after the 1960s, the various international conferences and agreements on the environment and the climate, the eco-feminist movements, the Kyoto Protocol, among other important climate events, emerged after the social ecology movement, which was inspired by Rachel Carson and her work *Silent Spring* (1962).

ENERGY POLICIES IN THE FACE OF ENVIRONMENTAL RISKS

Political systems have become a key determinant of energy transitions. As part of the 2015 Paris Agreement, most of the world's countries agreed to make an effort to deal with global climate change. However, Leea and Yang (2019) argue that even democratic

1. "I believe that most popular books about the ocean are written from the viewpoint of a human observer and record his impressions and interpretations of what he saw. I was determined to avoid this human as much as possible. I decided that the author as a person or a human observer should never enter the story, but that it should be told as a simple narrative of the lives of certain animals of the sea. As far as possible, I wanted my readers to feel that they were, for a time, living the lives of sea creatures."

countries are unwilling to make the transition to new forms of energy, preferring to maintain fossil energy systems.

Looking at the assumptions, the contemporary energy transition is politically motivated, born out of the Paris Agreement (2015), as a response to the reduction of greenhouse gas emissions and with the main focus on decarbonizing energy production and consumption (by switching from fossil fuels to renewable energies), with the aim of curbing climate change. On the other hand, the first and second energy transitions[2] were technologically motivated and aimed to respond to the demands of society, the market and industries regarding the availability and accessibility of energy. Couldn't this be one of the reasons why the contemporary energy transition is facing a number of factors that are antagonistic to the process, due to the dependence of the world economy on fossil fuels, especially considering that, in the words of Adewuyi et al (2020), the economic growth and social development of any nation depend notably on the sufficiency of its energy sector?

There is a broad consensus in the international community, at least at the level of discourse, that climate change is the most urgent, most serious and most profound dimension of the environmental crisis of the 21st century and that, therefore, the current development model, tied to fossil fuels, is a threat to humanity and human civilization.

However, according to Jänicke (2008) apud Olivieri (2020, p. 71), "an environmental problem is generally less difficult to solve politically when there is a (technological) solution in the market". According to the author, if a solution to an environmental problem requires, above all, an intervention in established patterns of production, consumption, transportation, lifestyles, etc. it will probably meet with a lot of resistance, which seems to be the case with the contemporary energy transition and the mitigation of environmental risks.

It is from this perspective that IRENA's *Global Renewable Outlook* report (2020) highlights the differences between rhetoric and actual action in meeting the targets set out in the Paris Agreement, despite the evidence of the impacts of climate change. According to the document, efforts between countries are unequal and the gap between aspiration and reality in the fight against climate change remains as significant as ever, despite growing evidence of the damage climate change is causing to the planet.

In line with the conclusions of the IRENA report, Tavares (2019) argues that strategies and approaches to the low-carbon energy transition vary from country to country. According to him, the energy transition in the United States, for example, can be understood beyond its environmental attributes, but also as a means of reducing its external dependence on oil, especially by using the growing production and use of unconventional natural gas (*shale gas*) and the increasing penetration of renewable sources (e.g. solar photovoltaics). In other words, the energy transition can be understood as a way of guaranteeing the growth of consumption with local energy sources and/or for the industrial development of alternative energy technologies.

2. The energy transition process is not new. The advance of capitalism, according to Brose (2021), demanded other major changes, such as the shift from wood to coal in the 19th century, and from coal to oil in the 20th century. The third energy transition, which is the contemporary energy transition emerging from the 21st century, is characterized by the shift from fossil fuels, such as oil, natural gas and coal, to fuels from renewable energy sources, such as wind, solar, water, etc. and finds support in the Paris Agreement (2015), which, according to its general objective,contained in article 2, number 1, point a), aims to maintain "the increase in the global average temperature well below 2°C above pre-industrial levels" and to pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels", believing that this would contribute to reducing greenhouse gas emission levels in order to achieve climate neutrality by 2050, recognizing that this would significantly reduce environmental risks and impacts.

According to Tavares (2019), the low-carbon energy transition is based explicitly on climate goals and implicitly on sustainability attributes, in addition to strategies of energy nationalism, industrial and technological policies. As can be seen from Tavares' perspective, despite the so-called "environmental consensus", as we see in international commitments, in the context of energy policies these agendas are often overshadowed by economic and energy security issues, thus denoting that there is usually no consensus on these issues. This apparent resistance to the transition is evidence that the world is not prepared to face the impacts of the 21st century energy transition, given the important role that oil plays in the economy, despite the environmental risks arising from its production and use.

GLOBALIZATION OF ENVIRONMENTAL RISKS AND LOCALIZATION OF BENEFITS

In this century, climate change and environmental risks have become an emblematic issue in discussions of sustainability, going beyond environmental issues and reaching the economic dimensions of countries and companies. The scenario of the energy transition in the 21st century, which can be considered a structural change in the energy market, especially in the nations that own oil resources as well as the biggest consumers of the resource, is highly challenging in the context of the search for solutions to climate change. We can see at least one challenge in this context, namely: the challenge of reducing emissions, in which nations, aware of the biases of the energy transition and the sacrifice to contain climate change, seek to divide the evil by the village while protecting domestic economic interests, in other words, globalizing only the environmental risks and localizing the benefits.

In this vein, it is worth recalling the assertion of Martin Jänicke apud Olivieri (2020, p. 71), who, agreeing with one of the prepositions of the Ecological Modernization Theory (EMT), namely a zero-sum *trade-off* between economic prosperity and environmental preservation, i.e. the assumption of simultaneous environmental and economic solutions, argues that "an environmental problem is generally less difficult to solve politically when there is a (technological) solution within the market". On the other hand, according to the author, if a solution to an environmental problem requires, above all, an intervention in the established patterns of production, consumption or transportation, it will probably meet with a lot of resistance, which seems to be the case with the current energy transition.

However, even so, countries are called upon to adhere to international agreements on climate change and present their NDCs[3] to reduce emissions, and some of these commitments include organizing the national economy, with a clear intervention in the energy sector, considered to be one of the main contributors to GHG emissions.

In the particular case of Mozambique, reducing GHG emissions could mean abandoning or reducing oil exploration and production levels. Considering the country's abundance of oil energy resources, fulfilling the energy transition imperative can be quite challenging for Mozambique, as it is for other fossil fuel producing and consuming countries.

The BRICS countries[4], for example, have a high share of global energy consumption

3. Nationally Determined Contributions (NDCs).

4. BRICS is a group of emerging market countries in terms of their economic development. It is an English acronym that is usually translated as "the BRICS" or "BRICS countries". The grouping began with four countries under the name BRIC, bringing together Brazil,Russia, India and China, until, on April 14, 2011, the added "**S**" resulted from the admission of *South Africa* to the group. On January 1, 2024, Egypt, Ethiopia, Iran, Saudi Arabia and the United Arab Emirates joined the bloc as full members. The group is not an economic bloc or a formal trade association, as in the case of the African Union or the SADC (Southern African Development Community). Rather, the four founding countries sought to form a "political club" or an "alliance", and

and production. The BRICS energy matrix is dominated by fossil fuels, especially coal. However, the countries have engaged in efforts to reduce emissions. The common goal of promoting clean energy sources and the complementarity of the matrices are opportunities for cooperation in energy between the BRICS. However, China, despite its efforts and determination to reduce emissions, laying the foundations to continue to grow and develop, but in an ecological and sustainable way, still maintains its rates of production and consumption of fossil fuels constant. According to the Portuguese National Bureau of Statistics (2024), China's crude oil production grew steadily in December 2023. For the whole of 2023, crude oil production reached 208.91 million tons, an annual increase of 2%. At the same time, China imported around 564 million barrels of oil in 2023.

A projection by Brazil's Energy Research Company (EPE) indicates that in six years, by 2029, Brazil should reach a record that is both historic and problematic: oil production in the country could reach a peak, with an estimated 5.4 million barrels of oil per day. The figure is historic because the country currently produces around 3 million barrels of oil per day. However, this production is also problematic, as the increase in production will mean more greenhouse gas emissions into the atmosphere.

The Organization of the Petroleum Exporting Countries (OPEC), which brings together several of the world's main oil producers, has released figures that can be seen as worrying in relation to the declining use of fossil fuels in the global economy. The organization has raised its forecast for global oil demand until 2045, pointing out that by then consumption of oil will increase by 16% worldwide, reaching 116 million barrels of oil per day.

These decisions and internal positions of each nation show resistance to the proposal that the world should discard fossil fuels. As policies and targets for other energies falter due to costs and a deeper understanding of the scale of the energy challenges, the positioning of nations in favor of environmental protection in the context of the energy transition is becoming clearer. The United States of America, for example, withdrew from the terms of the Paris Agreement in 2017, after adequately considering the socio-economic and political implications for the US economy, although it subsequently requested its reinstatement in 2021. These decisions show the need for a strong political will to stand between conflicting opinions from around the world.

It is in this perspective that the challenge of the energy transition versus the containment of environmental risks lies, especially for the largest oil producers and consumers at a global level, in the clear interest of globalizing only the environmental risks and localizing the economic and social benefits from the production and use of fossil fuels, which brings up the need to position African countries.

Now, records[5] indicate that Mozambique contributes less than 0.5% of greenhouse gas emissions out of a total of 36.8 billion tons of global carbon emissions from fossil fuels. However, the country is listed among the 10 countries that suffer most from the adverse effects of climate change.

To make a comparison, Africa emits very little greenhouse gases compared to other continents, with developed countries and emerging economies, which have been exploiting and using fossil fuels for thousands of years and are responsible for a large part of the emissions.

thus convert "their growing economic power into greater geopolitical influence".
5. INP Portal, 2023

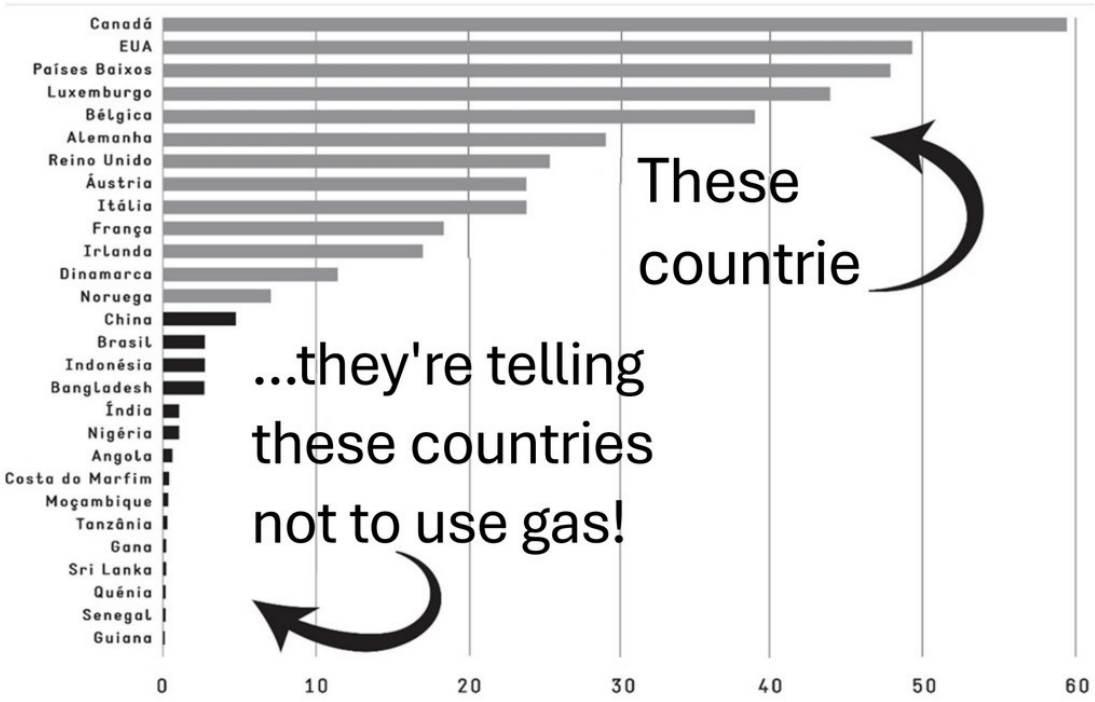

Figure 1: Natural gas consumption

Source: IEA, 2018

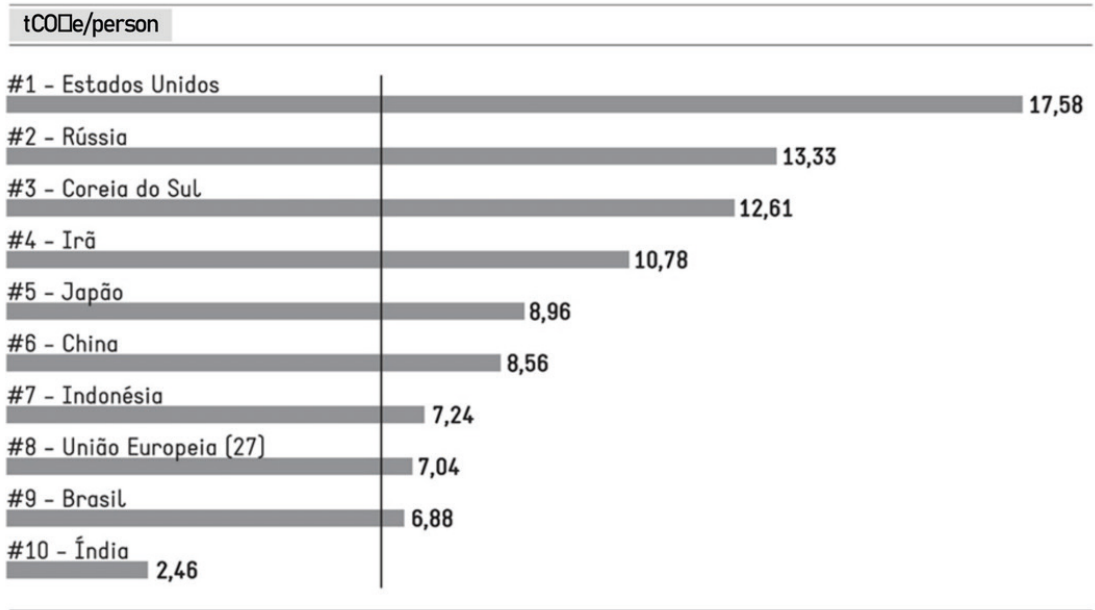

Figure 2: 2019 total emissions per capita of the world's top 10 emitters

Source: Climate Watch - Figures include emissions from the Forestry and Land Use sector. World Resources Institute, 2020

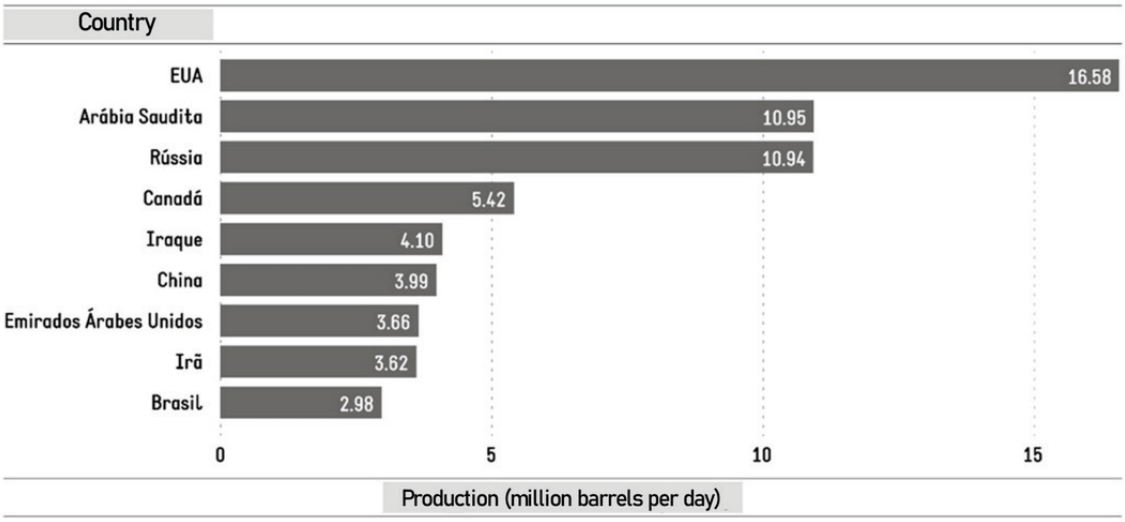

Figure 3: World's largest oil producers

Source: Own elaboration, based on data collected from the IBP portal, 2021

There is no doubt that the alternation of cyclonic episodes and droughts that have hit Mozambique and the region in recent years is directly linked to the large variations in temperature resulting from climate change. Mozambique and its neighboring countries produce only a small amount of the world's carbon dioxide emissions.

According to data from the *Global Carbon Project* (2023)[6], the richest and most developed countries have, throughout history, emitted disproportionately more carbon dioxide than the poorest. Between 1750 and 2019, Europe and North America were responsible for 33.5% and 28.7% of all greenhouse gas emissions, respectively, while Asia accounted for 30.6%, compared to just 2.9% for the whole of Africa. However, there is still some pressure from the more polluting countries on the less polluting ones to use fossil fuels.

The figure below is an illustration of the geopolitical influence exercised over developing countries, especially those in Africa, by developed countries, which, by the way, have been consuming fossil fuels for thousands of years and are responsible for a large part of emissions.

However, despite the inequality mirrored in the figure above, all countries are called upon to adopt the measures imposed by the energy transition under the pretext that there are no borders in the context of environmental pollution. Thus, African countries, even though they have an invisible share in greenhouse gas emissions, end up being penalized, i.e. they only participate in the sharing or, rather, the globalization of environmental risks.

This position is in line with that of other African civil society groups who question the proposed energy transition, which involves keeping fossil fuels underground. Bearing in mind that Africa has the lowest per capita energy consumption, the lowest per capita income levels and the lowest historical carbon footprint of any region in the world, Adow (2020) apud Pereira et al. [n.d.] points out that giving up the income from fossil fuel exploitation is an unfair proposal, since Mozambique and other African countries are not on the list of the main emitting countries or the list of the world's largest oil producers, as illustrated in figures 2 and 3 respectively.

6. According to the Global Carbon Project, via Our World In Data, Europe, Asia and North America account for 92.8% of CO2emissions, compared to 2.9% for Africa and 1.3% for Oceania -www.nexojornal.com.br -by Carolina Souza and Gabriel Maia (2021), updated in 2023.

As you can see from figure 2, there are no African countries on the list of the world's top 10 emitters, five of which belong to the countries with the highest oil production rates in the world, as illustrated in figure 3, i.e. Africa is not among the countries with the highest oil production and consumption rates and, consequently, is not on the list of the biggest polluters.

Meanwhile, African countries suffer the most from environmental risks and at the same time are among the poorest in the world, in other words, in a clear equation of globalization of environmental risks in Africa and localization of benefits for others.

CONCLUSIONS

The challenges of reducing emissions are more nuanced at a global level and, therefore, African countries end up being dragged along and included in the same package, since, despite its almost invisible participation in GHG emissions, according to the premises of the Paris Agreement, Africa should, like the others, participate in actions to contribute to reducing emissions as part of the global effort to decarbonize.

In other words, Africa must reduce its almost non-existent emissions and the pressure to respond to the energy transition imperative arising from the Paris Agreement, alongside other developed countries that have been using fossil fuels and polluting the planet for thousands of years. This challenge of the contemporary energy transition versus the containment of environmental risks through the reduction of greenhouse gas emissions leads, in some way, to the challenge of geopolitical positioning, i.e. the need for African oil and natural gas producing countries, such as Mozambique, to position themselves in order to meet internal social and economic demands through the exploitation of oil resources while seeking balanced solutions in the context of their contribution to reducing global emissions.

In other words, Africa needs to pay attention to the internal needs of its countries, rather than positioning itself as a mere participant in the globalization of environmental risks caused by others.

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