

# Transition (only) to the less adaptable



SECRETARÍA DE ESTADO  
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VOCES – Voces de la sociedad civil para una  
democracia más sustentable: diálogo entre Europa y  
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## **Transition (only) to the less adaptable**

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**We are apprehensive, beyond our own lives,  
with that of the entire earth, which is at risk of falling into chaos.  
White people are not afraid, like us, of being crushed by  
sky fall. But one day maybe they'll be so afraid of it  
as much as we do! (Kopenawa; Albert, 2019)**

The energy transition has been one of the main pillars and solutions proposed for the problem of the Climate Emergency and the reduction of greenhouse gas emissions into the atmosphere, in order to not exceed the target of one and a half degrees by 2100, proposed by the Agreement on Paris during COP 21, in 2015, and ratified by countries across the globe, promoting decarbonization. To achieve this objective, it is necessary to invest in clean renewable energies, such as Wind and Solar, and other forms of by-products, such as Green Hydrogen, known as H2V and coming from these alternative energy sources. These matrices reduce the concentration of greenhouse gases, helping to promote decarbonization, seeking to bring climate security. To this end, it is necessary to promote climate financing, especially in so-called developing countries, which do not have the possibility of large-scale expansion, large investments in research and development, but which have a large population, a great desire for large-scale production and independence. of external capital.

Large meetings such as the Conference of the Parties (the COPs) demonstrate a certain contradiction when mentioning the need for this fair energy transition in an extremely fast way (UNICEF, 2024), at the same time they explain the social, environmental and financial differences of the participating countries, divergent business interests and lack of representation, especially in the case of poorer and more remote traditional communities, who do not have the opportunity to be at this type of event that deals with issues of their main interest: their territories.

Still in the regulatory phase in several countries, but mainly in the Global South, such as Brazil, the proposals presented for the energy transition need to take into account different factors such as, in the case of the installation of Wind Power Plants: favorable terrain conditions, such as winds, land with large extensions for positioning turbines, sighting and monitoring of species, mainly birds in migratory processes and of course, from traditional or local communities, endemic to the regions and residents of that territory for generations, often. The term "Just Transition" has been gaining traction in the news, annual corporate sustainability reports, mapping processes for the purchase of new land for possible plants to be built, but is this transition considered fair for who, exactly?

Another trending term related to the Climate Emergency is Adaptation. When we consider traditional communities, such as quilombolas, indigenous people or artisanal fishermen, for example, adapting is almost in the blood of these individuals, who have had their territories reduced for centuries and are negatively impacted due to the installation of mines, plants for oil production and gas, hydroelectric plants or even due to urbanization, which goes unnoticed when we relate these topics. Urbanization does not pay royalties to affected communities, but real estate speculation ends up forcing these individuals to

migrate away from their conquered lands. One of the main points in the struggle of indigenous peoples today is the right to land and its titling, which is mandatory when threatened by large farmers and which serves as a guarantee for them to remain in their places of origin.

Environmental and Climate Racism, a term still unknown to a large part of the population, but created by Dr. Benjamin Franklin Chavis Jr, the American theorist responsible for this concept (STRATTNER, 2023), mainly affects residents of favelas, outskirts and remote locations, impacted by negligence on the part of public authorities, which often dump waste and treat their homes in an unequal and disrespectful manner. For a just transition to happen, environmental racism needs to be combatted and the path to this is climate justice, which takes into account those most affected by the consequences of climate change. If we look closely, those most affected by floods, extreme weather and droughts are the most vulnerable, least equipped with purchasing power and belonging to minority groups. The transition cannot be treated in isolation, since the negative impacts always fall on those least consulted and with the least financial possibility of applying solutions. Social technologies can be great allies, in addition to community-led solutions, which is why providing support for community-led adaptation and mitigation projects, in addition to promoting participatory decision-making processes, is extremely necessary in the search for climate justice.

Returning again to renewable energy matrices, there are reports and evidence of the strong impact of wind turbines, for example, in the Northeast of Brazil. Shading, dust from the creation of roads for the construction of plants, the intermittency of the movement of blades, changes in bird migration routes, the noise caused and the occupation of territories are some of the impacts reported by residents of one of the main biomes in the country: the Caatinga. The lack of prior, free and informed public consultation, provided for by law in convention 169 by the International Labor Organization, reinforces the disregard for these individuals and exposes the negligence of the public authorities, which does not provide access to rights and does not comply with legal obligations such as the Environmental Impact Study (EIA) and the Environmental Impact Report (RIMA), guaranteed by Brazilian legislation.

In addition to the mechanisms to guarantee citizen participation to indigenous peoples and traditional communities, ILO Convention 169 (Gov.br, 2023) and the legal system in force determine that whenever legislative or administrative measures that affect indigenous peoples, quilombola communities (communities formed by descendants of slaves, the majority of whom are black people), artisanal fishermen, legal procedures must be consulted using appropriate procedures. Consultation does not replace spaces where there is citizen participation and this is necessary, but it concerns the dialogue in good faith that the State, through government bodies and the legislative branch, must have with traditional communities, for the recognition of their specificities, respect for their ways of life and consideration mainly in decision-making by the Executive and Legislative powers.

Brazil has 953 wind farms, 261 of which are in Rio Grande do Norte alone (Instituto Humanitas Unisinos, 2023) and the entire process of installing and operating projects requires licenses to be carried out. Wind energy is a type of enterprise that is obliged to present the Environmental Impact Study (EIA) and the Environmental Impact Report

(RIMA), which are two fundamental mechanisms for monitoring the implementation of projects and enterprises that affect the environment. environment.

According to Brazilian legislation in force in the country, the licensing and supervision of wind energy projects in operation are the responsibility of each state, but the legislation's regulations are federal, established through laws approved by Congress and applicable throughout the Brazilian territory. Those who analyze, authorize and license the operation of private wind farms are the states and unfortunately there are many incentives from the federal government to stimulate the development of sustainable energy in the country, but there are not enough incentives to guarantee compliance with regulations to protect traditional communities, peripheral or more impacted.

Therefore, it is extremely necessary not only to guarantee the energy transition, but to guarantee legislation that preserves and demands the justice provided for by law and the ethics necessary for the preservation of ecosystems and non-violation of the rights, mainly of traditional communities, which They are the true guardians of the land and responsible for the care and use of the soil so as not to negatively impact the biomes. To achieve this, land titling, active listening and union with the Executive, Legislative and Judiciary powers must be guaranteed.

In addition to the possibility of paying royalties, as in the oil and gas industry for licensing, the energy transition should guarantee some type of mitigation of negative impacts, employability, income generation and return to locals. The hiring of employees and labor that is not resident in the territory does not comply with local development, which should be guaranteed in some way. The implementation of education, technical courses and training for introduction into the job market can be an alternative adopted by municipalities, in order to include communities in these new ventures that will change the entire routine that has been known for generations and passed down from father to son.

From an innovation perspective, we can report on plastic pollution and also draw a parallel with this problem. Plastic pollution is a global problem. The sources are not always clear, leaving land spills and beaches overflowing with plastic litter. Plastic debris is currently the most abundant type of litter in the ocean, constituting 80% of all marine debris (Anastasopoulou, 2019). This leads to environmental challenges, especially for animals (Thushari, 2020), as well as health risks. Efforts intended to tackle the plastic pollution problem are either focused on reducing the plastics: using less plastic in products or using recycled plastic, or efforts are focused on collecting plastics. If both these strategies are to be successful, the local community needs to be involved.

The increasing amount of plastic waste polluting the environment has made plastic recycling a crucial step towards sustainable development. This is particularly important in developing countries such as Brazil, where finding innovative ways to recycle plastic can create job opportunities and address water-related negative impacts resulting from climate change, such as droughts or floods. According to UNICEF (2023), Jordan is one of the most water-stressed countries in the world and without significant interventions, the situation is likely to deteriorate further. This has been driven by rapidly increasing water demand, low efficiency of water use as well as the effects of climate change. Around 98% of the population has access to an improved water source, only 93% access a safely-managed source and 86% to a piped network. In urban areas, water is usually

available once a week and only 77.3% of existing sanitation systems are safely managed and only a third of schools have basic sanitation services. Brazil, like most developing countries, is facing several problems related to plastic pollution such as Jordan: (Shalamai, 2022), water wastage, high unemployment rate and the adverse impacts. These have considerably contributed to the depletion of water resources and the losses related to the agricultural industry. With these issues is the complex problem with plastic pollution with far reaching impacts on the environment, human health, and marine ecosystems.

If we could use recycled plastics to create new products for storage and distribution, such as water tanks and pipes, that could solve many of the problems related above. The quality of the recycled plastics collected in this instance also provides the opportunity to diversify the range of products that contribute towards the mitigation of water related problems. Moreover, recycled products could create green alternatives for water distribution infrastructure, supply and treatment of water. Focused on a system that is designed with the long term goal of reducing unemployment rates as well as pollution. The main aim could be to use the cause of a problem to solve another. All of the plastic collected by volunteers and locals will be sorted according to their chemical composition to be transported to recycle plants. At these plants, fibers are made from the plastic. These fibers can be used to make new products, using the Precious Plastic technology or through 3D printers, namely:

1. Floodgates: This ensures minimal rainwater wastage.
2. Tanks: The tanks have a unique design to facilitate the transportation from a flooding area to a dry area via trucks. These tanks will be placed in rural areas as a water source for these communities.
3. Pipes: cheaper, yet effective pipes to serve as an alternative for water transport pipes in developing countries. The pipes will have a protective layer on the inside to minimize contamination of water sources. There will be a reward system to motivate locals to gather plastic waste.

Of interest in this case is providing a dual solution with the intent of reducing plastic pollution through recycling whilst also tackling the issue of high unemployment rate. Therefore, it is important to continue exploring new ways to utilize recycled plastic to create value and tackle multiple challenges at once.

There is also an opportunity to turn this plastic problem into a solution by using plastic taken from the oceans and collected in local communities as an input for new (climate changes related) products for sustainable urban infrastructure and water solutions. By doing so, Brazil could reduce its reliance (independent) on virgin plastic, create jobs, and promote sustainability. Because of creating useful products for the local community, by solving multiple (water) problems for example. There are a lot of benefits for the people, government and other stakeholders. Considering the quality of recycled plastic and the adverse impacts of floods, there is a potential to develop a range of products that can contribute to improving the state of damaged infrastructure.

The use of the closed loop process has a potential of being replicated across a wide range of markets by shifting the focus towards a diverse set of products that solve water related problems and which have an impact on water ecosystems. This could be for example reducing the ecological footprint related to the production of functional items that commonly exist at promenades such as chairs, hand rails etc.

Alternatively, the focus could potentially be in exploring multiple models for collection of recycling waste at either ocean or in-land environments and targeting areas that have large and constant inputs of plastic. The alternative and follow up execution of the plan and the associated waves:

- Proposed adoption of the use of recycled plastic for the production of non-potable water storage products used in domestic, agricultural and industrial settings to the Intergovernmental Negotiating Committee (INC) formed at the 2022 UN Environment Assembly (UNEA-5) (Walker, 2022). This could be included in the final global legally binding agreement envisaged for completion in 2024. The current resolution addresses the full lifecycle of plastic, including its production, design and disposal. The project potentially targets both production and disposal in the lifecycle and could be added to address the design of reusable and recyclable products and materials in the tentative agreement.
- Making distribution pipes for drinking water seems to be ambitious due the high requirements (ISO) that it must meet. Our research shows that 80% plastic that is released does not meet these requirements, so alternatives must be sought, and we need more research in the process to optimize the quality of recycled plastic.

As a result, we could explore strategies for using recycled plastic products to reduce the environmental footprint of water distribution infrastructure and provide cost-effective solutions, creating a first product feasible for commercialization or distribution for local communities. Additionally, diversify the range of products that contribute to mitigating water-related problems, while also creating green alternatives for water distribution infrastructure, supply, treatment, and storage.

When we talk about a Circular Economy and Energy Transition, we need to think about a truly integrated model, which brings benefits, makes the community financially independent and ready, thinking about education, trainings, the sale of these materials and partnerships with the local government itself, infrastructure and possible companies that need it, investing in Social Responsibility and good relations with communities, closing the loop and giving plastic pollution a purpose and promoting a really just transition.

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