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Amazon's Environmental Footprint And Climate Justice In The Global South

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Abstract
This essay examines Amazon's environmental footprint across packaging, logistics, and data centers, highlighting how its expansion exacerbates climate injustice. While Amazon's growth provides consumer benefits in the Global North, it externalizes costs to vulnerable communities in the Global South. Plastic waste, carbon emissions, and data center energy use reveal a structural imbalance in global climate inequality. Addressing these asymmetries is crucial for advancing climate justice and corporate accountability.

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I. Introduction

Amazon has emerged as the largest online shopping and delivery company globally, transforming international trade with its huge delivery networks, significant data facilities, and single-use delivery packaging. However, it has had a costly environmental impact. Its business ventures produce massive volumes of packaging waste, emit many carbon emissions via shipping and logistics, and utilize large volumes of energy to equip its worldwide network of data centers. The distribution of these effects in the world is not uniform. Global South communities, encompassing Latin America, Africa, South Asia, and Southeast Asia, are especially vulnerable to the impacts of climate change because the Global South has poorer infrastructure and increasing economic dependence and exposure to environmental stresses. The packaging waste of Amazon, logistics emissions, and energy consumption of data centers cause substantial environmental externalities that disproportionately affect residents of the Global South, essentially in terms of plastic waste, air and fuel emissions, and carbon inequality.

II. Amazon's Packaging Waste And Plastic Pollution

The issue of waste on Amazon packaging is one of the most noticeable elements of Amazon's ecological footprint, and the consequences are severe regarding climate justice. According to Oceana (2021), Amazon produced an estimated 599 million pounds of plastic packaging waste in 2020, 29 percent more than in 2019, with a pandemic-driven boom in e-commerce solidifying its position as the largest retailer in the world not headquartered in China. Much of this waste is often in the form of plastic film, bubble wrap, air pillows, and milers that are infamously hard to recycle. Most municipal recycling programs in countries like the United States, Canada, and the United Kingdom do not accept Amazon packaging due to its plastic, even though Amazon states that its packaging is recyclable. Instead, they are generally landfilled, burned, or leaked into the environment (Oceana, 2021). Studies also indicate that in 2020 alone, 23.5 million pounds of Amazon plastic went into the freshwater and marine environment, an equivalent of placing a delivery van of plastic in the environment every 67 minutes (Oceana, 2021). It highlights the inadequacy of Amazon's recycling claims and shows an institutional issue, shifting responsibility to consumers instead of cutting plastic by the corporation.

The impact of the packaging footprint is disproportionally concentrated on one side. The Global South has less waste management capacity, and its economies depend on marine ecosystems, thus increasing the harm. Plastic leakage poses an increasing risk to countries like India, Brazil, and Indonesia that rely on fisheries to support their economy and food security (Bastos, 2024). The plastic film, which is one of the most frequent Amazon packaging options, has emerged as one of the deadliest marine litter variants, commonly being consumed by turtles, seabirds, and fish that are significant to regional food insecurity and supply chains (Oceana, 2021). Plastics also pollute food chains and water supplies as they break down into microplastics, posing further risks to the population.

Additionally, breakdowns in the Global North recycling infrastructure further contribute to this unfairness since much of the unprocessed plastic waste may be offloaded on developing countries already overloaded with poorly developed infrastructure. Despite light bans on single-use plastics being piloted in India and Germany, such projects are towards a local scope and indicate a disconnection between sustainability commitments and international practice (Oceana, 2021). Communities in the Global South disproportionately contribute to environmental and social costs associated with packaging behaviors in the Amazon, even though they do not lead to the consumer demand at the root of these practices.

III. Amazon's Logistics And Transportation Emissions

Amazon has grown its logistics network to become the largest delivery network in the United States, surpassing FedEx and UPS. Still, its growth has led to a rapid increase in emissions. Amazon's transportation emissions have accelerated at an average of 18% per year since it introduced its Climate Pledge in 2019, leading it to become 5.84 million metric tons of CO2 in 2023 (The Guardian, 2024). The key factors contributing to this growth include aviation and road freight. Air freight emissions also increased by 67.5% over the same time frame, and comprised over 42% of the U.S. delivery-related emissions of a package (The Guardian, 2024). Delivery vans had an even more drastic increase, with emissions rising 195%, and heavy-duty trucks increasing by 51% (The Guardian, 2024). Although Amazon has published news about its electric vans and sustainability initiatives, it still requires fossil-based fleets. The company has failed to list a plausible plan to reduce emissions in trucking, aviation, and sea shipment, leaving its climate pledge and the future impact of its fast-delivery model in question.

Frontline and Global South communities bear a disproportionate environmental impact because of these emissions. The maritime shipping emissions increased by 26% in 2019-2023, disproportionately impacting communities on the port side who are in contact with black carbon and particulate matter (The Guardian, 2024). Wealthy nations use green infrastructure and pollution controls in their ports. Still, South Asian, West African, and Latin American ports do not maintain protection against pollutants, exposing poor people to respiratory illness, reduced air health, and environmental destruction. Vulnerable fisheries, coral reefs, and coastal communities are also at risk of pollution and sea temperature increase due to shipping routes at the oblique of the global South that support the Amazon supply chain (Brown et al., 2021). Climate change contributes to these pressures since the increased sea levels and flooding risk already endanger vulnerable areas like Bangladesh and small island states. Amazon has not yet agreed to zero-emission maritime shipping by 2030, a target climate group considers crucial. International shipping aims to reduce 20% by 2030 and 70% by 2040, compared to 2008, and achieve a 100% reduction by 2050 to achieve net-zero emissions (Halpe, Adams, and Walker, 2025). Such a lopsided bearing of the environmental burden reveals the role of Amazon logistics-induced emissions as a contributing factor to climate injustice, where the Global South remains the unequal receiver of the adverse effects.

IV. Amazon's Data Center Energy Use

Amazon Web Services (AWS) supports all operations in Amazon around the world, and the amount of energy it consumes makes Amazon the most significant contributor of carbon emissions of all large technology companies (Pacific Environment, 2024). Data centers are estimated to consume about 1-1.5% of all world electricity, with this percentage expected to increase by 160% in 2030, primarily attributed to artificial intelligence tasks (Pacific Environment, 2024). Despite publicly stating its carbon neutrality progression, critics claim its reporting is inaccurate. The company uses renewable energy certificates (RECs) and market-based accounting to underemphasize real-world emissions, but location-based measures indicate much greater carbon intensity. Amazon declared that it has reduced its emissions by 3% since 2018, though it has expanded its holdings of fossil fuel-powered information centers and warehouses (Pacific Environment, 2024). Such a creative accounting practice shades the size of Amazon's imprint and postpones real decarbonization. AWS is a leading contributor to climate change at Amazon as the company continues to experience high demand for its cloud services.

The reliance on power grids dominated by coal and gas impacts local carbon footprints as Amazon continues to open data centers in India, South Africa, and Singapore (Pacific Environment, 2024). These releases will exacerbate global warming and its outward manifestation in the Global South in terms of floods, droughts, and sea-level rise. However, the costs of the benefits of AWS are disproportionately distributed as the Global North businesses and customers benefit, and the rest of the developing countries externalize them economically, environmentally, and socially. The unevenness further enhances global climate inequality, whereby prosperous economies benefit from digital inequalities and poor regions experience environmental imbalance. The energy-intensive transition to AI synthesizes the unfairness that weakens already weak electricity networks and takes resources away from communities. Therefore, Amazon data centers highlight how technological growth in the Global North pressures the environment at the expense of the least prepared population. AWS's growth will not close the climate justice gap unless it discloses its progress and integrates renewables meaningfully.

V. Conclusion

The environmental impact of Amazon, as demonstrated by plastic packaging, ship emissions, and company data centers' energy consumption, reveals how corporate expansion intensifies climatic inequity. Although the company may serve the interests of the consumers in the Global North, its environmental burden ultimately contributes unequally to the predisposition to climate disruption that poor communities of the Global South endure. The waste packaging pollutes oceans, logistics fumes endanger people living near the ports, and data centers exacerbate global warming. Despite their sustainability promises, Amazon's activities contain more greenwashing than actual changes. Corporate responsibility and international collaboration must become more

robust, not to leave communities that did little to cause climate change with its greatest afflictions to compensate for these injustices.

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