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Making Mobility Work: The Impact of Pedicabs in Colombia and Their Role in Achieving Environmental Standards in Cities

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Abstract

The 21st century brings along challenges in the urban landscape. This article examines the role of pedicabs, or *bicitaxis*, in Colombia as a crucial component of urban mobility and their contribution to achieving environmental sustainability in cities. As traffic congestion and pollution worsen in many Colombian urban centers, pedicabs provide an efficient, eco-friendly alternative to traditional transportation methods at a reasonable price. This paper explores how these *bicitaxis* align with Colombia's environmental policies while providing transportation services to low- and middle-income sections of the city, thereby reducing overall carbon emissions. Using a comparative law approach, this paper assesses the economic and social impacts of pedicabs in other jurisdictions and the normative frameworks governing these services. Additionally, it analyzes the legal and regulatory frameworks governing pedicabs and proposes policy recommendations to enhance their role in creating greener, more resilient urban environments. It concludes that it is paramount to integrate pedicabs into broader urban planning strategies aimed at sustainable mobility and climate action in Colombia.

Keywords: pedicabs, mobility, regulation, environment, sustainability.

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Hacer que la movilidad funcione: el impacto de los bicitaxis en Colombia y su papel en el cumplimiento de estándares ambientales en las ciudades

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Resumen

Este artículo examina el papel de los bicitaxis en Colombia como componente crucial de la movilidad urbana y su contribución a la sostenibilidad ambiental en las ciudades. A medida que la congestión del tráfico y la contaminación empeoran en muchos centros urbanos colombianos, los bicitaxis ofrecen una alternativa eficiente y ecológica a los métodos de transporte tradicionales a un precio razonable. Este artículo explora cómo los bicitaxis se alinean con las políticas ambientales de Colombia, al tiempo que brindan servicios de transporte a sectores de ingresos bajos y medios de la ciudad, lo que se traduce en una reducción de las emisiones de carbono en general. A través de un enfoque de derecho comparado, este artículo evalúa el impacto económico y social de los bicitaxis en otras jurisdicciones, así como el marco normativo aplicable a estos servicios. Además, analizamos los marcos legales y regulatorios que rigen los bicitaxis y proponemos recomendaciones de política pública para mejorar su papel en el fomento de entornos urbanos más verdes y resilientes. Este estudio subraya la importancia de integrar los bicitaxis en estrategias de planificación urbana más amplias orientadas a la movilidad sostenible y a la acción climática en Colombia.

Palabras clave: bicitaxis; movilidad; regulación; medio ambiente; sostenibilidad.

Introduction

Urban centers across the globe are currently struggling with traffic congestion and environmental degradation,¹ and cities in Colombia are no exception. Rapid urbanization, combined with increasing vehicle use, has led to a sharp rise in carbon emissions and air pollution, which, in turn, negatively impacts public health and quality of life.² In response to these growing concerns, governments and policymakers in Latin America and around the world are seeking sustainable transportation solutions that can reduce the environmental footprint of cities while maintaining economic vitality and mobility, and that are integrated into their territorial organizational planning.³ One such solution gaining traction in Colombia is the use of pedicabs, or *bicitaxis*, as a cost-effective and environmentally friendly alternative to motorized vehicles.

Pedicabs have evolved into a crucial part of urban logistics and transportation. In Colombian cities like Bogotá, they have become a vital mode of transportation for low- and middle-income communities. By leveraging human-powered mobility, pedicabs help reduce reliance on fossil fuels, alleviate traffic congestion, and lower greenhouse gas emissions, aligning closely with the country's environmental sustainability goals. This practice has largely gone unregulated, creating safety risks for both users and pedicab drivers, as legal avenues for claiming damages in the event of an accident are scarce and inaccessible to the public. In addition, the lack of regulation creates an environment in which these pedicabs circulate freely in traffic lanes, causing traffic congestion and reducing their popularity among drivers.

There are three legally recognized means of public transportation in the city of Bogotá (TransMilenio, Integrated Transportation System, and Taxi). In a city of over 8 million people,⁴ these transportation means fall short of meeting the city's needs to transport about 1.4 million passengers per day. Due to this lack in the public

¹ Simon Curtis, "Global Cities and the Transformation of the International System," *Review of International Studies* 37, no. 4 (2011): 1923–47, <https://doi.org/10.1017/S0260210510001099>.

² Jeffrey L. Kidder, "Appropriating the City: Space, Theory, and Bike Messengers," *Theory and Society* 38, no. 3 (2009): 307–28, <https://doi.org/10.1007/s11186-008-9079-8>.

³ Benoît Delooz Brochet and Juan Enrique Serrano Moreno, "Ordenamiento del territorio y cambio climático. Estudio dogmático y crítico del Plan Regional de Ordenamiento Territorial," *Revista de Derecho Ambiental* 2, no. 20 (2023): 31–63, <https://doi.org/10.5354/0719-4633.2023.71100>.

⁴ Departamento Administrativo Nacional de Estadística, "DANE - Censo Nacional de Población y Vivienda 2018," DANE, last modified February 8, 2022, <https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/censo-nacional-de-poblacion-y-vivienda-2018>.

transportation system, *bicitaxis* emerged as a viable and environmentally sustainable alternative for people in localities such as Kennedy, Bosa, and Ciudad Bolívar.⁵

Today, *bicitaxis* transport about 300,000 people daily across Bogotá's different localities, with trips of 15 to 30 minutes between TransMilenio stations and central points in various neighborhoods. The USD 0.5 fare per trip is set by the internal organizations that operate this mode of transportation.⁶

This paper explores the multifaceted role of pedicabs in promoting sustainable urban mobility in Colombia. It examines, from a sociolegal angle, how pedicabs help reduce cities' overall carbon footprint, how they align with national environmental policies, and the unique socio-economic benefits they provide to underserved populations by affirming their right to work, as protected by the constitution and international instruments.⁷ By adopting a comparative law approach, this study also evaluates the legal and regulatory frameworks governing pedicabs in Colombia and other jurisdictions, highlighting best practices and policy gaps.

It is important to remember that social relations of production represent a contested space where the appropriation and control of the social product are at stake. Thus, the essence of law lies in creating and maintaining the foundational conditions necessary for the sphere of commercial exchange—a realm that fosters freedom and equality within the market.⁸ This research aims to integrate the current state of affairs into the legal framework.

The growing importance of sustainable urban mobility in addressing climate change makes this topic particularly timely. As Colombian cities seek to meet international environmental commitments such as the Paris Agreement, integrating pedicabs into broader urban planning strategies offers a promising pathway for achieving cleaner, greener, and more resilient cities. By analyzing both legal and environmental factors, this paper underscores the potential of pedicabs to become a cornerstone of Colombia's urban sustainability efforts.

⁵ Yenni Carolina Dimas Mecina and Yuliana Idárraga Hernández, "Modelo de legalización del sistema de transporte público bicitaxis en Bogotá," (Specialization capstone, Universidad Piloto de Colombia, 2017), <http://repository.unipiloto.edu.co/handle/20.500.12277/8594>.

⁶ Dimas Mecina and Idárraga Hernández.

⁷ Rafael Mauricio Plaza Revoco, "Incentivos jurídico-económicos a la minería y procesamiento de tierras raras," *Revista de Derecho Ambiental* 1, no. 17 (2022): 129–56, <https://doi.org/10.5354/0719-4633.2022.66408>.

⁸ José Rodríguez Martínez, "Ciencia y Derecho: ¿Formas de La Dominación Social?," *Novum Jus* 15, no. special (2021): 181–207, <https://doi.org/10.14718/NovumJus.2021.15.E.6>.

Methodology

This study employs a combination of **comparative legal analysis**, **empirical research**, and **case study methodology** to assess the role of pedicabs (*bici-taxis*) in Colombia's urban mobility and environmental sustainability efforts. The research aims to evaluate how pedicabs align with existing environmental policies, help reduce carbon emissions, and provide affordable transportation options for lower-income communities.

Legal Framework for Pedicabs in Other Jurisdictions

Pedicabs, as a means of transport, originated in Japan in the 1900s, where they were known as “jinrikisha” and consisted of a single-person carriage pulled by a man on foot. They were commonly made of rustic wood and a pair of cartwheels. It was not until 1980 that some cities around the world began implementing this transport system, accompanied by efforts to promote the benefits of bicycles by incorporating them into tourism. The pioneering countries in implementing this mobility option were Spain, Germany, Denmark, the Netherlands, Mexico, and Cuba, while countries such as Chile, Argentina, and Colombia have been developing strategies to accommodate bicycle taxis since 1995.⁹

Pedicabs are common in many countries worldwide. Some countries have specific laws and regulations for their operation, particularly in urban areas where traffic safety, licensing, and congestion control are important. Countries and cities that have legalized and regulated pedicabs include:

United States

In the United States, regulations governing pedicabs vary significantly across urban areas. For example, in New York City, pedicabs are heavily regulated, with specific licensing requirements, a cap on the number of pedicabs allowed, and safety requirements.¹⁰

⁹ Jonathan Fabian Guerrero Cediel, “Beneficios socio-económicos y ambientales de la operatividad de los Bicitaxis en la movilidad sostenible de Bogotá” (Bachelor's thesis, Universidad Piloto de Colombia, 2012), <https://repository.unipiloto.edu.co/bitstream/handle/20.500.12277/763/00000448.pdf?sequence=1&isAllowed=y>.

¹⁰ Alison Conway and Dounia Khallouki, “Pedicabs for Urban Transportation in U.S. Cities: Benefits, Challenges, and Regulations,” *Transportation Research Record* 2416, no. 1 (2014): 19–26, <https://doi.org/10.3141/2416-03>.

The regulations for pedicabs in New York City are part of a larger regulatory system that includes rules for vehicles, drivers, and operations, and are governed by the New York City Administrative Code. NYC Code § 20-250 to 20-266 regulates pedicabs, requiring both businesses and drivers to be licensed, ensuring that pedicabs meet safety standards, and mandating liability insurance. Pedicabs must undergo regular inspections, and fare regulations require transparent pricing to prevent overcharging. Operators must comply with traffic laws, and pedicabs are restricted from certain areas. Violations of these rules can result in fines, suspension, or license revocation, with harsher penalties for repeat offenses or serious infractions. These rules aim to ensure pedicab safety and protect both operators and passengers.¹¹

For Conway and Khallouki, the regulatory framework can be confusing, as they believe it is not straightforward and reflects an ambiguous understanding of pedicabs. This can lead to inconsistencies in enforcement and operational challenges for pedicab drivers. These regulatory restrictions can sometimes make it challenging for pedicabs to circulate freely around the city, but they allow this mode of transportation to be used with relative safety for its users. There are also other competing forms of transportation, such as ride-hailing services like Uber and Lyft, bicycle and scooter rentals, and, obviously, the city's robust public transportation system.¹²

Some pedicab drivers operate without proper licensing or fail to comply with fare rules, undermining the industry's legitimacy and fostering distrust among customers. Enforcement of these rules can be inconsistent, making it difficult for legal operators to compete fairly. Despite these challenges, pedicabs are a popular mode of transportation for tourists, especially in areas like Central Park and Times Square, where their operation is highly regulated.¹³

United Kingdom

In London, pedicabs are increasingly popular, but unlike in New York, there is no unified regulatory framework across boroughs. The public perception of these

¹¹ The City of New York, "New York City Administrative Code," 2024, <https://codelibrary.amlegal.com/codes/newyorkcity/latest/NYCAadmin/0-0-0-32982>.

¹² Conway and Khallouki, "Pedicabs for Urban Transportation."

¹³ Conway and Khallouki.

vehicles has shifted from “novelty” to “serious” transport mode. There has been a recent effort to improve regulations, including safety and traffic guidelines.¹⁴

The Pedicabs (London) Act 2024, which came into effect in June 2024, introduces regulations for pedicabs operating in Greater London, granting Transport for London (TfL) authority over their licensing, safety standards, and operations. The Act requires pedicabs to meet specific quality and safety standards, including requirements for insurance, equipment, and the appearance of both vehicles and drivers. TfL can regulate fares, enforce conduct standards (such as noise control), and set working conditions for drivers.¹⁵

The Act grants TfL the ability to restrict pedicab operations in certain areas, at specific times, or under particular conditions to manage congestion and public safety. Under the Act, TfL can impose punitive measures for violations, such as providing false information or failing to comply with safety standards. Additionally, the Act provides mechanisms for TfL to collaborate with the Metropolitan Police on enforcement actions, including vehicle seizure and, if needed, immobilization.¹⁶

Philippines

In this developing country, pedicabs are a preferred mode of transport due to their ability to navigate narrow streets, cost-effectiveness, safety, and accessibility. Unfortunately, their regulation has been implemented at the local level, with different municipalities adopting varying norms for the circulation of pedicabs.

In Manila, pedicab regulations are typically broader than in tourist areas and are governed by the local city government. The rules can vary significantly depending on the barangay (local neighborhood unit) or specific city ordinance, but generally cover licensing, safety standards, fare regulations, and routes. The goal is to maintain order on crowded streets, ensure passenger safety, and standardize fares to avoid disputes.¹⁷

¹⁴ Mamun Muntasir Rahman et al., “Non-Motorised Public Transport: The Past, the Present, the Future,” paper presented at ATRF 2010: 33rd Australasian Transport Research Forum, 2010, https://australasiantransportresearchforum.org.au/wp-content/uploads/2022/03/2010_Rahman_DEste_Bunker.pdf.

¹⁵ Parliament of the United Kingdom, “Pedicabs (London) Act 2024,” 2024, <https://www.legislation.gov.uk/ukpga/2024/7/section/2>.

¹⁶ Parliament of the United Kingdom.

¹⁷ City Council of Manila, “Ordinance No. 8291,” 2012, <https://citycouncilofmanila.com.ph/wp-content/uploads/2023/02/ORDINANCE-NO.-8291.pdf>.

In Intramuros, however, there are stricter, tourism-focused regulations since the area is a historical and cultural zone managed by the Intramuros Administration (IA). The IA has specific guidelines for pedicabs operating in Intramuros, as they cater primarily to tourists and are part of the area's charm. Under Intramuros regulations, pedicab drivers are required to wear uniforms and receive training on the history and significance of Intramuros landmarks, allowing them to act as informal tour guides. In addition, pedicabs in Intramuros are restricted to designated routes to protect pedestrian areas and avoid congesting streets with heavy vehicle traffic, and they have standardized fares posted publicly to avoid disputes with tourists unfamiliar with local customs.¹⁸

Enhancing the physical environment to support non-motorized transport like pedicabs can improve safety and accessibility for users, particularly women and those with children, but regulatory efforts need to align pedicab routes and regulations with overall transport service provisions to ensure they are integrated into the broader transportation at a national level, as encouraging the use of pedicabs can have positive implications for individual and population-level health outcomes and overall quality of life and levels of pollution.¹⁹

Mexico

In Mexico City, pedicabs are part of the city's sustainable transport initiatives, and they are regulated by laws governing their operation, including safety and licensing requirements. Their history is akin to "if you build it, they will come," since they arose from the initiative of unemployed people in the city's historic center who decided to offer a non-motorized passenger transportation service at a lower rate than motorized taxis then charged.²⁰

¹⁸ Supreme Court of the Philippines, "Revised Rules and Regulations Governing Pedicab Operations in Intramuros," 2018, <https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/10/90034>.

¹⁹ Alexis Fillone and Iderlina Mateo-Babiano, "Do I Walk or Ride the Rickshaw? Examining the Factors Affecting First- and Last-Mile Trip Options in the Historic District of Manila (Philippines)," *Journal of Transport and Land Use* 11, no. 1 (2018): 237–54, <https://doi.org/10.5198/jtlu.2018.1077>.

²⁰ Bicitekas A.C., Los Mosquitos Cooperativa de Taxis, and Alcaldía de la Bicicleta CDMX, *La segunda revolución: los ciclotaxis como pieza clave de la movilidad urbana sustentable* (Ciudad de México, 2017). <https://www.lacoperacha.org.mx/documentos/ciclotaxis-documento-bicitekas-mosquitos-alcaldesa-bici-compress.pdf>.

Legal Framework for Pedicabs in Colombia

Colombia was once a pioneer in developing alternative modes of mass transport. In December of 2000, the TransMilenio BRT system was launched in Bogotá, with such success that cities across the continent and the world began replicating it.²¹ TransMilenio, although successful, has faced its challenges. Fare evasion and crime inside the buses have created a sense of insecurity and unease. Additionally, the number of buses and service frequency are insufficient to meet the needs of many people from lower socio-economic strata living on the outskirts of the city, who are forced to use alternative transportation, such as pedicabs.

As with many unregulated activities, there is currently no official count of pedicabs in the city of Bogotá, but it is estimated that over 10,000 pedicabs are in circulation, serving the transportation needs of over 150,000 people.²²

According to the National Administrative Department of Statistics (DANE), Colombia's unemployment rate was 9.2 % as of September 2024.²³ This means that almost 1 in 10 people, usually in the lowest-income brackets, lack the basic means to access education, health care, and housing. As a result, Colombians are devising dignified ways to survive. Amongst these is the operation of a *bicitaxi* or pedicab, a vehicle similar to a bicycle but capable of transporting 2 or 3 people at a time.

The right to work is protected under International Labour Organization (ILO) conventions and treaties, of which Colombia is a party.²⁴ These treaties emphasize the importance of fair, equal, and decent employment opportunities worldwide. Key principles of the right to work under the ILO framework include ensuring freedom of choice in employment, safeguarding equal treatment, providing fair working conditions, and eliminating workplace discrimination. As a party to these conventions, Colombia is committed to actively pursuing policies that promote full, productive, and freely chosen employment. The convention supports countries

²¹ Andrés Gómez-Lobo, "Transit Reforms in Intermediate Cities of Colombia: An Ex-Post Evaluation," *Transportation Research Part A: Policy and Practice* 132 (February 2020): 349–64, <https://doi.org/10.1016/j.tra.2019.11.014>.

²² Dimas Mecina and Idárraga Hernández, "Modelo de legalización."

²³ Departamento Administrativo Nacional de Estadística, "DANE - Empleo y Desempleo," 2024, <https://www.dane.gov.co/index.php/estadisticas-por-tema/mercado-laboral/empleo-y-desempleo>.

²⁴ International Labour Organization, "ILO Conventions," 1919, <https://www.ilo.org/resource/ilo-conventions>.

in creating conditions that foster job opportunities, reduce unemployment, and provide equal access to employment for all individuals.²⁵

The operation of pedicabs is protected by Article 25 of the Colombian Constitution, which establishes: “Work is a right and a social obligation and enjoys, in all its forms, the special protection of the State. Every person has the right to work in decent and fair conditions.”²⁶ This right to work is especially relevant given the limited employment opportunities in the formal sector. For many in urban areas like Bogotá, *bicitaxis* represent a way to address local transportation needs while also providing economic opportunities for operators who may face barriers to more formal employment. In addition, the government has an obligation to protect and foster the conditions that enable individuals to exercise this right with dignity and respect. In this context, regulation of *bicitaxis* needs to balance the right to work with the public interest, addressing concerns about public space and urban mobility while still enabling citizens to earn a livelihood as *bicitaxi* operators.

One of the most fundamental rights for citizens is the right to work, as it provides access to other essential rights, such as education, health, recreation, and even life itself. The work of pedicab operators is valuable, for their own benefit and for the users who rely on this form of transport. This service offers significant benefits across various areas, yet there is an urgent need for regulatory standards to ensure coherent, dignified, and achievable labor conditions. Currently, this work operates under conditions not recognized by national authorities or international institutions. Strengthening the social component is crucial to continuously improving labor standards and thereby enhancing benefits in this area.

Regarding the current regulatory framework for non-motorized vehicles in Colombia, Resolution 3600 of 2004 of the Ministry of Transport of Colombia regulates the use of safety helmets for cyclists and users of skateboards and roller skates. This resolution establishes that helmets must comply with the specifications of the Colombian Technical Standard NTC-5239; manufacturers and importers of helmets must obtain a Product Conformity Certificate from a Certification Body accredited by the National System of Standardization, Certification and Metrology; and the

²⁵ Germano Schwartz et al., “Constitucionalismo intersistémico, Constitución y derechos fundamentales: entre teoría constitucional y sociología jurídica,” *Novum Jus* 17, no. 3 (2023): 93–131, <https://doi.org/10.14718/NovumJus.2023.17.3.4>.

²⁶ Asamblea Nacional Constituyente, “Constitución Política de 1991,” 1991, <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=4125>.

competent transit authority must train its operational staff.²⁷ In a similar vein, Law 769 of 2002 (National Land Traffic Code) requires the installation of a special device to carry a companion on a tricycle.²⁸ This means that at some point, the option of transporting people in a vehicle that comes off the bicycle was considered. This type of regulation has not been implemented in some European countries, such as the Netherlands and France, but it does exist in others, such as Spain.²⁹

A recent legal controversy in the city concerns bicycles or tricycles equipped with electric or gasoline motors. According to the National Traffic Code, a bicycle is defined as a “non-motorized vehicle with two or more wheels in a line, powered by the rider’s effort through pedals.”³⁰ Consequently, bicycles propelled by a motor do not fit this definition and are therefore classified as motorcycles, subject to motorcycle regulations (registration, license plates, SOAT insurance, vests, etc.) and prohibited from using bike lanes.

This rule’s interpretation and practicality have sparked debate, as these motorized vehicles are increasingly common on bike lanes, where they pose issues such as high speeds, pollution, and accidents, much like motorcycles. In response, manufacturers of electric bicycles and tricycles argue that their vehicles do not pollute and that speed-related accidents could be mitigated with speed-limiting devices or an “assisted pedaling” system that activates the motor only while pedaling, thereby reducing the physical effort required while still requiring continuous pedaling.

In 2013, the National Federation of Bicitaxis (FENALBIC), the National Federation of Bicitaxis Drivers of Colombia (FENABICOL), the Southeastern Tricimobility Corporation, and the Association of Bicitaxis Owners of Suba (ASOPROBISUBA) filed a constitutional protection lawsuit against the Mobility Secretariat of the District of Bogotá and the Metropolitan Police of Bogotá for the protection of their rights to work, minimum living standards, private property, and free enterprise. In a ruling issued on January 8, 2013, the lower court denied the plaintiffs’ *tutela* action as inadmissible. The judge found no violation of the plaintiffs’ fundamental

²⁷ Ministerio de Transporte, “Resolución 3600 de 2004 Ministerio de Transporte,” 2004, <https://www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=15295>.

²⁸ Poder Público - Rama Legislativa, “Ley 769 de 2002”, 2002, <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=39180>.

²⁹ Luciana Cristina da Conceição Lima et al., “Acordo União Europeia e Mercado Comum do Sul: novas perspectivas para sua efetivação,” *Novum Jus* 18, no. 2 (2024): 305–33, <https://doi.org/10.14718/NovumJus.2024.18.2.12>.

³⁰ Poder Público - Rama Legislativa, “Ley 769 de 2002.”

rights, since the *bicitaxismo* activity is unregulated and there was no evidence of irreparable harm, adding that they had another judicial forum to address their claims. Likewise, the lower court considered that it is not possible to invoke the violation of the fundamental right to work in defense of illegal or prohibited work when the necessary requirements for certain activities are not met. In line with the Ministry of Mobility's statement, it is not possible to authorize the circulation of vehicles or equipment not designed for public passenger transportation, as they do not meet the safety and comfort requirements set by law.³¹

On appeal, FENALBIC argued that irreparable damage is evidenced by the actions of Bogotá's Mayor's Office and the Metropolitan Police, which frequently conduct police operations to impose economic sanctions. These actions harm the core of the minimum living wage for approximately 8,000 families who rely on this mode of transport. The appellants also considered it incorrect to claim that bicycle taxis are an illegal activity. In this regard, they point out that the only reason the practice is not currently subject to a legal framework is that it has not been regulated, in contravention of judgment C-981 of 2010.³²

The Constitutional Court affirmed the lower court's judgment on the grounds that other legal mechanisms existed to seek the same relief and that the *tutela* action, or constitutional protection action, is subsidiary.³³

Regarding environmental protection, Colombia ratified the Escazú Agreement in 2023, a regional treaty that aims to protect the environment and human rights in Latin America and the Caribbean.³⁴ The implementation of pedicabs and other zero-emission vehicles aligns with the Agreement's principles, which emphasize transparency, public participation, and environmental justice. By reducing emissions and improving air quality, pedicabs contribute to environmental protection. This aligns with the Escazú Agreement's goal of creating a healthier environment for present and future generations. Furthermore, regulating pedicabs from a socially minded perspective is a key aspect of environmental justice. This aligns with the

³¹ Corte Constitucional de Colombia, "T-442-13," 2013, <https://www.corteconstitucional.gov.co/relatoria/2013/T-442-13.htm>.

³² Congreso de la República de Colombia, "Ley 1383 de 2010," 2010, <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=39180>.

³³ Corte Constitucional de Colombia, "T-442-13."

³⁴ United Nations, "Escazú Agreement," 2018, https://treaties.un.org/pages/viewdetails.aspx?src=treaty&mtdsg_no=xxvii-18&chapter=27&clang=_en.

Escazú Agreement's commitment to addressing environmental harms and ensuring everyone's right to a healthy environment.³⁵

In addition, the Escazú Agreement promotes regional cooperation on environmental issues, including the adoption of clean technologies such as zero-emission vehicles and pedicabs. By learning from other jurisdictions' best practices and lessons learned, Colombia can accelerate the transition to a sustainable future, consistent with the current administration's environmental goals. This shows that encouraging and regulating the use of *bicitaxis* is a tangible way to implement the principles of the Escazú Agreement and contribute to a more sustainable and just future for Latin America and the Caribbean.³⁶

The differing viewpoints highlight several points of contention among stakeholders, yet it is clear that no current national law, decree, or resolution explicitly bans the manufacture, sale, or operation of *bicitaxis* in Colombian public spaces. This opens the door for legal measures that could enable and regulate this mode of transport, which has been a source of ongoing debate over the past decade.

Sustainable Development Goals and the Environment

The UN Sustainable Development Goals (SDGs) are the United Nations' blueprint for achieving sustainability by 2030.³⁷ Colombia has actively engaged with the SDGs by integrating them into national policy and development strategies across economic and social spheres. Colombia was one of the early adopters of the SDGs and helped shape the 2030 Agenda by creating a High-Level Inter-Institutional Commission for SDG Implementation, which includes various ministries, to coordinate national efforts.³⁸

Colombia has a long-standing tradition of assuming international obligations to strengthen its institutional framework. This is why Colombia typically incorporates the SDGs into its National Development Plan (NDP). The NDP for 2018–2022,

³⁵ Erika Castro Buitrago et al., "Justicia ambiental comparada. Un modelo para Colombia a partir de los casos de Brasil, Chile y México," *Jurídicas* 19, no. 1 (2022): 223–43, <https://doi.org/10.17151/jurid.2022.19.1.13>.

³⁶ Gastón Medici-Colombo and Thays Ricarte, "The Escazú Agreement Contribution to Environmental Justice in Latin America: An Exploratory Empirical Inquiry through the Lens of Climate Litigation," *Journal of Human Rights Practice* 16, no. 1 (2024): 160–81, <https://doi.org/10.1093/jhuman/huad029>.

³⁷ United Nations, "THE 17 GOALS | Sustainable Development," 2015, <https://sdgs.un.org/goals>.

³⁸ Manuel Antonio Pérez Vásquez, "Retos de la política ambiental colombiana frente a los desafíos de la OCDE y los ODS," *Análisis Político* 33, no. 99 (2020): 101–20, <https://doi.org/10.15446/anpol.v33n99.90970>.

for example, aligned its key pillars with SDGs, including reducing poverty and inequality, improving education and health services, and fostering sustainable economic growth.³⁹

Colombia, a country rich in biodiversity, has implemented projects to protect forests and conserve biodiversity.⁴⁰ Programs like the “Heart of the Amazon” and “Visión Amazonía” aim to reduce deforestation and protect ecosystems. Similarly, Colombia has set ambitious goals to reduce greenhouse gas emissions by 51 % by 2030. The country is also developing renewable energy sources to become a clean energy superpower in the region.⁴¹

Clearly, reducing transportation emissions is crucial to achieving SDGs, and encouraging the use of carbon-neutral vehicles, such as pedicabs, supports these global efforts to create equitable, resilient societies.

Regulating and encouraging the use of pedicabs in urban areas like Bogotá not only benefits clean air and a healthy environment but also contributes to SDG 8: Economic Growth and Decent Work by creating jobs that promote a clean economy. Instead of relying on oil and mining, investing in and regulating pedicab use can benefit thousands of working families. Likewise, labor rights and working conditions for workers in the informal economy can be improved, aligning with the SDG 8 goals for inclusive, sustainable employment.⁴²

The human right to a healthy environment contributes significantly to the enjoyment of one’s existence, and thus, to every individual’s life project. Carbon-neutral vehicles, such as pedicabs, play a significant role in advancing both human rights and health by addressing climate change, improving air quality, and fostering sustainable development. First, pedicabs or rickshaws produce little to no emissions compared to traditional fuel-powered vehicles. Reducing emissions directly lowers air pollution levels, which are linked to respiratory diseases, cardiovascular conditions, and premature death. Clean air is essential for human health and is

³⁹ Pérez Vásquez.

⁴⁰ Pablo César Peña Quispe et al., “Cumplimiento de la regulación y gobernanza de la fiscalización ambiental: análisis del derrame de petróleo en la bahía de Ventanilla, Perú,” *Revista de Derecho Ambiental* 2, no. 18 (2022), <https://doi.org/10.5354/0719-4633.2022.67948>.

⁴¹ Clara Inés Pardo Martínez and Alexander Cotte Poveda, “The Importance of Science, Technology and Innovation in the Green Growth and Sustainable Development Goals of Colombia,” *Environmental and Climate Technologies* 25, no. 1 (2021): 29–41, <https://doi.org/10.2478/rtuct-2021-0003>.

⁴² United Nations, “THE 17 GOALS.”

increasingly seen as part of the right to a healthy environment. By reducing emissions, carbon-neutral vehicles such as pedicabs help fulfill this right, especially for vulnerable populations in urban areas like Bogotá, who are disproportionately affected by pollution.⁴³

Similarly, pedicabs, like other carbon-neutral vehicles, help reduce greenhouse gas emissions, mitigating the impacts of climate change, such as extreme weather events, rising sea levels, and food insecurity. These climate issues were something that Bogotá's population did not need to worry about up until a few years ago, but the current state of affairs is showing that they affect people worldwide, especially marginalized communities, like most pedicab users, who lack resources to adapt, implicating rights to life, health, and housing.⁴⁴

A study conducted in 2017 concluded that pedicabs are not only an essential part of Bogotá's transportation system but also a clean-energy alternative to buses and other carbon-emitting modes of transportation. The study assessed three categories: environmental, economic, and social sustainability, where a higher value is presented in factors corresponding to social sustainability, comprised of four subcategories: ethical behavior, human rights, labor practices in society, and consumers, given the impact of the project on the social part of Bogotá. The study concluded that pedicabs are a cleaner system than conventional systems due to their human-powered, bicycle-like mechanism.⁴⁵

It is important to note that one of the biggest problems facing cities is last-mile mobility. That is to say, the transportation system Bogotá currently has does not fully serve the neighborhoods and residential areas, and it would be vital to include transportation options that meet the needs of the many people who lack time and money. For this reason, pedicabs, "as a complementary mobility system to the existing ones," are highly beneficial for transporting one or two people per trip over distances of no more than 3 km. They improve mobility in the area, bring passengers to large systems, and reduce users' time, while generating income and

⁴³ Ersilia Verlinghieri, "Climate Change and Health, Related to Transport," in *International Encyclopedia of Transportation*, ed. Roger Vickerman (Elsevier, 2021), <https://doi.org/10.1016/B978-0-08-102671-7.10732-8>.

⁴⁴ Lloyd Burton and Paul Stretesky, "Wrong Side of the Tracks: The Neglected Human Costs of Transporting Oil and Gas," *Health and Human Rights* 16, no. 1 (2014): 82–92, <https://www.hhrjournal.org/2014/07/01/wrong-side-of-the-tracks-the-neglected-human-costs-of-transporting-oil-and-gas-2/>.

⁴⁵ Dimas Mecina and Idárraga Hernández, "Modelo de legalización."

social stability for the person who drives a practical, efficient vehicle for mobility and the environment.⁴⁶

Conclusion

The legalization and regulation of pedicabs in Colombia could lead to a cleaner, healthier environment. With zero carbon emissions, implementing a regulated model for pedicabs can reduce greenhouse gas and air pollutant emissions, improving overall population health. In addition, they could help reduce noise pollution, enhance the quality of life for city residents, and support better public health, as prolonged exposure to noise pollution is linked to stress and other health issues.

Encouraging the use of pedicabs can reduce the number of private vehicles on the road, thereby reducing traffic congestion, improving air quality, and benefiting public health by reducing respiratory diseases and other pollution-related health issues. Additionally, pedicab drivers engage in physical activity, which promotes cardiovascular health and may lower healthcare costs over time. Legalizing and regulating pedicabs would position them as a viable, eco-friendly alternative to cars or motorcycles, encouraging a cultural shift toward greener transportation. By establishing clear guidelines, such as vehicle safety standards and dedicated lanes, cities can integrate pedicabs effectively into their transportation ecosystems, encouraging their use over less environmentally friendly options.

Colombia, as a developing country, has a huge stake in the creation and maintenance of a sustainable economy. A regulated pedicab sector would create jobs in a green economy, offering sustainable work opportunities aligned with environmental goals. With appropriate policies, cities can support the growth of environmentally conscious businesses and sustainable transport models, potentially including incentives for electric-assisted pedicabs and reduced fees or subsidies for compliance with green standards.

By formalizing and regulating pedicabs, Colombia can help make cities more sustainable, reduce pollution, improve public health, and lead the way in implementing low-impact urban mobility solutions. This legalization must be accompanied by regulations that protect the rights of drivers and users equally. This could possibly mean an exclusive lane for pedicab traffic. Given the importance of citizens'

⁴⁶ Dimas Mecina and Idárraga Hernández.

mobility and the anticipated presence of more than 10,000 vehicles, *bicitaxis* must be included as a fundamental part of the integrated public transportation system.

A regulated and standardized transport system like *bicitaxis* can improve working conditions for its operators, addressing the currently subpar conditions observed across various areas of the capital, as noted in the social section of the methodological findings. One of the main concerns for authorities is the use of public space, especially given Bogotá's current management issues, particularly regarding street vendors. Authorities emphasize that public space is a right for all residents and that no one should claim it for personal economic benefit. However, they do not explain why public space, including that occupied by *bicitaxis*, is being used to address other pressing issues affecting many residents who also have a right to this space, especially regarding mobility.

To improve efficiency, safety, and overall operations, Colombia must adopt a regulatory, rather than prohibitive, approach, in line with other world cities that have integrated this mode of transportation into their mass transit systems.

Jurisdictions worldwide that have successfully integrated pedicabs require their drivers to be licensed and registered with a city administrative department, which helps maintain a database of legitimate operators and ensures that only qualified drivers are permitted. A similar licensing system in Colombia could help regulate who operates pedicabs, improve accountability, and potentially reduce unauthorized and unregulated operations.

Similarly, strict safety standards must be enacted, including regular inspections of pedicabs for mechanical soundness and the use of seat belts for passengers. Implementing these safety standards in Colombia would enhance rider trust and reduce accidents, thereby increasing the reliability and appeal of pedicabs as a form of urban transport.

In addition, regulated pedicabs are required to display clear fare information, including per-minute rates, ensuring passengers know costs upfront. Colombia could adopt this practice by setting a standardized fare structure or requiring fare meters, making pricing fair and transparent for riders and discouraging overcharging.

Restricting pedicabs to certain areas and routes is key to minimizing conflicts with motorized traffic and ensuring a smoother flow in high-density zones. Bogotá

already has a large network of bike lanes, which could be designated for pedicab routes to reduce congestion and support last-mile connectivity in neighborhoods where larger vehicles are less efficient.

Protecting the safety of passengers and drivers is paramount to an effective transportation system. Establishing training for drivers on road safety, vehicle maintenance, and customer service could enhance professionalism, minimize accidents, and improve the overall quality of service. In addition, pedicab operators in Colombia should be required to obtain insurance, as they do in New York City and other major cities worldwide. This would not only safeguard passengers but also increase the credibility of pedicab operations as a professional service.

Finally, Colombia could adopt environmental policies similar to those adopted in the Philippines by promoting pedicabs as an eco-friendly mode of transport, potentially attracting support and investment in green urban mobility.

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