

Maulana Azad Institute of Technology, Bhopal

ORGANIZES

INTERNATIONAL CONFERENCE ON: INCLUSIVE
SPORTS FOR ALL TRANSFORMING
INFRASTRUCTURE FOR ACCESSIBILITY

On 4th- 5th February 2025

IN ASSOCIATION WITH



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INTRODUCTION

SPORTSCAPE-2025: An International Conference on Inclusive Sports for All – Transforming Infrastructure for Accessibility seeks to bring together architects, planners, policymakers, academicians, sports professionals, technologists, and accessibility advocates to collectively explore innovative approaches to inclusive and accessible sports infrastructure. This two-day interdisciplinary event will serve as a dynamic platform to share research insights, practical strategies, and transformative ideas aimed at making sports facilities universally accessible across rural, urban, and peri-urban contexts.

Through keynote addresses, thematic paper presentations, and engaging discussions, the conference will foster dialogue on the critical intersections of sports, accessibility, sustainability, and social inclusion. Participants will have the opportunity to engage with leading experts, learn about cutting-edge methodologies, and examine successful case studies that demonstrate how inclusive infrastructure can empower communities and contribute to the broader vision of Viksit Bharat @ 2047.

Topics to be covered span a diverse range, including innovative assessment tools for sports infrastructure, inclusive design practices, policy frameworks, GIS-based accessibility mapping, and the role of gender and community engagement in sports. By uniting multiple disciplines and sectors, SPORTSCAPE-2025 aims to catalyze meaningful change in how sports infrastructure is conceived, designed, and implemented—ensuring that access to sports becomes a right, not a privilege.

MESSAGES



Prof. Karunesh K. Shukla

Director, MANIT

Message

It is my great pleasure to welcome you all to the International Conference *SPORTSCAPE-2025: Inclusive Sports for All – Transforming Infrastructure for Accessibility*, organized by the **Department of Architecture and Planning**, Maulana Azad National Institute of Technology (MANIT), Bhopal, under the esteemed initiative of **Viksit Bharat @2047**.

This conference brings together a diverse group of researchers, academicians, professionals, policymakers, and experts from across disciplines to engage in meaningful dialogue around one of the most pressing challenges of our time—**ensuring inclusive and accessible sports infrastructure for all**. The theme of SPORTSCAPE-2025 reflects a paradigm shift in how we envision, design, and implement sports infrastructure, with a strong emphasis on **accessibility, equity, and sustainability**.

Over the next two days, we will explore a wide array of topics including inclusive urban planning, innovative technologies, sustainable facility management, policy frameworks, gender equity in sports, and infrastructure development in rural and peri-urban areas. The goal is to foster interdisciplinary collaboration and encourage the exchange of knowledge and best practices that can influence future planning and design for inclusive sports environments.

I express my sincere gratitude to all our distinguished keynote speakers, panelists, paper presenters, and participants for their valuable contributions. I also extend heartfelt thanks to the organizing committee and student coordinators whose hard work and dedication have made this conference possible.

I am confident that SPORTSCAPE-2025 will serve as a significant step forward in rethinking and reshaping our sports infrastructure to be more inclusive, accessible, and future-ready.

Wishing you all an engaging, insightful, and impactful conference experience.

Warm regards,

Prof. Karunesh Kumar Shukla

Director

Maulana Azad National Institute of Technology (MANIT), Bhopal



Prof. Satish Pal Singh Rajput

Dean, Institutional Development and International Relations,

MANIT

Message

I extend my warm greetings and heartfelt congratulations on the successful completion of the two-day International Conference *SPORTSCAPE-2025: Inclusive Sports for All – Transforming Infrastructure for Accessibility*, organized by the **Department of Architecture and Planning**, MANIT Bhopal, in collaboration with **BMS College of Architecture**, Bangalore, and supported by the **Indian Council of Social Science Research (ICSSR)** under the *Viksit Bharat @2047* initiative.

This conference has been a significant step forward in addressing the critical themes of inclusivity and accessibility in sports infrastructure. It provided an invaluable platform for academicians, professionals, planners, and researchers to engage in multidisciplinary dialogue aimed at transforming the current landscape of sports through inclusive design and strategic planning.

The commitment and dedication of the organizing team have been truly commendable. Their efforts have successfully brought together a community of thought leaders and practitioners whose insights are sure to influence policy, academic research, and on-ground implementation in the years to come.

I am confident that *SPORTSCAPE-2025* will serve as a catalyst for continued progress in this field, aligning closely with our national vision of building an inclusive and empowered India by 2047.

Wishing all the participants and contributors continued success and looking forward to more such impactful initiatives in the future.

Warm regards,

Prof. Satish Pal Singh Rajput

Dean, Institutional Development & International Relations

Maulana Azad National Institute of Technology (MANIT), Bhopal



Message

It is with great pride and immense pleasure that we present the publication of the proceedings of *SPORTSCAPE-2025: An International Conference on Inclusive Sports for All – Transforming Infrastructure for Accessibility*, successfully held on **February 4–5, 2025**, in **hybrid mode** by the **Department of Architecture and Planning**, Maulana Azad National Institute of Technology (MANIT), Bhopal.

This conference served as a dynamic platform for **academicians, researchers, architects, planners, policymakers**, and professionals from the field of sports and infrastructure development to engage in meaningful discourse centered around inclusivity and accessibility in sports. The discussions encompassed a wide spectrum of critical global themes including **environmental sustainability, gender equality, technological advancements, and rural infrastructure development**, all through the lens of inclusive sports practices.

We were honored to receive **four international papers** and approximately **fifty scholarly contributions from across India**, including notable submissions from MANIT and other premier institutions. These research efforts highlighted the growing recognition of the need for equitable access to sports infrastructure and the collective will to break barriers and foster inclusive growth in the sporting domain.

We express our sincere gratitude to all the **distinguished speakers, eminent guests, authors, reviewers, and participants** who contributed to the academic and intellectual success of SPORTSCAPE-2025. A special word of thanks goes to our collaborating partner **BMS College of Architecture (BMSCA), Bangalore**, our funding agency **Indian Council of Social Science Research (ICSSR)**, and the **organizing committee**, whose dedication and hard work were instrumental in making this event a resounding success.

As we reflect on the outcomes of this conference, we are confident that the knowledge shared and deliberations held will pave the way for impactful **policy reforms** and **practical implementations** in inclusive sports infrastructure. We look forward to continued collaboration and innovation in this crucial field.

Dr. Neha Pranav Kolhe

Secretary, SPORTSCAPE-2025

Assistant Professor, Department of Architecture and Planning

Maulana Azad National Institute of Technology (MANIT), Bhopal



Message

The successful culmination of *SPORTSCAPE-2025: An International Conference on Inclusive Sports for All – Transforming Infrastructure for Accessibility*, held on **February 4–5, 2025**, represents a significant step forward in our collective mission to create an inclusive and accessible sports ecosystem. As the global discourse around equality and participation continues to evolve, **inclusivity and accessibility in sports are no longer optional considerations—they are essential prerequisites** for fostering a truly equitable society.

This conference brought to light the multifaceted dimensions required to build such an environment: from **adaptive infrastructure design and assistive technologies** to **policy reforms, educational outreach, and inclusive planning practices**. These approaches, when implemented in unison, can empower individuals from diverse backgrounds and abilities to participate and excel in the sporting world. *SPORTSCAPE-2025* reaffirmed the urgency of embedding accessibility into the very fabric of sports infrastructure and policy.

I extend my sincere appreciation to all the **researchers, professionals, participants, keynote speakers, and delegates** who shared their insights and enriched the dialogue. My heartfelt thanks also go to the **organizing team, supporting institutions—including BMS College of Architecture, Bangalore—and our funding agency, the Indian Council of Social Science Research (ICSSR)**, for their unwavering commitment and collaboration in bringing this important initiative to fruition.

This conference has not only opened new avenues for academic and professional exploration but has also laid a robust foundation for future strategies and innovations aimed at realizing the vision of **truly inclusive sports for all**. As we look ahead, may the spirit and outcomes of *SPORTSCAPE-2025* continue to inspire efforts toward **equity, participation, and transformation** in the realm of sports.

Dr. Supriya Vyas

Secretary, SPORTSCAPE-2025

Associate Professor, Department of Architecture and Planning

Maulana Azad National Institute of Technology (MANIT), Bhopal



Message

At **BMS College of Architecture, Bangalore**, we firmly believe in the **transformative power of design** to shape inclusive environments that respond to the needs of a diverse society. Within this belief, **sports infrastructure** emerges as a critical enabler—a **catalyst for social inclusion, community well-being, and individual empowerment**.

Our collaboration with **Maulana Azad National Institute of Technology (MANIT), Bhopal**, under the **ICSSR-funded Research Project** aligned with the national vision of **Viksit Bharat @2047**, reflects our shared commitment to advancing accessibility and equity in public spaces. By bringing together experts from multiple domains, this partnership has facilitated **interdisciplinary dialogues** that bridge **research, policy frameworks, and real-world applications**.

The international conference **SPORTSCAPE-2025: Inclusive Sports for All – Transforming Infrastructure for Accessibility** represents a **milestone** in these ongoing efforts. Hosted under the umbrella of the ICSSR Research Project, the conference stands as a testament to the **collective will and collaborative spirit** of academia, professionals, and changemakers to reimagine sports as a space for **all individuals, regardless of ability or background**.

This conference publication is a **valuable contribution** to the growing body of work on inclusive design and sports infrastructure. It offers **critical insights, emerging strategies, and innovative perspectives** that align with the broader goal of ensuring **“Sports for All”**.

I extend my sincere appreciation to the authors, presenters, organizers, and all contributors whose dedication has shaped the success of *SPORTSCAPE-2025*. We are optimistic that the ideas and initiatives it has sparked will continue to fuel **meaningful progress** in making sports environments **accessible, inclusive, and empowering**.

Dr. Mamatha P. Raj
Director and Professor
BMS College of Architecture, Bangalore



Message

It is increasingly recognized that **accessibility in sports is not merely a matter of infrastructure**, but a reflection of how well we understand the **spatial, social, and cultural fabric** of the communities we aim to serve. In **rural and peri-urban regions**, where disparities in access are often most pronounced, the thoughtful **integration of sports infrastructure** has the potential to generate **lasting social impact**—from nurturing local talent to fostering broader community inclusion.

Planning for such contexts requires a **multi-dimensional perspective**. While **deductive and inductive methodologies** offer structured paths for inquiry, it is the **abductive approach**—with its capacity for exploratory, adaptive thinking—that allows for more **responsive and iterative design strategies**. This approach is essential when addressing the **complexity and diversity of rural environments**, where rigid planning models often fall short.

In this regard, **SPORTSCAPE-2025** emerges as a **timely and necessary initiative**. By foregrounding inclusivity and accessibility, the conference has created a **critical platform** for dialogue, research sharing, and policy reflection. The studies and contributions included in this volume are not just academic exercises; they are **blueprints for transformative action**.

We at **BMS College of Architecture, Bangalore**, are honoured to be collaborators in this endeavor, and deeply value our association with **Maulana Azad National Institute of Technology (MANIT), Bhopal**. This initiative, supported by the **Indian Council of Social Science Research (ICSSR)** under the **Viksit Bharat @2047 vision**, exemplifies what collaborative, interdisciplinary scholarship can achieve.

As we look ahead, may these collective insights continue to shape **inclusive, equitable, and data-driven planning approaches** in sports infrastructure—particularly for those communities where such opportunities are long overdue.

Dr. Leena Thombre
Project Director
BMS College of Architecture, Bangalore

ABOUT BHOPAL & MANIT

Bhopal, the capital city and soul of **Madhya Pradesh**, stands as a vibrant convergence of **heritage, natural beauty, and modern development**. Often referred to as the "**City of Lakes**", Bhopal is adorned with the serene **Upper Lake and Lower Lake**, which not only enhance the city's landscape but also serve as key hubs for recreation and tourism.

Steeped in **history and architectural grandeur**, Bhopal is home to landmarks such as the **Taj-ul-Masajid**—one of the largest mosques in India—as well as a range of palaces, museums, and cultural centers that reflect the city's royal past and rich legacy.

A growing center of **education and research**, Bhopal hosts prestigious institutions including the **Maulana Azad National Institute of Technology (MANIT)**, **IISER**, **SPA**, and **AIIMS**, making it a knowledge capital of central India. It is also an emerging hub in the fields of **technology, automotive, urban planning, and manufacturing**.

While Bhopal rapidly embraces urban advancement, it retains a deep-rooted connection to its **cultural ethos**. The city celebrates a variety of **festivals, art forms, and community traditions**, making it a lively mosaic of **inclusivity and cultural harmony**. Events like **SPORTSCAPE-2025** resonate with Bhopal's identity—where **innovation meets heritage**.

With its **welcoming spirit, academic vibrance, and scenic charm**, Bhopal offers an enriching backdrop for discussions around **inclusive infrastructure and sustainable development** in sports and beyond. Whether you're a first-time visitor or a returning admirer, Bhopal leaves an impression that is both **timeless and transformative**.

Maulana Azad National Institute of Technology (MANIT), Bhopal is one of India's premier technical institutions and holds the status of an **Institution of National Importance**. Formerly known as **Maulana Azad College of Technology (MACT)**, it was established in **1960** as a Regional Engineering College with the vision of advancing excellence in **technical education, research, and innovation** in central India.

Spread across a sprawling **650-acre campus**, MANIT is a self-contained educational ecosystem, safeguarded by a boundary wall and encircled by a dedicated ring road. The campus houses a diverse range of infrastructure including **administrative and academic buildings, state-of-the-art laboratories, a well-stocked central library, workshops, and a community center**. It also comprises **residential facilities** for faculty and staff, **hostels for students**, and essential amenities such as a **post office, shopping complex, dispensary, school, and an auditorium** with a seating capacity of over **1000**.

A dedicated **sports complex** and expansive **open grounds** support the physical and recreational development of students, which directly aligns with the theme of **SPORTSCAPE-2025**—enhancing inclusivity and accessibility in sports infrastructure.

With a robust team of **highly qualified faculty**, modern infrastructure, and a culture of academic integrity and innovation, MANIT offers a **stimulating and nurturing environment** for aspiring engineers, architects, planners, and researchers. The institute continues to push the frontiers of **scientific inquiry, interdisciplinary learning, and entrepreneurial thinking**.

As a **dynamic and future-ready institution**, MANIT is proud to host initiatives like **SPORTSCAPE-2025**, contributing meaningfully to the nation's growth and the global discourse on **inclusive and accessible development**.

CONFERENCE THEMES

1. Innovative Methodologies for Sports Infrastructure Assessment

The growing demand for inclusive and efficient sports infrastructure necessitates the adoption of innovative assessment methodologies that go beyond traditional evaluation metrics. This theme focuses on developing dynamic frameworks to assess usability, accessibility, performance, spatial adequacy, and inclusivity in both urban and rural contexts. It brings to light novel approaches such as human-centric design audits, community-engaged assessment tools, and multi-scalar spatial analysis.

Participants are encouraged to share case studies, field-based models, and interdisciplinary evaluation techniques involving architecture, urban planning, and behavioral sciences. These methodologies aim to generate actionable insights that inform design improvements and policy interventions. Emphasis will also be placed on scalable assessment models that can be adapted for a wide range of socio-economic settings and user groups.

2. Inclusivity and Sports

Inclusivity in sports goes beyond physical access; it embodies a holistic vision that ensures participation across age, gender, ability, economic background, and culture. This theme highlights the critical need to eliminate structural, social, and psychological barriers in sports settings and infrastructure. It calls for design principles, programmatic innovations, and community-led initiatives that reflect the diverse needs of society.

The discussions will focus on inclusive design standards, participatory planning, and cultural sensitivity in sports infrastructure. It will also address how sports can foster social cohesion, build confidence in marginalized groups, and encourage cross-community engagement. The goal is to reimagine sports spaces not just as venues of competition but as inclusive social commons that foster empowerment, equality, and collective well-being.

3. Data Collection Methods

The efficacy of inclusive sports planning lies in the precision and relevance of the data that supports it. This theme delves into cutting-edge and participatory data collection methods that capture diverse dimensions of sports infrastructure access, user behavior, and spatial equity. It promotes the integration of both quantitative and qualitative tools—ranging from geospatial mapping, sensor networks, and machine learning, to ethnographic studies and community surveys.

Papers and presentations will explore the challenges of data standardization, representation of under-reported groups, and ethical considerations in data use. The role of technology, especially mobile apps, wearables, and remote sensing, in improving data accuracy and coverage will be examined. This theme underscores that inclusive data leads to inclusive planning, helping policymakers and planners address real gaps with informed interventions.

4. Sports Infrastructure and Policies

Policy is the backbone of any transformative effort in infrastructure planning. This theme examines the policy frameworks, institutional mechanisms, and governance models that influence sports infrastructure development across India and beyond. It highlights the need for inclusive, participatory, and context-sensitive policy formation that reflects ground realities.

Participants will discuss the alignment of local, state, and national policies with global accessibility standards such as Universal Design and the United Nations' Sustainable Development Goals (SDGs). The focus will also include implementation challenges, financial mechanisms, capacity-building for local authorities, and policy innovations that have enabled scalable change. This theme provides a forum to bridge the gap between policy formulation and on-ground execution for impactful outcomes.

5. Environment and Sustainability

As sports infrastructure continues to expand, its ecological footprint becomes a pressing concern. This theme explores how environmental stewardship can be embedded in every phase of infrastructure development—from site selection and design to construction and operation. It emphasizes the importance of green building materials, renewable energy integration, water-efficient systems, and biodiversity-sensitive landscaping in sports facilities.

Furthermore, discussions will extend to the lifecycle assessment of infrastructure, carbon neutrality in event planning, and circular economy models for equipment reuse and waste reduction. Sustainability is not only about ecological metrics but also about building resilient, community-centric spaces that serve future generations. This theme aims to merge ecological intelligence with social inclusivity for long-term environmental and societal benefit.

6. Role of Transport and Connectivity in Sports

Accessibility to sports infrastructure is heavily dependent on the availability and efficiency of transport systems. This theme investigates the interrelationship between sports participation and transport connectivity, with a focus on inclusive mobility solutions. It examines walkability, barrier-free public transit, last-mile connectivity, and the integration of sports hubs within transit-oriented development plans.

The theme also addresses how the lack of transport options disproportionately affects women, children, elderly, and people with disabilities, limiting their engagement with sports. Best practices from cities that have successfully co-located sports infrastructure along public transport corridors will be highlighted. The aim is to advocate for equitable transport planning that promotes universal access to sports facilities.

7. Development of Sports Infrastructure in Peri-Urban and Rural Areas

The disparity in sports infrastructure between urban centers and rural or peri-urban regions is a major impediment to achieving inclusivity. This theme addresses the urgent need to invest in under-served regions where potential often goes unnoticed due to lack of resources. It focuses on low-cost design strategies, adaptive reuse of existing spaces, and community-owned models that prioritize local needs and aspirations.

Papers are invited to showcase context-specific planning, decentralized decision-making, and innovative rural sports development initiatives. It also considers how local materials, vernacular techniques, and cultural values can be integrated into design to ensure both functionality and identity. The theme ultimately aims to democratize access to sports by empowering communities outside the urban core.

8. Sustainability and Transportation

The intersection of sustainability and transportation is central to promoting low-impact access to sports infrastructure. This theme examines how sustainable transport options such as cycling paths, pedestrian-friendly networks, and shared mobility services can enhance participation while reducing environmental impacts. It brings attention to the planning of sports zones within green mobility corridors and carbon-efficient regions.

Discussions will include the reduction of vehicular emissions through better zoning, use of electric buses to connect sports hubs, and strategies for ensuring that sports events minimize their ecological impact through sustainable transport planning. Emphasis will also be given to behavioral change campaigns and infrastructural nudges that promote greener travel choices among athletes and spectators alike.

9. Sports and Health

The relationship between sports and holistic health is well-established, yet infrastructure planning rarely reflects this synergy. This theme brings together perspectives from public health, urban planning, and community development to highlight how well-designed sports infrastructure can serve as a preventive health tool. Topics include mental well-being, reduction in lifestyle diseases, and sports as therapy.

The theme also addresses the role of inclusive infrastructure in encouraging physical activity among differently-abled individuals, senior citizens, and children. Emphasis will be placed on neighborhood-level interventions, such as open gyms and multi-use recreation areas, that encourage daily engagement with fitness. The discussions aim to strengthen the role of infrastructure as an active partner in advancing public health outcomes.

10. Technological Advancements in Sports Facility Management

With the advent of smart technologies, sports infrastructure is undergoing a digital transformation. This theme explores innovations in facility management, including IoT-driven maintenance systems, real-time occupancy monitoring, automated booking platforms, and digital wayfinding for the visually impaired. These technologies can improve efficiency, safety, and user satisfaction.

Papers under this theme may also explore augmented reality (AR) for training, sensor-based feedback systems, and building management systems that optimize energy use. The aim is to showcase how technology can bridge the gap between inclusivity goals and day-to-day facility operations. From accessibility apps to AI-assisted scheduling, this theme envisions the future of intelligent and responsive sports environments.

11. Sustainability and Sports

Sustainability in sports extends far beyond infrastructure—it encompasses operations, community engagement, and event management. This theme promotes a holistic approach to embedding sustainability into the culture and functioning of sports systems. It includes responsible resource use, community partnerships for maintenance, and educational campaigns that promote environmental consciousness through sports.

Examples of zero-waste sporting events, sustainable procurement practices, and infrastructure retrofitting will be explored. This theme also highlights how local stewardship and institutional responsibility can work hand-in-hand to reduce the footprint of sports facilities and programs. The goal is to ensure that sports not only entertain and inspire but also educate and preserve.

12. Role of Women in Sports

Despite increasing awareness, women continue to face multiple barriers in accessing sports—ranging from lack of safe infrastructure and representation to cultural stereotypes and institutional biases. This theme provides a platform to explore initiatives that encourage women's participation, leadership, and visibility in sports. It also advocates for gender-sensitive infrastructure planning.

Topics include design of safe and private facilities, mentorship programs, and media representation of women athletes. It also considers intersectionality by exploring how class, ability, and geography influence women's access to sports. The discussions aim to build momentum toward creating a supportive ecosystem where women can thrive across all domains of the sporting world.

13. Gender Equality in Sports

Building on the previous theme, this segment delves deeper into structural reforms and advocacy needed to ensure gender equity in sports at all levels. It focuses on equal opportunities in leadership, funding, recognition, and policy implementation. Discussions will highlight legal frameworks, institutional audits, and accountability mechanisms that support gender parity.

Case studies from organizations that have implemented equitable practices successfully will be showcased. Gender audits of sports institutions, inclusive programming for all gender identities, and systemic responses to gender-based discrimination will also be addressed. This theme is essential for creating just and progressive sports ecosystems.

14. GIS in Sports Infrastructure Accessibility

Geographic Information Systems (GIS) offer a powerful lens to visualize and analyze the distribution and accessibility of sports facilities. This theme focuses on the use of spatial tools for planning equitable infrastructure across diverse geographies. It emphasizes the importance of spatial justice in identifying infrastructure gaps and aligning facility locations with community needs.

Presentations may include accessibility mapping, demographic overlays, distance analysis, and location-allocation modeling. These techniques are vital in ensuring that facilities are not only available but also equitably distributed across marginalized and under-served regions. This theme champions data-driven and spatially intelligent decision-making.

15. Economics of Sports Infrastructure Development

The development of inclusive sports infrastructure must also be economically viable and strategically aligned with broader development goals. This theme explores funding models, cost-benefit analyses, economic multipliers of sports, and the role of public-private partnerships. Emphasis will be placed on long-term investment returns and community development.

Contributions may also explore how sports infrastructure can catalyze economic upliftment through job creation, tourism, health savings, and increased productivity. It encourages planners to view sports not just as a recreational pursuit, but as a driver of economic resilience and social capital in both urban and rural contexts.

16. Inclusivity and Sustainability

This integrative theme sits at the heart of SPORTSCAPE-2025's mission. It examines the confluence of equity and ecology in shaping future-ready sports infrastructure. Presentations will explore design frameworks, planning processes, and community models that embed social inclusivity and environmental responsibility simultaneously.

Real-world applications, such as inclusive green spaces, sustainable materials for universal design, and community governance in infrastructure use, will be discussed. This theme calls for a systemic shift in how we define success—not just by physical outcomes, but by how well infrastructure uplifts people and preserves the planet for generations to come.

SPEAKERS

1. Dr. Purva Tavri

Senior Lecturer

Department of Geography, Geology and Environment
Kingston University, London

Dr. Purva Tavri is a Chartered Environmentalist, Chartered Waste Manager, and a Fellow of the Higher Education Academy. With over 15 years of experience in sustainability and waste management, she brings a wealth of knowledge to her role as a Senior Lecturer at Kingston University. Dr. Tavri is actively involved in professional organizations, serving as a Centre Councillor for the Chartered Institution of Wastes Management (CIWM) London & Southeast Centre and as an Advisory Member for the Higher Education & Industry Connect of the G100 club.

Her research focuses on exploring how organizations adopt reuse behavior in practice, contributing to the field of environmental management. Dr. Tavri has published several articles on topics such as organizational behavior change towards waste reuse and the power of collaboration in sustainability initiatives. [LinkedInResearchGate](#)

2. Dr. Rachna Khare

Professor

Department of Architecture
School of Planning and Architecture (SPA), Bhopal

Dr. Rachna Khare is a Professor at the School of Planning and Architecture, Bhopal, where she also serves as the Dean of Research and Faculty Welfare. She holds a Ph.D. in Architecture from Birla Institute of Technology and was a Fulbright Scholar at Georgia Institute of Technology, USA.

Her research interests lie in universal design and designing for individuals with special needs, areas in which she has earned national and international recognition. Dr. Khare has been instrumental in advancing inclusive architectural practices in India and has served in several administrative roles at SPA Bhopal. [Welcome to](#)

3. Dr. Prashanti Rao

Assistant Professor

Department of Architecture

School of Planning and Architecture (SPA), Vijayawada

Dr. Prashanti Rao is an Assistant Professor at the School of Planning and Architecture, Vijayawada. She holds a Ph.D. in Architecture and Planning from SPA Bhopal, a Master's in Urban Development and Planning from MANIT Bhopal, and a Bachelor's in Architecture from MACT Bhopal. [SPAV](#)

With over 12 years of experience in practice and 10 years in teaching, Dr. Rao has contributed significantly to both undergraduate and postgraduate education. Her research interests include green space perception studies, green infrastructure planning, and mapping city/fringe area resilience. She employs various research tools such as GIS, SPSS, and space syntax in her work. [SPAV](#)

4. Ar. Kanu Kumar Das

Associate Professor and Head

Department of Architecture

Chittagong University of Engineering and Technology (CUET), Bangladesh

Ar. Kanu Kumar Das is the Associate Professor and Head of the Department of Architecture at CUET, Bangladesh. He obtained his Bachelor's degree in Architecture from Bangladesh University of Engineering and Technology (BUET) and completed his Master's in Planning from Maulana Azad National Institute of Technology (MANIT), Bhopal.

His academic and research interests include sustainable architecture, urban planning, and disaster resilience. Ar. Das has coordinated workshops on housing and urban design and has published research on topics such as mud architecture and rehabilitation housing for disaster-affected people.

ABSTRACTS

DRIVING SPORTS IN INDIA

Ar. Kamini Badnore, Asst. Professor, School of Architecture, IPS Academy
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ABSTRACT

India is a country with prosperous culture in sports since ancient times. With its burgeoning population, India has seen a surge in participation and interest in recent decades. Any sport needs talent and training for sportsmen to be successful, yet an often-overlooked aspect in that success is the connectivity and transport. This plays a very vital role in shaping the ecosystem of sports in any country. This research aims to study the multifaceted impacts and the aspects of infrastructure of transportation and digital connectivity that develops and promotes the sports in India to a major extent. This paper deals with the scrutiny of how transport systems in India have facilitated sports in terms of training, events, matches, engagement of fans and contribute to economic growth. The real obstructions like access to rural areas, environmental concerns and infrastructural disparities are identified, also highlighting the opportunities for sustainable and inclusive development. The case study of Indian Premier League (IPL) and Khelo India further illuminates the potential of integrated transport and connectivity which fosters a vibrant landscape of sport in India.

KEYWORDS

Transport Infrastructure, connectivity, athlete mobility, sustainable development, IPL.

ENVIRONMENT & SUSTAINABILITY

Dr. Swati Sisodiya (Assistant Professor)
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ABSTRACT

Environmental sustainability is key to allow for human development without compromising natural resources. Environmental indicators provide crucial information about the state of the environment in quantitative terms and capture its physical, biological and chemical characteristics. Yet, the state of the environment is difficult to compare across countries because of highly diverse local conditions. Composite measures attempt to summarize the multifaceted state of the environment and to make it comparable across countries. They can include related societal aspects.

KEYWORDS

Sustainability, Renewable, Environment, Survival, Eco-friendly.

IMPORTANCE OF WOMEN AND CHALLENGES FACED BY THEM IN SPORTS

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ABSTRACT

Over the years, the role of women in sports has evolved, significantly. Despite progress, women still face many challenges and targeted solutions are necessary to address these issues. Women often face limited access to quality training facilities, with fewer dedicated spaces compared to men. Concerns about safety and security can discourage women from participating in sports, particularly in areas with poorly lit or inadequately monitored facilities. A lack of female coaches and support staff further limits mentorship opportunities and creates a less supportive environment for women. Cultural norms and societal expectations can also restrict women's participation, especially in regions where women's sports are not widely accepted or encouraged. Insufficient media coverage and promotion hinder the visibility of women's sports, reducing support from fans and sponsors. Consequently, financial investment in women's sports remains limited. Women athletes also encounter challenges such as harassment, weak policies, and inadequate accommodations for disabled women. Additionally, sports equipment and facilities are often designed primarily for men, lacking gender-appropriate. To address these challenges, solutions include, ensuring that women have equal access to training facilities, equipment, and dedicated spaces for sports. Implementing safety measures, such as improved lighting, security personnel, and safe transport options, can enhance accessibility. Increasing the recruitment of female coaches and support staff can foster a more inclusive and supportive environment. Promoting cultural change through education and advocacy can help dismantle societal barriers. Greater media coverage and promotion of women's sports can attract fans, sponsors, and funding, leading to improved infrastructure and opportunities. Equal budgets, prime-time slots, high-quality venues, accessible facilities for disabled women, and subsidized access for economically disadvantaged women and girls. Through these targeted interventions and supportive policies, a more inclusive, accessible, and equitable sports environment for women can be established.

KEYWORDS

Women, Architecture, Sports Infrastructure, Inclusive Design, Equality, Design Challenges, Facilities, Leadership.

SPORTS FOR SUSTAINABILITY: CREATING ECO-FRIENDLY SPORTS ECOSYSTEMS IN RURAL INDIA

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ABSTRACT

India has made significant strides in developing sports infrastructure in rural areas. However, building and maintaining sports infrastructure in rural areas can be challenging due to water scarcity, increasing solid waste, high energy consumption, climate change, limited financial resources, inadequate environmental education, and lack of clear policies supporting ecological sustainability in rural sports. Water shortages can hinder athletes from accessing clean drinking water and cause a lack of maintenance in sports facilities, including fields, swimming pools, and other infrastructure. The water scarcity will further increase costs for maintaining these facilities, making it even harder for rural communities to develop and sustain sports programs. High energy consumption for lighting, cooling, and heating; and inadequate waste disposal and recycling facilities can cause various environmental, social, and economic impacts. Furthermore, climate change impacts cause increases in temperatures and extreme weather events, affecting the player's health and infrastructure durability. Sports organizations and stakeholders can integrate the sports ecosystem with sustainable development practices to mitigate the impacts. As the sports ecosystem evolves, integrating circular economy (CE) strategies will be crucial for minimizing waste, optimizing resource efficiency, and promoting environmentally responsible practices among stakeholders.

KEYWORDS

Rural Sports, Sustainable Development, Climate Change, Social Inclusion, Circular Economy.

MECHANICAL PROPERTIES OF PERVIOUS CONCRETE FOR SUSTAINABLE SPORTS COMPLEX CONSTRUCTION BY UTILIZING AI TECHNIQUE

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ABSTRACT

Innovative drainage solutions are the heart of improving sports infrastructure performance and sustainability. This study considers the use of pervious concrete, a highly permeable and environmental friendly material, in sports fields which can alleviate drainage, serviceability, and sustainability. Pervious concrete aligns with goals such as groundwater retention and reduced urban heat island effect by allowing water to infiltrate and reducing surface runoff. Methodologies in this research concerning data collection to assess expected pervious concrete performance entailing its mechanical strength. Therefore, in order to improve the material's structural performance and its application in a variety of engineering projects, it is necessary to comprehend the mechanical properties. The use of machine learning approaches to forecast the mechanical characteristics of pervious concrete is investigated in this study. Using datasets across a range of compositions and situations. Due to careful feature engineering and model selection along with hyper-parameter tuning, we could evolve accurate predictive models that incorporate the complex relationships between components of the mixture and mechanical performance. This study exhibits a potential improvement by machine learning of design and optimization for pervious concrete structures that could endure the efforts on development while conserving environmental issues at large. The study puts forth the potential of pervious concrete to change sports infrastructure, envisaging the theme of innovative methods for sustainable development and assessment in sports infrastructure.

KEYWORDS

Artificial intelligence technique; Machine learning; Pervious concrete; Sport sustainability.

BUILDING INCLUSIVE AND SUSTAINABLE SPORTS INFRASTRUCTURE: POLICIES FOR EQUITY, HEALTH, AND COMMUNITY INTEGRATION

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ABSTRACT

Infrastructure and sports policy is the basis that contributes to inclusivity, access, and sustainability in sporting environments. Notwithstanding the advances in technology and awareness, disparities remain concerning access; in particular, these disadvantages pertain to the most disadvantaged in society, such as individuals with disabilities, women, and members of socio-economically depressed societies. These disadvantages result from structural limitations related to inadequate infrastructure, discriminating policies, and scarcity of resources aimed toward an inclusive approach.

The relationship between sports infrastructure and policy frameworks is examined, paying close attention to their importance in developing inclusive sports environments. In this regard, deficiencies within the infrastructural setup are noted in such as not being accessible by a wheel chair, gender-sensitive, or adaptive sports equipment that excludes others from participating. This paper also analyzes local and international policies established to address these shortcomings with respect to ensuring accessible sports for everyone.

Such case studies as the Tokyo Paralympic Games, Khelo India initiatives, and community-driven projects in South Africa show how inclusive design and sustainability can be amalgamated into sports infrastructure even in resource-constrained environments.

The study further highlights the role of data-driven methodologies and multi-stakeholder collaboration in the establishment of a sustainable sports ecosystem. By using data on participation patterns, understanding local needs, and sharing best practices, stakeholders formulate actionable solutions.

Ultimately, it produces policy recommendations to policy-makers and other urban planners striving to provide equal opportunities to all, towards more inclusive sports ecosystems for everyone, which also furthers social inclusion, health, and well-being in all corners of the world.

KEYWORDS

Inclusive Sports, Infrastructure, Accessibility, Sustainability, Social Integration, Policies.

INCLUSIVE SPORTS INFRASTRUCTURE: A CATALYST FOR SOCIAL INTEGRATION AND COMMUNITY COHESION

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ABSTRACT

This paper examines the key role that sports play in fostering community development, improving individual well-being, and creating community cohesion. Sports have several benefits; however, one of the main hindrances is the lack of accessible sports infrastructure among marginalized communities and individuals with a disability. Accessibility challenges prevent a broad segment of the population from fully participating in sports activities, which affects their physical and mental health, social integration, and community engagement.

The paper will explore the concept of inclusivity within sports infrastructure by analyzing how it can be integrated into the design and development of sports facilities. It explores the synergy between inclusion, accessibility, and sustainability in the creation of sport environments that are responsive to different needs, including those of the disabled, low-income communities, and those in rural areas. The focus is on identifying policies, methodologies, and best practices that facilitate the creation of universally accessible sport spaces while ensuring that the spaces are sustainable from the environmental and social perspectives.

This paper analyses case studies from different geographical contexts—rural, urban, and peri-urban—to explore innovative approaches to sports infrastructure that are both inclusive and sustainable. These case studies will be examples of successful models that show how inclusive design and sustainable practices can coexist and lead to long-lasting positive impacts on the environment and society.

Data analysis and policy evaluation are applied throughout the paper to illuminate existing gaps in sports infrastructure policies and practices, offering concrete policy and practical recommendations for policymakers, urban planners, and community leaders. The bottom line is to achieve an in-depth understanding of how the design and planning of sports infrastructure might meet the needs of everybody and everywhere, with attention paid to environmental sustainability. Finally, the paper aims to offer concrete strategies that can transform sports facilities into models of inclusivity and sustainability, thereby making it easier for all to access sports.

KEYWORDS

Inclusivity, Accessibility, Sustainability, Sports Infrastructure, Community development, Policy frameworks.

BREAKING BARRIERS AND FOSTERING EQUALITY: THE ROLE OF THE WOMEN'S PREMIER LEAGUE IN TRANSFORMING WOMEN'S CRICKET GLOBALLY (WOMEN IN SPORTS)

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ABSTRACT

The research study investigates the profound effect of the Board of Control for Cricket in India's (BCCI) Women's Premier League (WPL) on reducing gender discrimination and promoting women's cricket worldwide. Women in cricket and sports have faced considerable disadvantages regarding opportunity, resources, and recognition compared to men. The WPL, a pioneering project, represents a watershed moment in women's cricket and a bold challenge to the perception and treatment of female athletes and the sport's established gender conventions. The WPL plays an essential role in breaking down long-standing obstacles, empowering women in cricket, and transforming the sport's worldwide scene by giving a platform for female cricketers to demonstrate their abilities. The study looks at the WPL's role in increasing participation, skill development, visibility, and financial assistance for female cricketers, focusing on its potential to promote greater gender equality in sports. Furthermore, the study emphasizes the importance of efforts such as the WPL in furthering gender equality and empowering women through sports, indicating a bright future for women's cricket worldwide. The findings show the WPL's ability to promote cultural shifts in India and beyond, encouraging a more inclusive and equal environment for women in cricket. 3

KEYWORDS

Women's Premier League (WPL), Gender discrimination, Women's cricket, Empowerment, Gender equality, Cultural shifts.

STUDY ON COLD BONDED ARTIFICIAL AGGREGATES IN CONCRETE

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ABSTRACT

The use of fly ash has been the subject of numerous studies in the past. Although the primary focus was on using fly ash instead of cement, the creation of fly ash-based artificial aggregates aids in efficiently using a significant amount of ash in concrete. Due to extensive use, which also lessens environmental pollution and the depletion of natural resources, the globe has recently become considerably more dependent on this region. The production of lightweight aggregates using a pelletizer and curing using the cold-bonded technique are the primary topics of this study. These fly ash aggregates' qualities have been examined and contrasted with those of natural gravel; the results of the survey indicate that cold-bonded fly ash aggregates can be utilized in concrete in place of aggregate. According to research on the density and strength characteristics of concrete formed with natural gravel and artificial fly ash particles, adding fly ash aggregates to concrete lowers its compressive strength while still providing it with the strength needed to be utilized as a structural material.

KEYWORDS

Cold bonded Technique, Flyash aggregates, lightweight concrete,

EMPOWERPLUS FRAMEWORK FOR HOLISTIC INCLUSION: ADDRESSING DISCRIMINATION AND FOSTERING EQUALITY IN SPORTS

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ABSTRACT

Inclusivity in sports remains a significant challenge, especially but not limiting for women, athletes with disabilities, transgender individuals, and those from marginalized socioeconomic or caste backgrounds. This paper explores how the *EmpowerPlus: Framework for Holistic Inclusion*, (Kulshreshtha, 2025) developed by the author, with its four core pillars—Equal Access to Opportunities, Dignity, Respecting Personal Agency and Voice, and Realizing Worth—can address these barriers common in sports.

Athletes in remote locations with insufficient infrastructure and training facilities faces the concerns related to Equal Access to Opportunities. These sportspersons need to commit a lot of time and money to get benefited from such facilities in urban areas. Similarly, women athletes face barriers like limited resources, gender bias in training environments, and a lacking coach for females, affecting their participation and growth. Women from marginalized caste backgrounds or with disabilities, faces more challenges due to compounded barriers to access. Transgender athletes face discrimination, with limited access to facilities and many times excluded from competitions, hindering their participation.

Athletes' Dignity is undermined when personal individual's characteristics are considered instead of their performance. Many times, based on physical appearance, success of female athletes/ athletes with impairment are reduced to gender-based narratives or appreciation for perseverance and their talents and performance are disregarded.

Respecting Personal Agency and Voice remains challenging for athletes from marginalized sections. The absence of representation in sports organizations leads to decision-making that doesn't prioritize their concerns. Realizing Self Worth is key to empowering athletes from marginalized communities. Without adequate support, recognition, and resources, these athletes struggle to have their contribution, limiting their potential.

The paper concludes with actionable recommendations for creating inclusive environments. It is important to note that the sections mentioned regarding discrimination are not exhaustive, and other areas may also face similar challenges.

KEYWORDS

Inclusivity, EmpowerPlus, Discrimination, Equal Access, Women in Sports, Disability, Transgender Athlete.

ENHANCING ACADEMIC AND SPORTS ENVIRONMENTS THROUGH STRATEGIC ZONING: TOWARDS SUSTAINABLE SCHOOL DESIGN

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ABSTRACT

A child's overall development depends on classroom learning and physical activities on the field. The academic environment and areas of physical activity for children/students are affected by the sports facility zoning (SFZ), which is one of the most critical facets of school campus planning. This work deals with correlations of classroom noise conditions and SFZ for identifying various strategies resulting in the optimization of SFZ yielding enhanced learning outcomes. SF generates noises from various sources and activities like students' running, sports equipment impacts, screaming/shouting, and noise from the overcrowded students' population. Such a noisy scenario near the classrooms affects children's performance, drastically disrupting the teaching-learning environment. As deliberated in this work, integrating classroom acoustic principles and associated zoning strategies will mitigate noise disruptions while maintaining the cordial atmosphere of learning and physical activities. This work focuses on the combinatorial approach of sound level measurements and their transmission from SF towards classes along with qualitative assessment from teachers and children. Schools with different configurations are assessed to infer the correlations between SFZ and noise levels in the classroom. The quantitative findings highlight administrative buildings or green spaces' crucial role as effective sound transmission barriers. The orientations utilized in the design of buildings significantly affect the acoustic outcomes. Recommended strategies include implementing a zoning approach that positions SF at a considerable/sufficient distance from academic establishments, landscaping mitigating noise levels, and implementing construction practices that prioritize acoustics insulation. This study promotes sustainable school design by bridging the gap between SFZ and a sound classroom environment. The proposed zoning framework aims to benefit architects, policymakers, and school administration by creating a balanced scenario of active physical lifestyles and academic excellence.

KEYWORDS

Sports, zoning, classroom performance, school design.

ENVIRONMENT & SUSTAINABILITY

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ABSTRACT

The wellbeing of human life is closely linked to the health of the environment. In face of High Global Population & Urbanization, human impact on environment has increased manifold. The Global phenomenon of urbanization is now a global problem to be addressed. Human actions are depleting Earth's Natural capital impacting our planet, its ecosystems and ability to sustain future generations. The United Nations has realized that these strains can no longer be taken for granted. The 2030 Agenda for Sustainable Development (htt20), adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They apply universally to all countries. SDG 11 is an indicator with goal to "Make cities and human settlements inclusive, safe, resilient and sustainable". Urban sprawl, air pollution and limited open public spaces persist in cities (htt21). Where people largely live in urban slums. With the large proportion of the urban population the extent of built-up area and open area available per person is much less as guided by WHO in global context and NBC in Indian context. WHO guidelines are to have an availability 9-12 sq.m of open area per person.

KEYWORDS

Environment, Sustainability, Population density, Sustainable Development Goals.

PROBE INTO SUSTAINABILITY AND TRANSPORTATION IN RURAL, URBAN AND PERI URBAN AREAS

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ABSTRACT

Rural, urban and peri urban areas cover a lot of footfalls as far as sustainability is concerned. This conference again frequently uses these 3 words in context to conference theme i.e. **Inclusive Sports for All: Transforming Infrastructure for Accessibility**. That is how title (one of 16 conference theme enlisted) of this paper is decided as **sustainability and transportation**. Transportation although age old, it is doubly sensitive thing over last about has 200 years. Doubly, because it has given high human comfort, direct and indirect advancements while if not handled sustainability, it invites chaos, it adds to chaos. Transportation is found across almost in all 3 i.e. rural, urban and peri urban areas today.

In rural areas, it needs to be sustainable because if not, this is how it invites/adds chaos. Polluting vehicles put smoke into otherwise clean air in rural areas. Roads if not paved, tarred or concreted, mere open muddy roads make them uncomfortable to walk, uncomfortable for rural vehicles like tractors, bullock carts etc.

In urban areas, multiple modes of transportation are found unlike rural areas. Therefore, transportation in urban areas need to be highly sustainable because if not, this is how it invites/adds chaos. Pollution is already higher in urban areas and above all polluting vehicles add higher smoke. Roads and pedestrian areas i.e. footpaths are already complex matter in cities. Both need to be paved, tarred or concreted respectively, or else they are uncomfortable for people to walk and they are likely to invite accidents. Noise pollution is already a problem in urban areas. If roads, footpaths and modes of transportation are not sustainable they add a lot to noise already alarming in cities.

Compared to urban areas, peri urban areas, have lesser multiple modes of transportation, lesser complexities. But as observed in many peri urban areas, chaos is generated due to mishandling mismatch of roads, footpaths and vehicle types, qualities and therefore they need to be sustainable. Therefore, transportation in peri urban areas equally need to be highly sustainable.

Thus, transportation in all 3 i.e. rural, urban and peri urban areas needs to be sustainability conscious.

KEYWORDS

Rural, Urban, Peri Urban, Sustainability, Transportation.

REVOLUTIONIZING THE SPORTS INDUSTRY WITH BLOCK CHAIN TECHNOLOGY: ENHANCING TRANSPARENCY, SECURITY, AND FAN ENGAGEMENT

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ABSTRACT

Software technology has revolutionized almost every field, bringing tremendous advancements in technological development. Infrastructural development is one of many sectors being transformed by the application of emerging computer technologies. These technologies enhance efficiency, transparency, and reliability, paving the way for innovations that redefine traditional methods. Among these, blockchain stands out as an entirely new technology that leverages decentralized computer-based applications. This study examines the integration of blockchain technology into the sports industry, focusing on its potential to enhance transparency, security, and fan engagement within the sportscape ecosystem. The paper proposes a conceptual framework demonstrating how blockchain can redefine sportscape elements, creating a more efficient, transparent, and sustainable sports ecosystem.

KEYWORDS

Blockchain, Sports Industry, Transparency, Security, Fan Engagement, Decentralization, Ticketing, Data Integrity, Smart Contracts.

SPORT IMAGERY AMONG ALL INDIA INTER UNIVERSITY FEMALE SOFTBALL PLAYERS

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ABSTRACT

The present investigation was to examine the sport imagery among all India inter university female softball players. Seventy-five (N=75) female all India inter university softball players with the age group of 19 to 25 years was selected through purposive sampling technique to act as subjects from various universities. They were divided into five groups: Group-A [Fifteen (N=15) Punjabi University, Patiala]. Group-B [Fifteen (N=15) Maharaja Bhupinder Singh Punjab Sports University, Patiala]. Group-C [Fifteen (N=15) Guru Nanak Dev University, Amritsar]. Group-D [Fifteen (N=15) Panjab University, Chandigarh] and Group-E [Fifteen (N=15) Lovely Professional University, Phagwara]. Sport imagery was measured by applying Sport Imagery Questionnaire developed by hall et al. (1998). One Way Analysis of Variance (ANOVA) was employed to compare the entire groups. Where 'P' values found significant, Least Significant Differences (LSD) Post-hoc test was applied to find out the direction and degree of difference. The level of significance was set at 0.05. It is concluded that results revealed significant differences among all India inter university female softball players on the sub-variables cognitive specific, cognitive general, motivational specific, motivational general-arousal, motivational general-mastery and on the variable sport imagery.

KEYWORDS

Sport, imagery, softball, players.

A SYSTEMATIC LITERATURE REVIEW ON THE CHALLENGES AND SAFETY ISSUES ON WOMEN ATHLETES

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ABSTRACT

Participation of women is revealed as a catalyst for empowerment and gender equality in sports. However, accusations related to infrastructure accessibility and safety often set boundaries for their involvement in various places. Safety and security have become an emergent factor for sustainable development and broader societal progress. The study addresses an in-depth literature review based on the Scopus database (1989-2024) in this field. The study highlights various women's safety-related challenges and issues and research gaps. This study's findings also explore how safe and inclusive spaces can encourage women's participation, empower them in sports and other activities, promote gender equality, and foster their confidence to engage freely in the field. It also emphasizes the significance of empowering women to participate confidently, contributing to extensive sports for development with sustainable goals. This study highlights that women's safety concerns, harassment, and accessibility issues, the nature of risks faced by females, and safety perceptions, affect the travel choices of women athletes and their experiences.

KEYWORDS

Women's safety, gender equality, women athletes, safety perception.

FIELDS OF OPPORTUNITY: TRANSFORMING RURAL COMMUNITIES THROUGH SPORTS INFRASTRUCTURE

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ABSTRACT

Sports infrastructure is a cornerstone of community development and an essential element for nurturing talent, fostering health, and promoting social inclusion. In peri-urban and rural areas, the lack of adequate sports facilities limits opportunities for youth engagement and community cohesion. This paper explores the challenges, opportunities, and strategies for developing sports infrastructure in these regions, emphasizing the socioeconomic and cultural benefits of such investments. This paper investigates the critical challenges faced in developing sports infrastructure in peri-urban and rural areas. It explores the transformative potential of these investments, highlighting the socioeconomic benefits, including employment generation, economic growth, and poverty alleviation. Beyond economic gains, sports facilities can help address broader societal issues, such as reducing juvenile delinquency, enhancing educational outcomes, and promoting gender equality by encouraging greater female participation in sports. Drawing from global case studies and successful models, the paper identifies innovative strategies for addressing these challenges. Emphasis is placed on the importance of public-private partnerships, community-driven initiatives, and culturally sensitive approaches to infrastructure development. The integration of local resources, capacity-building programs, and sustainable practices is also examined as a means to ensure long-term viability. Ultimately, the paper underscores the role of sports infrastructure as a powerful tool for driving social and economic transformation in underserved regions. By advocating for policy reforms, targeted investments, and inclusive planning, it aims to provide a roadmap for fostering equitable access to sports facilities, thereby enabling communities in peri-urban and rural areas to realize their full potential.

KEYWORDS

Sports Infrastructure, Rural and Peri-Urban Development, Socioeconomic Impact, Community Engagement, Public-Private Partnerships, Gender Equality in Sports, Sustainable Development Inclusive Planning.

ECONOMICS GROWTH THROUGH SPORTS INFRASTRUCTURE

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ABSTRACT

The development of sports infrastructure is increasingly recognized as a vital component of economic growth and community development. This study investigates the economic dimensions of sports infrastructure, focusing on the mechanisms through which it can drive sustainable economic benefits while enhancing social engagement. By analyzing international experiences and best practices in public-private partnerships (PPPs), the research identifies key factors that influence the effectiveness and sustainability of sports facilities. The study begins with a comprehensive literature review that highlights the current gaps in understanding how universities and public institutions can leverage PPPs to modernize sports infrastructure without incurring significant financial burdens. It emphasizes the need for a stable regulatory framework and effective risk-sharing models to facilitate successful collaborations between public entities and private investors. Through qualitative analysis and case studies, the research examines successful PPP projects in various regions, assessing their operational models, financial structure, and stakeholder impacts. The findings reveal that strategic public investment priorities, coupled with innovative financial and operational models, can significantly enhance the sustainability and efficiency of sports infrastructure. Moreover, the study highlights the role of modern technologies, such as modular systems and energy-efficient designs, in improving operational efficiency and attracting investment. The economic benefits of well-developed sports infrastructure are manifold, including increased participation in physical activities, enhanced community engagement, and the potential for job creation. The research also underscores the importance of fostering collaborations that align the needs of universities and public institutions with the capabilities of private sector partners. This study provides actionable recommendations for policymakers and stakeholders, advocating for the integration of sports infrastructure development into broader economic planning. By maximizing the economic potential of sports through strategic investments and sustainable practices, this research aims to contribute to the creation of vibrant, inclusive communities that benefit from enhanced sports facilities and activities.

KEYWORDS

Sports Infrastructure Development, Public-Private Partnerships (PPPs), Sustainable Investment, Models, Community Engagement, Regulatory Framework.

SPORTING JUSTICE: ANALYSING THE INTERSECTION OF WOMEN PARTICIPATIONS AND CRIME RATES FOR SUSTAINABLE DEVELOPMENT IN INDIA

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ABSTRACT

Sustainability and inclusion are key aspects that influence gender equality in sports. Sport promotes women's self-esteem, confidence, resilience, and teamwork skills, which improves their professional prospects; nevertheless, it is unappreciated in India due to a fear of violence in athletic situations. According to reports, more than 75 percentage of criminal activities will be committed against women and less than 35 percentage women participations (WP) were found in sports in India in 2021. The study investigates the relationship between safety of women (SOW) in sports and crime against women incidents (CAWI) in India, with the goal of meeting UNSDGs such as eradicating gender-based violence, promoting social inclusion, providing safe settings, and ensuring social justice by 2030. The study used bibliometric and correlation methods to investigate women's sports safety and the relationship between CAWI and SOW in sports. The data demonstrate that CAWI is favorably associated with contemporaneous development but negatively associated with WP, indicating that women's sentiments of security are decreasing. Gender equality in sports necessitates greater WP and SOW levels. School officials should encourage female students, local governments should provide sporting facilities, and technology has the potential to improve performance analysis. India need laws and regulations, while international sports governing bodies can make alterations. Future research should incorporate longitudinal studies, cross-cultural perspectives, and qualitative studies.

KEYWORDS

gender equality, women participants, crime against women incidents, sustainability, sports.

IMPORTANCE OF PLAY SPACE WITH MODERN ARCHITECTURAL DESIGN IN URBAN PRIMARY SCHOOL- A REVIEW

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ABSTRACT

Playing sports has been accepted as an important way to encourage good behaviours and general development in children as a kind of physical activity (Chen et al., 2021). Incorporating play areas into contemporary architectural plans in urban elementary schools is essential for supporting young students' social, cognitive, and physical development. Effective and captivating play venues require creative design solutions in high-density urban contexts with limited open spaces. This essay examines recent studies on the value of play spaces in elementary school architecture, looking at how they affect child development, architectural factors, and sustainable urban planning techniques. The study emphasizes the necessity of child-centric, flexible, and inclusive design methods by showcasing case studies and best practices from various geographical areas.

KEYWORDS

Play space, urban primary school, modern architecture, child development

BEYOND THE UNCLAIMED THRONE: THE UNWRITTEN CHAPTER OF INDIA'S SPORTING LEGACY (INCLUSIVITY AND SPORTS)

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ABSTRACT

The goal of this study is to debunk the long-held myth that hockey holds this position by revealing the mysterious story of India's lack of a recognized national sport. Even though cricket is a popular sport in the country & traditional games like kabaddi & kho-kho are part of the culture, the Indian government's egalitarian approach to promoting the growth of other sports highlights its opposition to the hierarchical exaltation of one sport. Using a multidisciplinary approach that includes historical, sociopolitical, & cultural assessments, this paper examines the effects of this misalignment on the Indian sports industry. Instead of being a mistake, it suggests that the lack of a national sport is a sign of an inclusive mindset that seeks to fairly promote a variety of sports. The study also examines how this pluralistic viewpoint affects global competitiveness, grassroots growth, & the commercialization of sports in a quickly changing socioeconomic environment. In order to support the country's quest for a unified but diverse sports heritage, this academic investigation seeks to shed light on the unexplored territory of India's athletic paradigm & propose a revised structure that balances inclusion with strategic priority.

KEYWORDS

Inclusive Sports Development, National Sporting Identity, Sports Policy, Cultural Narratives, Social Inclusion.

FROM FAME TO FORTUNE: UNPACKING THE GOLDEN TICKET OF PROFESSIONAL SPORTS IN INDIA (INCLUSIVITY AND SUSTAINABILITY)

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ABSTRACT

The domain of professional sports in India represents a dual-edged paradigm, oscillating between unparalleled opportunities and inherent uncertainties. This research dissects the intricate tapestry of privileges, luxuries, and systemic advantages that accrue to individuals pursuing a career in sports. By delving into the socio-economic dividends—ranging from national adulation to substantial financial remunerations—the study unveils the mechanisms through which sports professionals ascend to societal eminence. Simultaneously, it interrogates the latent vulnerabilities of this pursuit, including precarious career longevity and the inequities embedded in institutional frameworks.

A comprehensive review of extant literature underscores the manifold benefits extended to sportspeople, such as sponsorships, global exposure, and access to elite training infrastructures. These are juxtaposed with critical discourses on fallback strategies for those failing to achieve professional acclaim, encompassing policy-driven skill transition programs and alternative vocational trajectories. Additionally, the analysis elucidates the role of cultural capital and governmental patronage in shaping career pathways while critiquing the systemic lacunae that exacerbate socio-economic disparities among aspirants.

The study contributes to a nuanced understanding of sports as a profession in India, where glamour and uncertainty coexist. It highlights the exigency for robust planning interventions and policy reforms to mitigate occupational precarity, ensuring equitable access to opportunities while fostering sustainable career outcomes for the aspirants of the sporting domain.

KEYWORDS

Professional sports, socio-economic dividends, career longevity, institutional inequities, sponsorships, cultural capital, socio-economic disparities, policy reforms, occupational precarity, equitable access, sustainable career outcomes.

EQUITABLE ROAD SPACE: A CASE STUDY OF VIKAS MARG, DELHI

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ABSTRACT

Urban Street design plays a crucial role in shaping the character and functionality of urban environments. It involves the planning, layout, and integration of various elements within streetscapes to create vibrant, safe, and sustainable public spaces. This report highlights the key aspects and principles of Urban Street design and its contribution to building liveable and inclusive cities. Effective street urban design embraces the principles of walkability, accessibility, connectivity, and placemaking. It recognizes the importance of pedestrian-oriented environments, prioritizing the needs and safety of pedestrians and cyclists over vehicular traffic. By incorporating elements such as wide sidewalks, pedestrian crossings, bicycle lanes, and traffic calming measures, streets can become inviting, people-centric spaces that promote physical activity, social interaction, and economic vitality. Vikas Marg Street exemplifies several principles discussed in the books "The Image of the City," "Theory of a Good City," and "A Hidden Dimension." It embodies legibility, inclusivity, sustainability, and social interaction. Moreover, the adherence to street standards ensures functional and aesthetic coherence. Traffic congestion, inadequate pedestrian infrastructure, and lack of green spaces were some of the issues in Vikas Marg. After the solution Vikas Marg Street serves as a valuable example of successful urban design, contributing to a vibrant and liveable cityscape.

KEYWORDS

walkability, accessibility, sustainability, legibility, liveable cityscape.

POTENTIAL THREATS FOR THE IMPLEMENTATION OF CIRCULAR ECONOMY

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ABSTRACT

The world where everyone is in pursuit of sustenance, so to overcome the depletion of natural resources. The circular economy is introduced by UNCTAD to overcome the linear economy where the resources are extracted and waste is generated. The circular economy deals with the supply chain to minimize the extraction of natural resources. The USEPA suggested models for the circularity of supply chain in various country profiles and can be accessed. The total resources entering the global economy 100.6GT of which extracted resources is 92.0 Gt and cycled resources is 8.6 Gt and loses 24Gt of resources.

To implement circular economy in India the program named as CITIIS2.0 was introducing that leads to Integrate, Innovate and sustain concept to the municipal corporation for implementation. The major threats in implementation of circular economy are counterfeit products where the source of product could not be mapped.

The basic products that cause the major concern for sustainability the products are outline as per the frame work defined by GOI that should be circled their supply chain.

The basic aim of research is to develop and draw attention to the current frame work to take further steps to strengthen the supply chain and map the route of products so that can be reused by the parent company.

KEYWORDS

Circular Economy, Linear Economy, Performance economy, counterfeit.

AN INNOVATION IN LAW FOR DATA COLLECTION: AN ATTEMPT TO SAFEGUARD THE PRIVACY

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ABSTRACT

In the digital world, data has become a part of life, where every milestone from birth to death is digitally recorded. The advent of the internet has facilitated the seamless and boundless flow of this data across the globe at unprecedented speeds. Users, enticed by the convenience and accessibility of digital platforms, often share their personal data without constraints. However, such abundance of free data has created significant concerns in relation to privacy and security. The unregulated proliferation of data can lead to information overload and unintended distractions that call for vigilant measures in the protection of user privacy. As a response, the European Union came up with the General Data Protection Regulation in 2018, which was an innovative framework to change the global data management approach. The impact of GDPR goes beyond national boundaries; it influences users, corporations, and economies worldwide. This regulation has challenged the countries of the world to enact their own data protection laws in accordance with global standards. India has joined this global movement with the introduction of the Digital Personal Data Protection Act, 2023. This act comprehensively addresses data collection, storage, processing, transfer, and deletion, positioning itself as a critical enabler of the nation's vision for a developed India ("Viksit Bharat"). This study uses a qualitative research methodology, where the sources of secondary data used are legislation texts, policy documents, scholarly articles, and case studies, which will be used to analyze the evolution and impact of data protection laws. The research concludes that robust legal frameworks such as GDPR and India's Digital Personal Data Protection Act are necessary in safeguarding individual privacy rights in an increasingly digitalized world. These regulations not only safeguard personal data but also contribute to user trust, corporate accountability, and economic stability.

KEYWORDS

Data, Data protection, Digitalisation, Economy, Viksit Bharat.

BREAKING BARRIERS: TRANSFORMING SPORTS FACILITIES FOR HOLISTIC INCLUSION

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ABSTRACT

This research delves into the transformative potential of inclusive sports complexes in empowering individuals with disabilities, fostering holistic well-being, and promoting equitable participation. By examining critical elements such as accessibility, adaptive infrastructure, and personalized training programs, it highlights the imperative of inclusive environments that enable active and equal engagement.

Through a comprehensive analysis of planning principles, design methodologies, and case studies, this study identifies key challenges, including infrastructural gaps and societal stigmas, while showcasing the profound impact of sports on physical health, mental resilience, and social integration.

Introducing innovative school programming initiatives, this research demonstrates how inclusive sports infrastructure can unleash the untapped potential of individuals with disabilities. By educating young minds about inclusive sports and the achievements of disabled athletes, we can foster a culture of empathy, encouragement, and empowerment.

Proposing cutting-edge solutions, including modern technologies and anthropometric design, this study calls on stakeholders to prioritize inclusivity in sports infrastructure. By promoting adaptive sports, empowering disabled individuals, and creating a more equitable sports ecosystem, we can unlock a brighter future for all.

KEYWORDS

Inclusive Sports Infrastructure, Disability Empowerment, Adaptive Physical Activity, Accessibility in Sports, Social Integration, Anthropometric Design.

FORM FOLLOWS FUNCTION: A RELATIONSHIP BETWEEN ARCHITECTURE AND SPORTS PERFORMANCE

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ABSTRACT

The research investigates the relationship between architectural design and sports performance through the principle of "form follows function," as articulated by Louis Sullivan. The study examines the design of sports facilities, particularly their spatial configurations and architectural elements, can either enhance or hinder athletic performance. Key objectives include analyzing different architectural designs of sports facilities, evaluating the effectiveness of specific design elements in boosting athletic performance, and conducting qualitative analyses of various sports stadiums. Analysis of various stadium designs highlights the significant impact of architectural features on sports performance. Open bowl designs, advanced acoustics, retractable roofs, and innovative ventilation systems can enhance team performance whereas challenges such as sun glare and inadequate ventilation in some venues underline the importance of addressing environmental and functional factors in stadium design to fully optimize sports performance.

The study highlights architecture considerations, including climate responsive form, natural ventilation and ergonomic recovery spaces. By focusing on these factors that influence efficiency, comfort, physical and psychological wellbeing of athletes, it provides valuable insights for architects, facility managers, and sports professionals. Ultimately, this research is qualitative research that aims to identify best practices for optimizing sports facility design, contributing to the creation of environments that support peak athletic performance.

KEYWORDS

Architectural design, form follows function, sport facilities, sports performance, design impact.

AMENITIES INFLUENCING SPORTS FIELDS IN RURAL MADHYA PRADESH: A MACHINE LEARNING APPROACH

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ABSTRACT

Rural areas are crucial to the society and the economy of the nation, as they serve as the foundation for agriculture, natural resource production and cultural heritage. Despite various policy initiatives, rural areas still face challenges like very limited access to financial services, inadequate infrastructure and lack of basic services. Addressing this requires understanding of the macro level factors such as economic policies and the micro level factors like the education and healthcare of a place. Sports play a major role in both physical and mental health of a person and it also contributes to the community development. This study aims to identify key amenities influencing the presence of sports fields in the rural areas of Madhya Pradesh, India. The study utilizes the state level Census 2011 data. A robust machine learning framework is used to analyze the relationship between rural amenities and sports field availability. For this, a structured machine learning pipeline is implemented. This begins with statistical preprocessing, followed by ten machine learning models to determine the model with highest accuracy on the rural data. Subsequently a meta-ensemble model is created to further enhance the accuracy. Also to identify the amenities which are most influential in affecting the presence of sports fields. The meta-ensemble model created achieved the highest accuracy of 82.65%. The most significant amenities which were identified are educational institutes, transportation networks and services, and essential services. This reveals the critical role of urbanization and infrastructure development in fostering recreational opportunities in the rural region. The findings of this study provide valuable insights for the planners, policymaker and experts enabling data-driven decision making. This would enhance rural planning and also optimize the allocation funds and resources for development of sports infrastructure.

KEYWORDS

Rural Development, Sports fields, Machine Learning, Census 2011, Infrastructure and amenities.

SPORTS AS A CATALYST FOR PUBLIC HEALTH AND WELLBEING

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ABSTRACT

Sports have a unique ability to bring people together while improving physical and mental health. However, in India, access to sports facilities is not equal for everyone. Many communities, especially people with disabilities, women, and those in rural or peri-urban areas, face challenges due to a lack of inclusive infrastructure. This research explores how sports can serve as a powerful tool for public health and wellbeing, with a focus on creating infrastructure that is accessible to all.

The paper highlights the pressing need for inclusive sports facilities in India, where existing gaps in design and accessibility often limit participation. It identifies practical solutions for overcoming these challenges, such as incorporating universal design principles, ensuring sustainable construction practices, and prioritizing transport connectivity. By addressing these issues, inclusive infrastructure can help bridge health inequalities, foster social connections, and promote mental wellness across diverse groups.

A major focus of this study is on developing a strategic framework for inclusive sports infrastructure, tailored to the Indian context. This framework provides clear guidelines for architects, urban planners, and policymakers to design facilities that cater to all users. Additionally, the paper explores the potential of sustainable and cost-effective solutions to create facilities that are environmentally responsible while meeting community needs.

By reimagining sports infrastructure as a tool for social and health equity, this paper aims to inspire a shift in how we design and plan public spaces. Inclusive sports facilities have the potential to transform lives and contribute to a healthier, more unified society.

KEYWORDS

Inclusive Sports Infrastructure, Public Health and Wellbeing, Universal Design, Accessibility in Sports, Sustainable Infrastructure, Health Equity, Social Inclusion, Sports for All.

URBAN PLANNING AND MOBILITY MANAGEMENT- BUILDING SUSTAINABLE AND ACCESSIBLE CITIES

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ABSTRACT

To what extent is urban growth a guided process shaped by human interaction and physical infrastructure, rather than a spontaneous or uncontrollable phenomenon?

To address this research question, many researchers and planners argue that urban growth is neither random nor unmanageable; rather, it is directed by human decisions and the structures we build. However, despite this potential for intentional growth, global urban expansion frequently manifests as unchecked sprawl, resulting in inefficient land use and significant resource depletion.

The development of sustainable and accessible cities requires a thoughtful integration of **urban planning** and **mobility management** to address the challenges posed by rapid urbanization, resource constraints, and climate change. Effective urban planning ensures that land use, infrastructure, and community design align with the needs of people and the environment. At the same time, mobility management provides strategies to optimize the movement of people and goods, emphasizing accessibility, efficiency, and sustainability.

Low-density development, government functioning for city development and social segregation hinder human interactions and reduce opportunities for innovation. For cities and towns to function effectively, accessibility is crucial—not only for the movement of goods and services but also to enable social and economic connections. Sustainable urban planning now encourages cities to adopt diverse, eco-friendly transportation options, including pedestrian-friendly spaces, to enhance accessibility.

KEYWORDS

Urban Growth, Sustainable Urban Planning, Mobility Management, Urban Sprawl, Accessibility.

INVESTMENT IN ACCESSIBLE RURAL SPORTS INFRASTRUCTURE IN INDIA THROUGH DIFFERENT MODES

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ABSTRACT

Investing in accessible rural sports infrastructure through diverse modes is essential to foster grassroots sports development, promote inclusivity, and unlock the untapped athletic potential in India's rural areas. With a majority of the population residing in villages, a strategic focus on equitable sports infrastructure is imperative for bridging the urban-rural divide and nurturing talent at the grassroots level. This paper examines various approaches to infrastructure investment, including public funding, Corporate social responsibility (CSR) initiatives, public-private partnerships (PPPs), and community-driven models. The study analyzes the effectiveness of government programs such as Khelo India and Panchayat Yuva Krida Aur Khel Abhiyan (PYKKA), alongside private-sector contributions and local self-governance efforts. Challenges such as funding constraints, maintenance issues and resource allocation are identified, emphasizing the need for innovative funding solutions like Impact bonds, SEZ for sports etc. Findings highlight the importance of a multi-stakeholder approach to address gaps in accessibility and inclusivity while fostering economic growth and social cohesion. By integrating diverse investment modes, India can develop a robust rural sports ecosystem that empowers communities, promotes gender equality, and positions the country as a global leader in sports.

KEYWORDS

Investment, Sports infrastructure, Accessibility.

OPTIMIZING SPORTS INFRASTRUCTURE ACCESSIBILITY USING GIS: A CASE STUDY OF URBAN- PERI URBAN CONNECTIVITY

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ABSTRACT

Accessibility to sports infrastructure plays a critical role in promoting inclusivity and fostering healthy communities. This research aims to explore the potential of Geographic Information Systems (GIS) in enhancing the accessibility of sports infrastructure across urban and peri-urban areas, addressing spatial inequities in facility distribution. Taking a case study approach, the study maps existing sports infrastructure in a rapidly urbanizing region, analyses travel patterns, and identifies accessibility gaps using spatial analysis techniques. Furthermore, this research incorporates demographic data to propose optimized locations for future infrastructure, prioritizing underserved areas and promoting inclusivity. **The finding shows that** The findings aid policymakers and urban planners in integrating sports infrastructure into holistic urban planning frameworks, ensuring equitable access for all. This approach demonstrates a replicable model for developing sustainable and inclusive sports ecosystems, leveraging technology to bridge the urban-peri urban divide.

KEYWORDS

Sports infrastructure accessibility, GIS, urban-peri urban connectivity, spatial analysis, inclusivity, sustainable planning, equitable development, sports ecosystem.

MAINSTREAMING SPORTS INFRASTRUCTURE IN URBAN PLANNING: THE CASE OF AHMEDABAD (INDIA)

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ABSTRACT

Rapid urbanization and economic growth pose a challenge for cities to balance built development with liveability. This research investigates the integration of social infrastructure, particularly facilities promoting physical activity, such as sports infrastructure, in urban planning instruments to enhance the liveability of Ahmedabad, India. The city is experiencing economic prosperity, but its discretionary approach to social infrastructure provision creates inequitable access. To identify gaps between the demand and supply of such social amenities promoting physical activities among diverse age groups, the research process involved mapping social infrastructure and their level of service for Ahmedabad; reviewing statutory planning mandates; conducting over 450 household surveys along with multiple key informant interviews to bring multidimensional stakeholder's perspectives. Additionally, drawing on best practices from Hong Kong and Delhi, the research proposes a framework for integrating social infrastructure at various spatial planning scales, ensuring accessibility across the city. This research contributes knowledge on incorporating social infrastructure into urban planning to improve liveability in rapidly growing economies.

KEYWORDS

Social Infrastructure, Urban Planning, Liveability, Quality of Life, Sports Infrastructure

BEHAVIORAL CHARACTERISTICS TO SUSTAINABLE TRANSPORTATION ADOPTION IN RESIDENTIAL NEIGHBORHOODS

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ABSTRACT

“Sustainability” and “Transport” are two distinct fields of study, each with its own scope and intricacies. However, these concepts frequently intersect, particularly within the framework of any kind of development projects. Transportation is widely regarded as a critical indicator of sustainability by professionals and researchers alike, since, with the rapid urbanization of meta and metropolitan cities, a substantial shift in population density is placing stress on urban ecosystems, leading to the rise of private vehicle ownership, which impacts deteriorating air quality, disruptions in ecological balance, and significant public health concerns. In this paper, we aim to examine the concept of sustainable mobility at a level where individuals experience their city firsthand: the neighborhood level. Within the scope of this study, we will explore how the spatial distribution of a neighborhood unit influences residents' behavior in making travel choices, mobility patterns, and interactions with the built environment. These are essential factors that need to be analyzed in order to inspire these behavioral shifts—encouraging the adoption of public transport, cycling, walking, and other non-motorized modes, particularly for enhancing first-mile and last-mile connectivity.

KEYWORDS

Sustainable Transport, Neighborhood, NMT, Behavioral Patterns, Spatial, Dynamics; Demography, Stages of Behavioral Shifts; Infrastructure.

BUILDING HEALTHY COMMUNITIES THROUGH SPORTS: THE ROLE OF PARKS AND RECREATION

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ABSTRACT

Regular physical activity is essential for maintaining both physical and mental health. Research demonstrates that individuals who engage in sports and exercise are significantly less likely to develop chronic illnesses, including cardiovascular diseases, diabetes, and mental health disorders. However, gender disparities persist, with women approximately 30% less likely than men to meet physical activity guidelines, highlighting the need for more inclusive sports infrastructure. This paper examines the critical role of sports infrastructure in fostering health and well-being within communities by providing accessible and inclusive facilities. It explores how well-designed fields, courts, and recreational centres can promote physical activity and strengthen community engagement. Urban parks, in particular, are showcased as exemplary spaces that encourage active lifestyles while simultaneously supporting urban biodiversity and climate resilience, aligning with broader sustainability goals. Through numerous case studies of urban parks redesigned to integrate sports amenities, the research demonstrates how such developments can inspire active lifestyles, reduce healthcare costs, and enhance overall community well-being. This paper offers practical strategies and best practices for optimizing sports infrastructure to promote healthier lifestyles and improve quality of life for individuals and communities alike.

KEYWORDS

Sports Infrastructure; Green Spaces; Urban Parks; Community Health; Sustainability.

MAPPING ACCESSIBILITY: LEVERAGING GIS FOR SPORTS INFRASTRUCTURE IN BANGALORE RURAL

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ABSTRACT

Geographic Information Systems (GIS) play a pivotal role in transforming sports infrastructure planning, particularly in regions like Bangalore Rural. This study investigates the application of GIS to evaluate and enhance the accessibility of sports facilities in semi-urban and rural contexts. GIS provides a framework for data collection, offering precise spatial and demographic information critical for understanding the distribution of existing facilities and identifying gaps in infrastructure. By integrating GIS-based methodologies, the research collects, organizes, and analyzes geospatial data, ensuring evidence-based decision-making for infrastructure development. The study highlights the distribution of sports facilities across Bangalore Rural, driven by population density, geographic constraints, and socio-economic factors. Through spatial analysis, GIS is utilized to propose strategic locations for new infrastructure, optimize the placement of existing resources, and create equitable access to sports opportunities. The research underscores GIS as a tool to bridge regional development challenges by fostering inclusivity and enhancing Community well-being through participatory planning and resource optimization. By focusing on Bangalore Rural, this study provides actionable insights tailored to its unique dynamics, including its dispersed population and varying terrain. The findings contribute to sustainable development strategies that align with regional growth objectives while emphasizing inclusivity in sports accessibility. This paper reinforces the potential of GIS as a cornerstone for advancing sports infrastructure planning, offering a replicable model for other rural and semi-urban areas aiming to improve access to sports and recreational opportunities.

KEYWORDS

Geographic Information Systems (GIS), Sports Infrastructure Planning, Spatial Analysis, Equitable Access, Community-Driven Planning.

ROLE OF ENVIRONMENT AND SUSTAINABILITY FOR INCLUSIVITY OF SPORTS

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ABSTRACT

Considering to the backdrop of global warming, the environment and sustainability play a significant role in sports and is increasingly acknowledged as an essential practice for encouraging inclusivity, clinching equitable access, and minimizing the ecological footprint of sporting events and facilities. All sports events contribute to carbon emissions due to transportation, energy usage, waste generation, clearing land for the construction of sports venue, directly contribute to the loss of ecosystems and biodiversity. The emission of one sole sport event at the global sector is equivalent to the level of emissions generated by a medium-sized country affecting the world's climate. The approach is to analyze and examine case studies thereby highlighting the initiatives of sports organizations, and global sporting events that have successfully integrated sustainability practices with inclusivity measures like eco-friendly infrastructure, choose sports with low environmental impact, opt for eco-friendly sportswear, waste reduction programs, accessibility improvements, and policies promoting diversity and social responsibility and use of sustainable equipment reduce, reuse, and recycle. This paper explores the intersection of sustainability in the planning and execution of sports programs to stimulate greater inclusivity by reducing costs, increasing accessibility, and promoting social cohesion. By integrating sustainability into the sports sector will not only address environmental challenges that can improve people's health and well-being, promoting more active and healthy lifestyles. The findings underscore that sustainability in sports is not only an environmental necessity but also a critical factor that include community engagement, adaptive infrastructure, and policies that prioritize both environmental and social goals. Finally, the paper concludes by suggesting that prioritizing sustainability can bridge the gap inaccessibility, inclusivity, reduction in carbon emission and thus enhance how the need for policies and practices can enable diverse participation to protect the environment for future generations.

KEY WORDS

Sustainability, Inclusivity, ecofriendly.

EQUITABLE SPORTS INFRASTRUCTURE FOR PERI-URBAN COMMUNITIES: STRATEGIES FOR INCLUSION AND DEVELOPMENT

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ABSTRACT

This paper explores the potential of inclusive sports infrastructure to bridge social, economic, and cultural disparities in peri-urban Indian communities, with a focus on Karnataka state. While India boasts a rich heritage of traditional indigenous sports (TISG) like Kabaddi, Kho-Kho, Mallakhamb, and Kalaripayattu, the accessibility of infrastructure for these sports is often hindered by geographical constraints, inadequate planning, and socio-economic barriers. These challenges are particularly evident in peri-urban areas, where rapid urbanization exacerbates inequities in sports participation.

The study highlights the transformative role of indigenous sports in fostering social cohesion, preserving cultural heritage, and promoting sustainable development. Drawing insights from case studies such as the Vikramshila Sports Hub (Bihar), Sakhi Sports Complex (Uttar Pradesh), and Madhuban Sports Park (Madhya Pradesh), the research identifies actionable strategies for designing inclusive sports infrastructure. These strategies include community-centered planning, equitable resource distribution, technology integration, and policy frameworks like the Khelo India Policy.

The paper proposes reimagining infrastructure projects, such as the proposed international cricket stadium in Tumakuru, Karnataka, to create multi-functional, inclusive sports complexes that cater to both modern and traditional sports. By integrating universal accessibility, sustainability, and community participation, such initiatives can empower marginalized groups, enhance cultural preservation, and drive economic growth.

Ultimately, this research underscores the importance of participatory planning and stakeholder collaboration in creating sports infrastructure that transforms peri-urban communities, ensuring inclusivity, and safeguarding India's intangible cultural heritage while addressing contemporary urbanization challenges.

KEYWORDS

Inclusive sports infrastructure, Traditional indigenous sports of India (TISG), Community-centered planning, Sports infrastructure Policy reforms.

REDEFINING SPORTS INFRASTRUCTURE: POTENTIAL AND ISSUES IN IMPROVING INDIA'S SPORTS LANDSCAPE

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ABSTRACT

"The main organizational and physical construction required to facilitate sport participation" is the standard description of sports infrastructure. In any nation, sports are a part of a complex ecosystem that includes leagues, commercial firms, government agencies, athletes, sports enthusiasts, and regulatory bodies.

Each of these stakeholders contributes significantly to the growth of sports in the nation. By providing top-notch facilities and resources that support the hosting of major sporting events and sustain the nation's passion of sports, these many actors, when properly aligned, have the ability to propel India's position on the international sporting scene. The quality of sports in the country could stagnate and even worsen if different groups, as stakeholders, do not coordinate their efforts.

The significance of constructing and enhancing sports facilities is covered in this paper, along with the varied functions and contributions of the aforementioned stakeholders. Along with the complicated rules for allocating sports funds and putting sports policies into action, the paper also addresses the obstacles that India may face in its pursuit of becoming a sporting superpower, including inadequate infrastructure planning, underuse of existing infrastructure, and poor maintenance of sporting facilities in major cities.

A lack of smart stadiums and outdated technologies have also impeded the growth of sports in the nation. A focused approach to infrastructure development is necessary given the pervasive effects that sports have on a country's economy and community as well as the crucial role that sports infrastructure plays in the expansion of sports.

KEYWORDS

Infrastructure, stakeholder, technology.

BENEFITS OF GREEN BUILDING CERTIFICATIONS FOR SPORTS INFRASTRUCTURE IN MADHYA PRADESH

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ABSTRACT

The need for sports complexes has grown significantly due to heightened health awareness (Schneider et al., 2020), greater exposure to sports across genders (UNESCO, 2018), and inclusion of specially-abled individuals (IOC, 2019). Initiatives like "One District, One Sports Complex" (Government of India, 2023) and the "Chief Minister Sports Infrastructure Scheme" in Madhya Pradesh (Madhya Pradesh Sports Department, 2023) aim to develop multi-facility sports stadiums. As demand rises, ensuring environmental sustainability in these facilities is critical. Green building certifications, such as LEED (USGBC, 2021), BREEAM (BRE Group, 2021), and IGBC (IGBC, 2022), promote sustainability, but their adoption in Indian sports infrastructure remains limited.

This study explores global examples, including the Mercedes-Benz Stadium, USA (HOK, 2017) and London 2012 Olympic Stadium (London Legacy Development Corporation, 2013), to showcase the environmental and social benefits of green certifications. Indian examples like Jawaharlal Nehru Stadium, New Delhi (CPWD, 2020), Sardar Patel Stadium, Ahmedabad (L&T, 2021), and Indira Gandhi Athletics Stadium, Surat (Gujarat Urban Development Company, 2022) highlight the integration of sustainable practices. Challenges such as high initial costs (Chandra & Singh, 2019), material availability (Sharma et al., 2021), and bureaucratic hurdles (Kumar, 2022) are analyzed. Findings suggest that while green certifications offer clear benefits, cost and logistical issues hinder widespread adoption. The paper concludes with policy recommendations to encourage eco-friendly, accessible, and sustainable sports facilities, aligning with India's urban development needs and rising demand for sports infrastructure.

KEYWORDS

Sustainability, Green Building Certification, Sports Complex, LEED, IGBC.

OLYMPIC VISION 2036: FOSTERING SAFE AND INCLUSIVE SPORTS-LED DEVELOPMENT IN BHUBANESWAR

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ABSTRACT

The goal of developing safe, inclusive, and sustainable sports-led development has become crucial as Bhubaneswar hopes to host the Olympic Games in 2036. This study addresses important issues with accessibility, safety, and inclusion while examining the possibilities of using sports infrastructure and planning as drivers for urban change. Being known as the "Sports Capital of India," Bhubaneswar offers a special chance to match urban development with international norms for leisure and sports.

The research uses a multifaceted method to assess the present urban landscape, socioeconomic dynamics, and sports infrastructure in Bhubaneswar. Sports facilities' geographical accessibility is analysed using Geographic Information Systems (GIS) to find gaps and provide remedies for fair distribution. Policy reviews and stakeholder discussions offer valuable perspectives on how to address safety issues and promote inclusion, especially for women, people with disabilities, and underrepresented populations.

The results of the study highlight the necessity of strategic interventions, such as community involvement, capacity building, and sustainable urban design, to guarantee that sports facilities are inclusive places. In order to reach Olympic criteria, the suggested proposals place a strong emphasis on incorporating sports infrastructure into larger urban planning frameworks, encouraging public-private collaborations, and implementing global best practices.

This paper at last concludes by preparing a roadmap for Bhubaneswar to achieve its Olympic Vision 2036 – “Together for a shared future”, demonstrating how sports-led development can contribute to social cohesion, economic growth, and global recognition while setting a benchmark for aspiring host cities.

KEYWORDS

Safe Sports Infrastructure, Sports Led Urban Development, Geographic Information System (GIS), Olympic City Planning, Sustainable Urban Development, Inclusive Sports Planning.

EMPOWERING WOMEN THROUGH SPORTS: ADDRESSING TRANSPORTATION SAFETY BARRIERS

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ABSTRACT

Transportation connects women to sports participation but simultaneously exposes them to significant safety concerns. Studies reveal that approximately 84% of women worldwide experience harassment in public spaces like transit systems, and 96% report sexual harassment in public transportation. These incidents deter women from accessing sports facilities and events, with risks further exacerbated by poorly lit transportation hubs and unsafe last-mile connectivity in many urban areas. Such conditions pose barriers not only for female athletes but also for spectators and professionals. Current transport systems inadequately address women-specific safety needs. Policies and infrastructure often overlook gender-specific concerns such as harassment hotspots, unsafe waiting areas, and challenges during off-peak hours. Moreover, non-inclusive planning perpetuates accessibility gaps, marginalizing women from full participation in sports. These systemic failures require a holistic approach to ensure mobility and safety for women. Effective solutions include designing safe transit corridors, deploying real-time safety applications, and fostering community-based transport initiatives. Integrating gender-sensitive urban planning is essential to create secure and accessible spaces that enable women to actively engage in sports. Such actions can not only bolster women's participation in athletics but also promote social justice, redefining the role of transportation in empowering women through sports.

KEYWORDS

Women's Safety; Transportation Accessibility; Sports Participation; Gender-Sensitive Urban Planning.

ENHANCING SUSTAINABLE URBAN MOBILITY FOR THE ELDERLY: CHALLENGES AND INNOVATIONS IN PUBLIC TRANSPORT SYSTEMS

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ABSTRACT

As the global elderly population continues to rise, ensuring their seamless mobility in urban environments becomes essential for social inclusion, independence, and an enhanced quality of life. Public transportation plays a pivotal role in achieving this, yet accessibility barriers, affordability issues, and infrastructure limitations persist, hindering elderly commuters' ability to travel efficiently. This systematic review employs the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology to analyse challenges faced by elderly commuters and explore innovations in public transport systems tailored to their needs. The study identifies key constraints, including inadequate accessibility, safety concerns, and first/last mile connectivity difficulties. It also examines the effectiveness of emerging solutions such as demand-responsive transit (DRT), smart mobility applications, and inclusive urban planning policies. Through a synthesis of global case studies, the findings emphasize the need for comprehensive, age-friendly transport policies that integrate technological advancements and equitable infrastructure improvements. The study concludes that fostering sustainable urban mobility for the elderly requires coordinated efforts from policymakers, transport planners, and urban developers to create resilient, accessible, and inclusive transport systems.

KEYWORDS

Sustainable urban mobility, Elderly transportation, public transport accessibility and Age-friendly transport.

PYTHON-BASED NETWORK MODEL TO ASSESS CITIZEN'S ACCESS TO LAKEFRONT SPACES: A CASE OF BHOPAL

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ABSTRACT

This study explores citizen accessibility to urban lakefront spaces in Bhopal, famously known as the *City of Lakes*, using a Python-based network model integrated with GIS-based isochrone maps and advanced network analysis techniques. Four prominent lakefronts—Upper Lake, Lower Lake, Shahpura Lake, and Kaliasot Dam—were selected based on their spatial extent and proximity to dense residential areas. The study evaluates accessibility across four speed limit scenarios: S-1 (40-30-6 km/h), S-2 (30-20-6 km/h), S-3 (20-20-6 km/h), and S-0 (Walking speed 6 km/h). By applying Dijkstra's Algorithm, the shortest travel paths and cumulative travel times were calculated, enabling visualization of walkshed maps through GeoPandas, NetworkX, and Matplotlib libraries. Results revealed a significant increase in accessibility with higher speeds across different road hierarchies. Among the studied lakefronts, Lower Lake consistently exhibited superior reach, whereas Kaliasot Dam lagged behind, emphasizing disparities in spatial connectivity. These findings highlight the crucial role of sustainable mobility solutions and integrated transport networks in enhancing walkability and improving access to lakefront public spaces. The study underscores the need for targeted urban planning interventions, such as optimizing road networks, adjusting speed limits, and fostering eco-friendly mobility infrastructure. By offering a data-driven assessment of accessibility, this research provides actionable insights for planners and policymakers to design inclusive, sustainable, and efficient urban lakefront spaces, ultimately improving the quality of urban life in Bhopal.

KEYWORDS

Accessibility; Lakefront; Walkability; Python Network Mode.

SUSTAINABILITY IN SPORTS INFRASTRUCTURE AND GOVERNMENT POLICIES

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ABSTRACT

The construction and maintenance of many existing sports infrastructures are often not cost-effective or efficient due to a lack of technical strategies and ecological policies. Traditional facilities often have significant carbon footprints due to high energy and water consumption, as well as substantial waste production. To address these issues, future sports infrastructure should adopt sustainable practices that focus on energy efficiency, water conservation, and waste reduction. Architectural sustainability aims to minimize the negative impact of buildings in the context of climate change. This trend is becoming increasingly important in both architecture and urban development, particularly for sports facilities. By implementing these sustainable approaches, facilities can not only reduce their environmental impact but also lower operational costs over time. This paper will explore the characteristics and impacts of sustainable sports infrastructures worldwide and will also discuss the challenges and opportunities for sports infrastructure in India.

KEYWORDS

sustainability, sports infrastructure, sustainable development goals, energy efficient.

REVITALIZING SPORTS INFRASTRUCTURE: ENHANCING INCLUSIVITY IN BANGALORE'S SPORTS LANDSCAPE

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ABSTRACT

Inclusivity in sports and leisure is essential for creating a vibrant and equitable urban landscape. Ensuring accessibility for athletes from all social backgrounds and improving connectivity across the city are crucial factors that contribute to the holistic development of sports infrastructure, fostering opportunities for all. Bangalore, once the thriving hub of sports like hockey, badminton, and athletics, has witnessed a shift in its sports infrastructure. While the city was historically known for its state-run sports facilities, the rise of private sports setups has changed the dynamics of accessibility. State-run facilities, which were once critical in nurturing talent from various socio-economic backgrounds, have increasingly been neglected or underfunded. In contrast, private sports clubs and academies, with their superior amenities, often remain out of reach for the majority due to their high costs. This growing divide between public and private infrastructure has created an unequal playing field, with aspiring athletes from underprivileged backgrounds finding it difficult to access quality sports facilities.

For Bangalore to reclaim its position as a leader in sports, it is essential to revitalize public sports facilities, enhance citywide connectivity, and introduce inclusive policies that ensure accessibility for athletes from diverse social strata. By addressing these issues, the city can once again foster a more equitable and competitive sporting environment. This paper examines the current state of sports infrastructure in Bangalore, highlights the challenges faced by underrepresented communities, and stresses the need for inclusivity in sports development to build a more inclusive and diverse future.

KEYWORDS

Inclusivity, sports infrastructure, leisure, accessibility, equity, connectivity, urban landscape.

COMPARATIVE ANALYSIS OF THE FACTORS IMPACTING THE INCLUSIVENESS OF SPORTS INFRASTRUCTURE IN INDIA

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ABSTRACT

Inclusivity in sporting facilities is vital for equality, social cohesion, and national progress. It guarantees that varied people, including women, those with impairments, and economically disadvantaged communities, may enjoy sporting activities without impediments. This paper analyses the structural obstacles and potential for promoting inclusivity within India's sports ecosystem, marked by urban-rural differences, gender injustices, and economic limitations. The study used a mixed-methods approach, including quantitative surveys, qualitative interviews, case studies, and policy analyses. Findings indicate substantial obstacles, such as inadequate infrastructure in rural regions, cultural norms that hinder women's involvement, and insufficient facilities for those with disabilities. Fewer than 15% of sports facilities in India adhere to universal design guidelines, and exorbitant participation prices further isolate disadvantaged populations. Notwithstanding the potential of initiatives such as Khelo India, deficiencies in execution and accountability impede their effectiveness. The paper recommends a multifaceted method to tackle these difficulties. Recommendations include obligatory accessibility assessments, the retrofitting of existing facilities, and the use of universal design principles for new infrastructure. Focused awareness initiatives may confront prejudices and advocate for sports participation among marginalized populations. Enhancing the competencies of coaches and policymakers is essential for promoting gender sensitivity and disability inclusion. Subsidies, scholarships, and public-private partnerships may alleviate economic obstacles and provide sustainable financing. Global and local case studies illustrate effective approaches, such as Tamil Nadu's community-driven initiatives and the United Kingdom's grassroots campaigns, which may guide context-specific solutions. By implementing these ideas, India can establish an inclusive sports environment that enables people from diverse socio-economic and demographic backgrounds. Ultimately, promoting inclusivity in sports is not just an issue of fairness but also a means of social development. An inclusive sports culture fosters social integration, enhances mental well-being, and advances national development, guaranteeing that all individuals have the chance to flourish and participate.

KEYWORDS

Sports Inclusivity, Universal Design, Gender Disparities, Disability Accessibility, Community-Driven Sports Initiatives.

URBAN MOBILITY SIM: A RESEARCH PROTOTYPE FOR EVENT-BASED URBAN MOBILITY PLANNING

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ABSTRACT

This research delves into the development and application of "Urban Mobility Sim," a strategic prototype designed to address urban mobility challenges during large-scale events. The study is structured into two core areas. Firstly, it evaluates the limitations of current urban mobility planning practices, which rely heavily on manual, time-intensive

methodologies that struggle to adapt to dynamic scenarios. Secondly, it explores the role of simulation-based approaches in improving urban mobility outcomes, focusing on congestion mitigation, optimized routing, and multimodal transport integration.

The conceptual framework of this research emphasizes the integration of Geographic Information Systems (GIS), network analysis, and regulatory compliance to create a robust and scalable tool. Through the case study of a major sports event in Goa, the software's capacity to model traffic patterns, predict congestion, and optimize transport networks was tested and validated. The findings highlight how strategic use of computational tools can enhance urban mobility planning, ensuring efficient transportation systems, reduced environmental impact, and improved accessibility for all stakeholders.

Drawing on comparative insights from global urban mobility solutions, this research positions Urban Mobility Sim as a benchmark for data-driven urban planning practices. It underscores the need for integrating technology into planning frameworks to address the growing complexities of urban environments. The outcomes aim to guide future initiatives in mobility management, aligning with sustainable development goals and improving the quality of urban life during high-demand scenarios.

KEYWORDS

Urban Mobility, GIS Integration, Sustainable Transport, Simulation-Based Planning, Urban Event Management.

LEVERAGING YOUTH INNOVATIVENESS FOR SUSTAINABLE STARTUP ECOSYSTEMS: A STRUCTURAL EQUATION MODELING APPROACH

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ABSTRACT

This study explores the interplay between youth innovativeness and sustainable startup ecosystems, focusing on how educational strategies and entrepreneurial ecosystems contribute to economic growth. The locations of the finest entrepreneurial ecosystems are widely recognized, but in the case of sustainable entrepreneurial ecosystems, this information is lacking. There are high proportion of startups operating in sectors that use innovation to meet the Sustainable Development Goals. Using SmartPLS analysis, we assess the relationships among key variables: innovativeness, entrepreneurial intention, digital competency, and sustainability practices. The research emphasizes on the youth contributions to startup policy reforms, especially during volatile scenarios such as the COVID-19 pandemic. Findings reveal strong correlations between education-driven skill acquisition and resilience in startup operations, offering actionable insights for policymakers and educators.

KEYWORDS

Youth Innovativeness, Startup Ecosystem, Sustainability, Entrepreneurial Intention, Structural Equation Modeling, SmartPLS.

REIMAGINING URBAN STREETSCAPES: A CASE STUDY OF CHANDNI CHOWK

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ABSTRACT

A city's social, cultural, and economic life revolves on the street. They are made to channel, transport and create a network of circulation and accessibility. It is what makes up most of the public areas in a city. But in recent decades, this use has been diminished, and many metropolitan streets now serve as thoroughfares for the circulation of motor vehicles and private automobiles without proper planning. It leads to the destruction of the lively, engaging public street. In context of such streets, Chandni Chowk is one that is degenerating and losing its rich legacy. While more trade and business increases in this area, it adds up to the overcrowding and clogging of the space and the streets. As a result, problems emerged such as an increase in traffic accidents and death rates, flaws in the social function of urban streets. To address and discuss the issues and comprehend the idea of what a street should be. A research study in Chandni Chowk was carried out for the purpose of gathering primary data based on the 25 parameters, and several literature reviews of other street standards, books in context to urban street. It follows a framework process of observations, on-field interviews, adaptation of the design guidelines into the street, the possible benefit of the design, the evaluation and the conclusion produced through inferences and recommendations.

KEYWORDS

Chandni Chowk, Urban Streetscapes, Street Design, Pedestrian-based Street.

ENVIRONMENTAL PRESSURES ON RELIGIOUS SITES: IMPACTS, CHALLENGES, AND PATHWAYS TO SUSTAINABILITY

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ABSTRACT

Religious sites in India hold immense cultural, spiritual, and economic significance, attracting millions of pilgrims each year. However, the rapid increase in pilgrimage tourism has placed considerable environmental pressure on these sacred spaces. This paper examines the **environmental impacts** on religious sites in India, including **pollution** (water, air, and solid waste), **climate change** (temperature rise, flooding, and landslides), and **biodiversity loss** (deforestation and habitat degradation). It explores the **challenges** in managing these sites, such as **overcrowding**, inadequate **infrastructure**, and governance issues that hinder effective environmental management. The paper also discusses potential **pathways to sustainability**, focusing on **sustainable tourism** practices, **technological interventions** like waste-to-energy systems, **community engagement** in conservation efforts, and **policy recommendations** for strengthening environmental governance. Government initiatives like the **Namami Gange Programme**, **Swachh Bharat Mission**, and the **Eco-Sensitive Zones Policy** are also explored in the context of their contribution to protecting religious sites. The paper includes case studies of **Kedarnath** and **Sabarimala** temples, highlighting the challenges and solutions implemented at these pilgrimage sites. Finally, the paper emphasizes the importance of multi-stakeholder approaches and provides recommendations for the long-term sustainability of religious tourism in India.

KEYWORDS

Religious Tourism, Resilient Urbanization, Sustainable Development, Urban Planning.

URBANIZATION AND WETLAND LOSS: IDENTIFYING THE ENVIRONMENTAL IMPACTS AND EXPLORING MITIGATION STRATEGIES FOR SUSTAINABILITY

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ABSTRACT

Urbanization in India has led to significant transformation of landscapes, with wetlands being among the most affected ecosystems. Wetlands, which provide critical environmental services such as water filtration, flood control, and biodiversity conservation, are increasingly being lost due to urban encroachment and development. This review paper explores the environmental impacts of wetland loss caused by urbanization, specifically focusing on India. It identifies key issues such as biodiversity loss, water quality degradation, and increased vulnerability to flooding. Through two Indian case studies—Yamuna floodplain in Delhi and Chilika Lake in Odisha—the paper highlights the consequences of wetland degradation and examines successful mitigation strategies, including government-led conservation initiatives and community-based approaches. The role of national schemes like the National Wetlands Conservation Programme and the integration of wetland conservation in urban planning through initiatives like the Smart Cities Mission are also discussed. The paper further explores pathways to sustainability, emphasizing nature-based solutions, sustainable urbanization models, and policy recommendations for balancing development with environmental preservation. It underscores the urgent need for holistic approaches to wetland conservation that involve all stakeholders, ensuring the protection of these invaluable ecosystems amidst India's rapid urban growth.

KEYWORDS

Urbanization, Wetland Loss, Environmental Impacts, Mitigation Strategies, Sustainability.

GLOBAL SCENARIO OF WOMEN ACCESSIBILITY IN SPORTS

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ABSTRACT

The evolution of sport participation of women has undergone significant transformation over the years, where it transitioned from minimal involvement to a very significant presence. The literature review explores the historical context, the contemporary trends, the present scenario and the ongoing challenges which are faced by women in sports. Measures taken at legislative level like the Title IX of United States of America had played a significant role in the promoting the gender equity and increasing the number of opportunities for women athletes. Despite progress there still are present various disparities particularly in the leadership roles and representation in media. There view also throws light on social factors which are influencing women's participation in sports and highlights the importance of media visibility and financial as well as public support for women sportspersons. By examining the regional perspective and global scenario this study aims to understand the need for policy reforms, technological advancements and continued advocacy to foster more inclusivity of women in sports.

KEYWORDS

Gender Equity, Socio-Cultural Barriers, Global Perspectives, Legislative Measures, Historical Context, Contemporary Trends, Advocacy and Policy Reform, Technological Advancements, Regional Analysis, Women accessibility, Disparity, Low participation, Sports.

FABRIC 3D PRINTING: INTEGRATION, CHALLENGES, AND BENEFITS IN THE INDIAN FASHION AND TEXTILE INDUSTRY

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ABSTRACT

3D printing has emerged as a transformative technology across numerous industries, with its influence now extending into the fashion and textile sectors. Fabric 3D printing, in particular, offers a unique opportunity to merge the functional qualities of textiles with the design possibilities of additive manufacturing. Globally, it is shifting design and production paradigms towards greater customization, reduced waste, and localized manufacturing. For India, whose textile industry is a vital part of the national economy, employing millions and contributing significantly to the GDP, integrating 3D printing presents both challenges and substantial opportunities. This technology holds the potential to address pressing issues like resource scarcity and environmental impact within the Indian context. This paper explores the integration of fabric 3D printing in the Indian textile industry, examining its benefits, such as enhanced sustainability through waste reduction and decreased water usage, improved economic efficiency, and increased customization capabilities. It also considers how 3D printing can support traditional craftsmanship by blending it with modern technology. However, significant challenges remain, including high initial investment costs, the need for new skills and a technological learning curve, and limitations in material availability. The paper discusses the future potential, highlighting the integration with wearable technology and the importance of collaboration between educational institutions, industry, and government to foster innovation and adoption. Ultimately, leveraging 3D printing can help India modernize its textile industry, creating a sustainable, innovative, and inclusive fashion ecosystem.

KEYWORDS

Fabric 3D Printing, Sustainable Fashion, Additive Manufacturing, Customization and Innovation, Technology Integration in Textiles

INTEGRATION OF GIS & INTERNET OF THINGS TO TRANSFORM EXISTING SPORTS INFRASTRUCTURE FOR BETTER ACCESSIBILITY

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ABSTRACT

This study examines the integration of Geographic Information Systems (GIS) and the Internet of Things (IoT) to create smart sports infrastructure that enhances accessibility, inclusivity, and sustainability. In many urban areas, traditional sports facilities often fail to meet the diverse needs of communities due to uneven distribution and limited accessibility. By leveraging GIS for spatial analysis and IoT for real-time data collection, this research explores how these technologies can address these challenges effectively. GIS provides powerful tools to map existing sports facilities, identify accessibility gaps, and optimize resource allocation. IoT enhances this capability by delivering real-time insights into facility usage, user behavior, and maintenance requirements. Together, these technologies offer a dynamic, data driven approach to transforming conventional sports infrastructure into smarter systems that serve diverse community needs. The study uses case studies and scenario analysis to demonstrate the potential of GIS and IoT to guide evidence-based policy decisions and infrastructure planning. The findings highlight how integrating these technologies can bridge accessibility gaps, promote equitable resource distribution, and support smart city initiatives. By offering a replicable framework, this research emphasizes the role of GIS and IoT in shaping inclusive, accessible, and sustainable sports infrastructure in growing urban areas.

KEYWORDS

GIS, Accessible, IoT, inclusivity, Bridge.

A REVIEW ON ENHANCING ACCESSIBILITY IN INDIAN HERITAGE PRECINCTS THROUGH INCLUSIVE DESIGN.

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ABSTRACT

Enhancing accessibility in heritage buildings involves making these sites usable for all individuals, including those with disabilities. Accessibility is redefined as a dynamic concept that evolves over time and context, rather than being a static feature. Inclusive design principles play a crucial role in improving user experiences and tourism perceptions, particularly for individuals with disabilities and senior citizens. This study employs both qualitative and quantitative methods to support the hypothesis that accessibility is essential in heritage buildings. The research underscores the often-overlooked importance of accessibility in design, resonating with the aspirations of those who wish to experience historical sites. The lack of comprehensive research on this topic highlights the need for a more interdisciplinary approach, integrating insights from various fields to better address disability issues within Indian heritage environments. Efforts by the government and agencies to incorporate accessibility into heritage site management are examined, especially within the frameworks of green building initiatives. Balancing the need for accessibility with the preservation of cultural integrity is emphasized as a key objective. Maintaining cultural integrity is essential to transforming heritage sites into inclusive and welcoming spaces for all visitors. By addressing these aspects, this study aims to set a precedent for future research and practical implementation, ensuring that these sites remain accessible to everyone, regardless of their abilities.

KEYWORDS

Accessibility, Heritage Buildings, Inclusive Design, tourism, disability, cultural integrity, green rating.

INCLUSIVE DESIGN FOR REHABILITATION: TRANSFORMING JUVENILE FACILITIES WITH SPORTS AND PLAY : A CASE OF RAOZAN, CHATTOGRAM, BANGLADESH

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ABSTRACT

Sports spaces play a pivotal role in the rehabilitation of juvenile offenders, now referred to as residents of Children Development Centers, a reimagined concept under UNICEF's initiative. Under the Children Act 2013, Children Development Centers have been established to rehabilitate children in conflict with the law. These centers aim to reintegrate these children into society by fostering their growth and providing opportunities for a balanced and productive life. These centers create inclusive environments that enhance emotional and physical well-being through structured activities and design, moving away from traditional methods.

This study derives the design of a Children Development Center in Bangladesh, with a focus on integrating sports and play spaces as tools for rehabilitation. Recognizing the critical role of outdoor activities in mental and physical health, the design prioritizes dynamic play zones over indoor confinement, categorizing spaces by age and the unique needs of the residents. A central healing space, featuring circular walkways and an open amphitheater, serves as a hub for reflection, interaction, and recreation. The research methodology involved field surveys and questionnaires to analyze the activities, background, trauma, habits and psychology of children across various age groups. Insights from this study informed the design of spaces that address functional requirements while ensuring a therapeutic environment. The rehabilitation process begins in an Observation Home, where new inmates are monitored, followed by a Special Home that provides education, life skills training, and sports activities to promote discipline, teamwork, and resilience. This study emphasizes how inclusive sports infrastructure can transform juvenile correctional facilities into environments of hope and opportunity, helping children regain confidence and reintegrate into society successfully.

KEYWORDS

Children Development Centers, Rehabilitation, Inclusive Play Spaces, Sports and Well-being, Transformative Design.

ROLE OF TRANSPORT AND CONNECTIVITY IN SPORTS

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ABSTRACT

Transport and connectivity are important for the development and accessibility of sports in India. The economic impact of transport infrastructure on sports is extensive, as major events like the Indian Premier League (IPL) and international cricket matches attract thousands of attendees, boosting local economies through tourism, hospitality, and related industries. The construction and maintenance of sports infrastructure create job opportunities and stimulate economic growth. The Union Budget 2024-25 emphasizes government investments in transport and sports infrastructure, highlighting their critical role in India's economic growth. Efficient transport networks, including roads, railways, and air travel, enhance accessibility for athletes, coaches, and fans, facilitating regular training, competitions, and talent scouting. In urban areas, the development of metro lines and bus services has significantly eased commuting to sports facilities, while transport connectivity in rural areas is key to discovering hidden athletic talent. Transport and connectivity also promote social and cultural integration through sports, bringing together people from different regions and backgrounds, promoting unity and a sense of community. Efficient transport networks enable fans to travel and support their teams, creating a vibrant and universal sports culture, especially during national and international events. Despite progress, challenges such as inadequate transport facilities in certain regions and accessibility issues for disabled sports fans persist. Addressing these challenges requires continued investment in transport infrastructure and innovative solutions, such as Geographic Information Systems (GIS), which can enhance sports accessibility by mapping facilities and transport networks, optimizing routes, and planning new infrastructure. In conclusion, transport and sports connectivity are integral to the growth and development of sports in India, enhancing accessibility, driving economic growth, and promoting social and cultural integration. Addressing existing challenges and investing in efficient transport networks will ensure that sports in India continue to grow and achieve new milestones.

KEYWORDS

Transport and connectivity, Sports development, Accessibility, Urban transport, Transport challenges, Disabled accessibility, Geographic Information Systems (GIS).

EVALUATING SPORTS INFRASTRUCTURE AND POLICIES AT LOCAL AREA LEVEL

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ABSTRACT

Urbanization is simultaneously a boon and a threat, as it reflects economic development on one hand and on the other hand affects urban livability adversely. Urbanization in India has resulted in increase of urban population from 26% in 1990 to 32% in 2014 and is expected to reach about 50% by 2050. Major share of population in India resides in urban cities, yet the urbanization ratio is low compared to countries like China, Mexico, Russia, Brazil etc. (United Nations, 2018). India's urbanization is full of contradictions; having large percentage of country's population living and working in urban areas reflects development in past few decades followed by issues in social, economic, physical and environmental domains. Urbanization has led to urban development issues like gap in demand and supply of physical amenities, lack of green spaces, congested streets etc, hence degrading the quality of life in cities. Though urban cities aim to provide healthy environment to its population but urban development issues like inadequate physical amenities make population suffer. The research area is physical domain, lack of amenities in local areas, with focus on recreational and sports infrastructure. Recreational and Sports infrastructure is the need of society socially, economically and environmentally. The main conclusion which can be derived from literature is that physical development is currently in the process of being better understood and worked at the local level too. To achieve this at local area level we need to create a balance between demand and supply of physical facilities. The study aims to evaluate the actual status of recreational and sports infrastructure available in local areas and suggests how to address the discrepancy between demand and supply of these facilities at policy level in urban planning.

KEYWORDS

local area, physical amenities, recreational, sports infrastructure.

LAND USE LAND COVER DYNAMICS IN BHOPAL CITY, INDIA: CHALLENGES AND SOLUTIONS TO ENVIRONMENTAL SUSTAINABILITY

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ABSTRACT

The fast urban growth and the related changes in LULC (Land Use Land Cover) has become the influencing factor sustainability of environment. Population growth, economic activity, and infrastructure development have all contributed to urban growth dynamics, which have drastically changed the natural environment and resulted in loss of habitat, a fall in biodiversity, and an increase in carbon emissions. This study uses geographic information systems (GIS), remote sensing methods, and spatial analysis to examine the environmental effects of LULC modifications and urban expansion, by using the LULC of different years from 2017 to 2023 of Bhopal City. The results demonstrate the ways in which uncontrolled urban sprawl exacerbates the urban heat island effect, disrupts hydrological cycles, and depletes natural resources. The study also highlights the significance of green infrastructure, sustainable urban design techniques, and legislative frameworks in reducing negative environmental effects. Achieving long-term sustainability goals requires accepting creative urban development strategies and promoting integrated land use management. In order to create resilient and livable urban areas, the study emphasizes the necessity of striking a balance between environmental preservation and urban growth.

KEYWORDS

LULC, Urban growth, Dynamism, Environment, sustainability.

ANALYSIS OF INFRASTRUCTURE AND SERVICE SUPPLY ON SUSTAINABLE URBAN TRANSPORT SYSTEMS IN DELHI-NCR: IMPLICATIONS OF LAST-MILE CONNECTIVITY FOR GOVERNMENT POLICIES

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ABSTRACT

Urban mobility stands as a critical facet of contemporary city living, with the efficiency of transportation systems playing a central role in ensuring the seamless flow of both people and goods. However, the system faces challenges associated with inadequate last-mile connectivity; adversely affecting DMR ridership and limiting its inclusivity, particularly for socio economically marginalized demographics. India's booming urban populations are straining public transportation systems. However, a crucial gap exists inadequate integration of these systems with "first-last mile" connectivity, meaning smooth connections from homes and destinations to the transit hubs. Effective last-mile solutions are crucial for bridging the gap between public transport hubs and final destinations, encouraging greater ridership and reducing reliance on private vehicles. The review analyses various modes of last-mile connectivity, including walking, cycling, micro-mobility (e-scooters, e-bikes), feeder buses, and shared mobility services. Addressing the effective linkage of final segments, specifically the last-mile connectivity connecting major transportation hubs to end destinations, represents a key challenge in the realm of urban mobility. It further investigates the interplay between infrastructure development, service provision, and the integration of these modes with existing public transport networks. By synthesizing existing research and best practices, this review aims to identify key challenges and opportunities for enhancing last-mile connectivity in Delhi- NCR and contribute to the development of more sustainable and equitable urban transportation systems.

KEYWORDS

Last mile connectivity, Delhi Metro-Rail System, accessible transportation, Urban mobility, Transit Oriented Zone, Sustainable urban transport systems, mobility as a service.

ROLE OF TRANSPORT AND CONNECTIVITY IN SPORTS AND EXERCISE IN URBAN PARKS

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ABSTRACT

Urban parks play a vital role in promoting physical activity, sports, and general well-being among city residents. However, accessibility and transport connectivity significantly influence their effectiveness in encouraging regular participation in sports and exercise. The role of transportation infrastructure, connectivity, and urban planning in optimizing access to urban parks, thereby enhancing community engagement in physical activity is immense. It explores how well-designed transport networks, including pedestrian pathways, cycling lanes, and public transit routes, improve park accessibility, particularly in densely populated metropolitan areas where green spaces may be limited. The study highlights the importance of integrating parks into the urban fabric through strategic connectivity planning, ensuring equitable access for diverse socioeconomic groups. Evidence from case studies of cities worldwide demonstrates that proximity alone is insufficient to guarantee park usage; instead, safe, efficient, and affordable transport options are crucial. Factors such as walk ability, availability of bike-sharing systems, and public transport integration have been shown to correlate strongly with increased park visitation rates. Moreover, this research discusses how barriers such as poor infrastructure, heavy traffic, and lack of direct routes discourage park usage and physical activity. Policy implications emphasize the need for urban planners and policymakers to prioritize sustainable and inclusive transport solutions to maximize the health benefits of parks. Collaboration between transport authorities and park management is recommended to design user-friendly environments that encourage active transport, such as walking or cycling, to parks. By fostering better connectivity, urban parks can become more accessible hubs for sports, recreation, and community engagement, ultimately contributing to healthier and more vibrant urban populations. This research concludes that effective transport and connectivity strategies are essential components of urban planning that directly impact public health outcomes by enabling broader and more consistent participation in sports and exercise within urban parks.

KEYWORDS

Transportation Infrastructure; Urban Parks; Connectivity; Physical Activity; Urban Planning.

ROLE OF MEDIA IN PROMOTING ACTIVE SPORTS FOR IMPROVING THE HEALTH OF YOUTHS - AN ASSESSMENT OF YOUTH IN JAIPUR

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ABSTRACT

The role of media in promoting active sports and fostering a culture of physical fitness among youth has gained significant attention in recent years. This study assesses the influence of media on sports participation and health improvement among young people in Jaipur, India. It explores how various media platforms, including social media, television, online streaming, and print media, shape attitudes and behaviors toward sports and physical activity. The research investigates the effectiveness of media campaigns, advertisements, and sports coverage in encouraging youth engagement in regular exercise and organized sports. Data was collected through surveys and interviews with a representative sample of youth aged 15 to 25 years in Jaipur. Findings reveal that social media and digital content play a dominant role in shaping sports awareness and participation, with platforms like Instagram, YouTube, and Facebook serving as primary sources of motivation. Media-driven initiatives such as fitness challenges, sports influencer endorsements, and online coaching content have been particularly impactful in promoting active lifestyles. However, the study also identifies barriers, including misinformation, unrealistic fitness portrayals, and limited access to local sports resources despite heightened awareness. The research concludes that media has a powerful but underutilized potential to promote healthy lifestyles through sports. To maximize its impact, policymakers, media professionals, and sports organizations should collaborate to create targeted, relatable, and culturally relevant content that emphasizes inclusivity, accessibility, and long-term health benefits. Recommendations include integrating localized sports initiatives with digital media campaigns and leveraging community-based programs to bridge gaps in participation. This study contributes to understanding the media's influence on health behavior change and highlights strategies for harnessing its reach to foster sustained sports engagement among youth in urban settings like Jaipur, ultimately contributing to improved public health outcomes.

KEYWORDS

Media Influence; Sports Promotion; Youth Health; Physical Activity; Sports.

MODERN METHODOLOGIES FOR SPORTS INFRASTRUCTURE ASSESSMENT: MOVING FROM TRADITION TO INNOVATION

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ABSTRACT

Sports infrastructure evaluation is critical for promoting athletic performance, community well-being, and long-term urban development. This study looks into innovative methodologies that change how sports facilities are evaluated, bridging the gap between old approaches and the changing demands for usefulness, inclusivity, and environmental sustainability. This study seeks to develop a complete framework for appraising sports infrastructure by including sophisticated technologies, stakeholder participation, and sustainability principles. Conventional approaches have limitations, such as their inability to address changing user needs and long-term adaptation, are thoroughly examined.

The study discusses cutting-edge techniques such as Building Information Modeling (BIM), Geographic Information Systems (GIS), Internet of Things (IoT)-based real-time monitoring, and digital twins that allow for extensive infrastructure performance studies. These technologies

provide actionable data on crucial aspects such as energy efficiency, accessibility, and maintenance requirements, ensuring that buildings are robust and forward-thinking.

Case studies from global athletic hubs demonstrate effective uses of these approaches, emphasizing best practices and providing scalable solutions for various scenarios. The study stresses using socioeconomic data and community engagement to ensure that infrastructure design is inclusive, equitable, and responsive to local needs. The findings aim to create sporting facilities that are adaptable, efficient, and sustainable, addressing present demands while planning for future challenges.

This study makes practical recommendations to architects, urban planners, and legislators by merging technical innovation with sustainability and community-centric approaches. The findings aim to design sporting facilities that are adaptive, efficient, and sustainable, meeting current demands and planning for future difficulties.

KEYWORDS

Innovative methodologies, Assess sports infrastructure, Sustainable Sports Facilities, Community-Centric Design.

IMPACT OF BANKING SECTOR DEVELOPMENT ON EXPANSION OF PROFITABILITY AND PERFORMANCE OF SELECTED PUBLIC SECTOR BANKS IN INDIA

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ABSTRACT

The banking industry in India has experienced substantial reforms over recent decades, aimed at improving its efficiency, competitiveness, and stability. These reforms, which encompass regulatory shifts, liberalization measures, technological progress, and governance enhancements, have significantly impacted the growth, profitability, and performance of public sector banks (PSBs). This study investigates the consequences of banking sector reforms on select PSBs in India, with a focus on critical indicators such as profitability, asset quality, operational effectiveness, and overall financial health. By examining data from a range of leading PSBs, the research delves into how these reforms have influenced their capacity to adjust to market changes, enhance service delivery, and uphold financial stability. The results indicate that, although the reforms have fostered higher profitability and growth in the long term, challenges related to non-performing assets (NPAs), capital adequacy, and technological adaptation continue to present notable obstacles. The purpose of this paper is to identify the suggestions to further strengthen the effectiveness of banking sector reforms and support sustainable development in an Indian Scenario.

KEYWORDS

competitiveness, liberalization measures, enhancements and consequences.

DEVELOPING SPORTS INFRASTRUCTURE ASSESSMENT MODEL USING ANALYTICAL HIERARCHICAL PROCESS

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ABSTRACT

Promotion of Sports purely depends upon the indoor and outdoor infrastructure. The major sports persons come from rural areas to urban area to learn better techniques through best coaches. The outdoor infrastructure consists of connectivity, convenience, and inclusivity. The outdoor infrastructure comprises of transportation modes that remains convenient for all gender, religion and economic background. Similarly, the indoor infrastructure constitutes the sports and ancillary infrastructure available within the sports campus. The indoor infrastructure comprises of availability of toilets, drinking facilities, lighting facilities, barrier free environment etc. But availability of all indoor and outdoor infrastructures remains always a tedious task. Hence, the study identifies the important 07 indoor and outdoor infrastructure parameter that should be given priority using Analytical Hierarchical Process (AHP). Further the weights shall be useful in preparation of Model to evaluate the current sports infrastructure indoor and outdoor accessibility. The study evaluates the responses provided by 50 experts that are professionals, users, academicians etc. The result shall be useful to planners, peoples, architects, sociologist, athletes, sportsperson to evaluate as well prepare new arenas with respect to demand and usability.

KEYWORDS

Sports Infrastructure Accessibility, Indoor and Outdoor Infrastructure AHP, Inclusivity

EFFECT OF BUILT ENVIRONMENT ON ACTIVE TRANSPORTATION CHOICE: A SYSTEMATIC REVIEW

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ABSTRACT

Active transportation, such as walking and cycling, is a sustainable and health-promoting mode of travel that seamlessly integrates physical activity into daily life. Simultaneously, it contributes to environmental sustainability by reducing carbon emissions and fostering cleaner urban environments. Neighborhood design plays a crucial role in encouraging active transportation, with features such as pedestrian-friendly pathways, dedicated cycling lanes, safe crossings, and convenient access to amenities significantly influencing the choice to walk or cycle. In this paper, we conducted a systematic literature review, initially screening 80 papers and selecting 30 for a detailed study. The impact of neighborhood factors on active transportation was examined under 11 major themes: residential density, land use mix, street connectivity, retail land use, walk ability, street integration, access to destinations, neighborhood aesthetics, safety, belongingness, and readability. Measurable indicators were identified for each theme, and a method was developed to calculate weight ages. Each indicator was assigned ranks ranging from -2 to +2, where 0 represented no relationship, and -2 and +2 indicated extreme negative and positive dependencies, respectively. These ranks were then multiplied by a representative factor derived from the frequency of occurrence of these indicators in the reviewed papers. This process resulted in a comprehensive framework for calculating the activeness of neighborhoods. The framework offers urban planners and policymakers a practical tool to assess and enhance neighborhood designs, promoting healthier and more sustainable urban lifestyles. 5 papers were further selected for detailed analysis as these papers were showing deviation from the general conclusions. Further factors, which might also be affecting active transportation choice, but are not well researched yet, were identified. This establishes the future research avenues. This research highlights the intersection of health, sustainability, and urban design, emphasizing the importance of active transportation infrastructure in shaping livable, active, and environmentally responsible communities.

KEYWORDS

Active Transportation, Built environment, Walkability, Cyclability, Systematic review.

FROM SPORTS TO SKYLINES: THE TRANSFORMATIVE IMPACT OF SPORTS TOURISM ON REAL ESTATE AND CITY INFRASTRUCTURE

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ABSTRACT

Sports tourism has emerged as a significant force in urban development, influencing economic growth, property prices, and infrastructural expansion. Major sporting events such as the Olympics, FIFA World Cup, and Commonwealth Games drive investment in cities, leading to urban regeneration and increased real estate demand. However, these transformations often come with challenges, including gentrification and displacement of lower-income communities. Through a review of existing studies, this paper examines case studies from cities like London, Rio de Janeiro, and Delhi, highlighting both the economic benefits and social consequences of sports-driven urban development. The review also assesses the role of India's Draft National Sports Policy (NSP) 2024 in leveraging sports for economic growth, while critiquing its lack of a detailed strategy for managing real estate and urban expansion. By synthesizing research on the intersection of sports tourism, real estate markets, and city infrastructure, this study underscores the need for balanced urban planning policies that maximize benefits while mitigating socio-economic disparities.

KEYWORDS

Sports Tourism, City Infrastructure, Real estate Market, Economic growth.

SPORT AS A CATALYST FOR NATIONAL DEVELOPMENT: A THEORETICAL FRAMEWORK FOR MADHYA PRADESH'S CONTRIBUTION TO VIKSIT BHARAT 2047

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ABSTRACT

The development of sports in India is pivotal to achieving the broader goals of social, economic, and cultural progress. As India aims to become a Viksit Bharat by 2047, the role of sports in shaping national identity, promoting health, and driving economic growth becomes increasingly significant. This theoretical framework explores how Madhya Pradesh's sports development initiatives align with this vision by integrating theories from sports management, social development, and sports science. Through programs such as Khelo MP and the establishment of sports academies and facilities like I-SHAPE, the state has undertaken comprehensive measures to promote grassroots sports, enhance athlete performance, and build sustainable infrastructure. The framework examines the application of key theoretical models, including the sports development continuum, athlete development models, and the integration of sports science to optimize training and performance. Additionally, it considers the governance structures needed to ensure transparency, accountability, and inclusivity in sports development. This paper assesses how these theoretical principles can inform and guide Madhya Pradesh's efforts in advancing its sports ecosystem in line with the national goal of Viksit Bharat 2047. By focusing on socio-economic factors, governance, accessibility, and the integration of scientific principles, this research provides a holistic understanding of the state's sports initiatives. Ultimately, it highlights the potential of sports to foster a healthier, more integrated society, contribute to economic growth, and pave the way for India's transformation into a Viksit Bharat by 2047.

KEYWORDS

Sports Development; Viksit Bharat 2047; Accessible design; Khelo MP.

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Rishi Kumar Solanki, is an architect and urban planner with a passion for sustainable urban development and data-driven planning. He holds a Bachelor's degree in Architecture and a Master's in Planning from MANIT, Bhopal. His expertise spans geospatial analytics, remote sensing, GIS, and spatial data science, with applications in urban growth analysis, infrastructure accessibility, and spatial decision-making. He has worked on research projects involving machine learning, urban modeling, and multi-criteria decision analysis, and has completed over 60 certifications in data science, geospatial technologies, and artificial intelligence. His aims to bridge the gap between technology and policy in shaping resilient, equitable, and sustainable cities.

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Ar. Harsha Raveendran is an architect and urban designer who served as a Research Assistant on the ICSSR project titled “Comparative Analysis of Sports Infrastructure Accessibility...” at MANIT Bhopal, in collaboration with BMS College of Architecture. She led the design and execution of the project's perspective survey. With over two years of experience in master planning, local area planning, and architectural design, she advocates for inclusive spaces that serve diverse communities and enjoys writing and documentation.

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Deepansh Birthare is a Field Investigator at MANIT, Bhopal, engaged in an ICSSR-funded project. He undertakes comprehensive fieldwork—including surveys, assessments, and interviews—to gather critical data on infrastructure and resources. By linking academic research with on-the-ground realities, he contributes meaningfully to the development of evidence-based strategies for sustainable growth and policy formulation.