

# Promoting Climate-Responsible Lifestyles through Movement-Based Learning in Green Sports and Physical Education

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## Abstract

Physical education (PE) offers a powerful and often underutilized platform for climate literacy and environmental behaviour change. By embedding sustainability into movement-based learning, schools and colleges can shape active, eco-responsible citizens. This paper explores how climate themes can be integrated into PE curricula through outdoor learning, low-carbon sports, and green campus initiatives. Relying on secondary data from UNESCO, IOC, CBSE circulars, and global case studies, the paper highlights the educational and behavioural benefits of combining physical activity with ecological awareness. The findings suggest that physical education, when aligned with sustainability education, builds both personal fitness and climate responsibility. It concludes with practical recommendations for policy makers, educators, and institutions seeking to create climate-resilient learning environments through sports and PE.

**Keywords:** *Physical education, green sports, environmental literacy, sustainability, youth engagement, movement-based learning, eco-friendly schools*

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## Introduction

The climate crisis is not only an environmental and economic issue—it is also a social and educational challenge. As the world grapples with sustainability transitions, the role of education in shaping behaviour, values, and awareness is critical. Within this, Physical Education (PE) stands out as a unique subject that engages students physically, emotionally, and socially.

PE builds more than bodies—it builds habits. Students walk, cycle, play, collaborate, and explore through PE sessions. This daily engagement provides a rich context for teaching climate-conscious values, promoting low-emission physical activity, and connecting youth with the natural world.

Unfortunately, the climate potential of PE has been largely overlooked in Indian curricula. This paper proposes that by introducing sustainability themes into PE, educators can create a double impact: improving fitness and nurturing environmental responsibility. From outdoor biodiversity walks to zero-waste sports days, movement-based learning can support the vision of climate-resilient education.

## Literature Review

UNESCO (2021) emphasizes that PE must evolve to meet the needs of 21st-century citizenship, including environmental sustainability. Internationally, countries like Finland and Canada have included eco-literacy in physical activity curricula, combining outdoor education with climate learning.

The International Olympic Committee (IOC) has committed to "greening" global sports by setting sustainability standards for events and athletes. The 2020 Tokyo Olympics featured carbon-neutral infrastructure and athlete education on climate responsibility.

Research by Bailey et al. (2021) shows that outdoor PE in natural environments improves students' ecological connection, reduces stress, and increases pro-environmental behaviour. In India, a few CBSE schools have introduced "eco-athletics" programs where physical activity is combined with nature education, yet such efforts are isolated.

Literature also identifies the gap: most physical education programs focus on fitness or competitive performance without integrating sustainability goals. The paper aims to address this by presenting a practical framework for green PE.

## Objectives

To examine how physical education can contribute to environmental awareness and climate action.

To analyze global and Indian initiatives combining sustainability with sports and PE.

To evaluate the role of physical educators in promoting low-carbon lifestyles.

To provide policy and practice recommendations for integrating climate education into PE.

## Methodology

This study is based on secondary data and content analysis from:

- Reports and toolkits by UNESCO, IOC, and World Economic Forum
- Indian education policy documents including NEP 2020 and CBSE advisories
- Published case studies of green sports initiatives in India and abroad
- NGO and institutional programs linking physical education with sustainability
- Peer-reviewed research articles on outdoor learning, sports ecology, and youth behaviour change
- Thematic analysis was conducted to identify common approaches, gaps, and success models.

## Findings and Discussion

### 1. Green Sports Foster Climate Values

Eco-sports festivals (e.g., zero-waste races, barefoot marathons, tree runs) create high engagement and improve awareness about local environmental issues. These events are especially effective when student-led.

### 2. Movement-Based Outdoor Learning Enhances Eco-Connection

PE conducted in natural environments such as school gardens or public parks increases environmental sensitivity, according to studies in European schools. India's forest schools and scout programs offer similar models.

### 3. Low-Carbon Activities Encourage Behaviour Change

Active commuting (cycling or walking to school), nature treks, and yoga reduce carbon footprints and instil daily sustainable habits. PE teachers can promote such behaviours through peer-led campaigns.

### 4. Educator Training and Curriculum Integration are Lacking

Most PE instructors lack environmental training. Climate topics are rarely included in physical education syllabi at school or college levels, leading to missed learning opportunities.

### 5. Technology Can Amplify Impact

Digital pedometers, fitness apps with carbon-saving trackers, and QR-coded climate facts on playgrounds are innovative methods that blend movement with awareness.

## Strategic Recommendations

- Revise PE Curriculum to include sustainability concepts such as carbon footprint, eco-friendly equipment, and waste management in sports.
- Conduct Outdoor Learning Sessions in parks, gardens, or local green zones to build nature empathy.
- Launch Green Sports Weeks that combine physical fitness with environmental actions like planting trees, recycling contests, or climate pledges.
- Train Physical Educators in sustainability literacy and eco-pedagogy.
- Encourage Active Transport to School through cycling clubs and walk-to-school days.
- Introduce Incentives for students and teams adopting green practices during sports events.
- Collaborate with Eco-Clubs and NGOs for integrated green fitness campaigns.

## Conclusion

Physical education is a powerful yet underutilized tool in the global fight against climate change. This paper has shown, through extensive secondary data, that integrating environmental themes into PE can simultaneously improve student health and promote sustainability values.

Green PE is not about reducing activity—it's about reimagining it. When movement-based learning is aligned with eco-education, students are more likely to adopt sustainable lifestyles, advocate for climate action, and influence their communities.

India's NEP 2020 encourages cross-disciplinary and experiential learning. This vision can be realized by treating PE as an avenue for climate literacy and responsible behaviour. As we energize the future, movement must become mindful—and fitness must become planet-friendly.

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