

Beyond the Game: Case Study on how Real Betis is Redefining Sustainability in Football

Dr. Syed Tabrez Hassan

Associate Professor, Adamas University, Kolkata

I. INTRODUCTION

Real Betis Balompié, a historic Spanish football club based in Seville, has stepped beyond the boundaries of the pitch to make a bold statement in the global sustainability movement. In a world increasingly conscious of environmental degradation and climate change, the sports industry—known for mass consumption and high energy use—has begun to seek greener solutions. Real Betis, by launching the world's first football jersey made from invasive algae, has positioned itself at the forefront of sustainable sports innovation. This case study explores the club's pioneering efforts, its implications for the industry, and how it is redefining the role of sustainability in football. This jersey was developed in collaboration with sportswear brand Hummel, environmental-initiative group Parley for the Oceans, and textile company Pyratex. The club unveiled the jersey publicly on February 6, 2025 and it was worn by the team in a league match against Real Sociedad on 16 February 2025.

II. SUSTAINABILITY MEETS SPORTS: THE ALGAE-BASED JERSEY

Invasive algae are a growing threat to marine ecosystems, clogging coastal waters and disturbing biodiversity. Rather than treating them as waste, Real Betis partnered with sustainability leaders to repurpose these algae into performance sportswear. Real Betis designed a new kit made from textile fibres derived from marine algae (specifically an invasive species *Rugulopteryx okamurae*), along with recycled ocean-plastics and wood pulp. This resulted in a jersey made from recycled polyester and thread derived from these problematic seaweeds.

This initiative reduces environmental waste while lowering carbon emissions typically generated from petroleum-based fabrics. By wearing algae-based jerseys, Real Betis players are not only making a fashion statement but also raising awareness about ocean conservation and the possibilities of circular innovation in sports.

The jersey is part of Real Betis' environmental-sustainability platform Forever Green, and aims to raise awareness about the ecological crisis caused by the uncontrolled invasion of these algae on Andalusian coasts. The algae invasion, notably along the Andalusian Mediterranean and Atlantic coasts, threatens marine biodiversity, affects fishing and tourism, and represents a broader environmental issue driven by climate change. By turning a problematic marine species into fabric, the club shows how circular economy principles and creative design can help address ecological problems and make sustainability visible through sport.

III. BUSINESS AND BRAND IMPACT

Real Betis's sustainability efforts have significantly enhanced its brand identity. The algae-based jersey initiative has resonated with environmentally conscious fans, particularly among younger generations who increasingly align themselves with brands that share their values. As a result, Real Betis is gaining recognition as a progressive club beyond just its La Liga performances.

This move also opens doors for green sponsorships and collaborations with eco-friendly partners. The club's alignment with Environmental, Social, and Governance (ESG) principles positions it favorably in an era where stakeholders—including investors, sponsors, and fans—demand greater accountability. In addition, media coverage of the initiative has

expanded Real Betis's global brand reach, strengthening its image as an innovator in both football and environmental responsibility.

IV. INDUSTRY IMPLICATIONS AND FUTURE TRENDS

Real Betis's algae jersey represents more than a one-off innovation—it signals a broader shift in the sports industry. Other clubs and manufacturers are now exploring sustainable alternatives, such as Adidas's recycled ocean plastic kits and Forest Green Rovers' fully vegan operations. Real Betis becomes one of the first football clubs globally to adopt algae-based jerseys. This positions the club as an innovator in sustainability, allowing them to stand out in a highly competitive sports market. It also earns international media coverage which increases global visibility without additional marketing cost. Sustainability attracts eco-conscious sponsors (fashion, clean-tech, NGOs, environmental brands). The algae-based jersey could be sold as a limited-edition premium product, increasing merchandise revenue. The sports merchandise market is ripe for circular economy models, where end-of-life recycling and renewable materials take precedence over single-use production. Real Betis, by being a first mover, gains competitive advantage, setting an example that aligns with FIFA's and UEFA's increasing environmental focus. As fans and sponsors push for accountability, clubs that embed sustainability into their core will likely lead the future. Other clubs may adopt Betis' model in future and Betis becomes a thought leader in green innovation. This could lead to consulting opportunities, cross-industry partnerships and sustainable supply chain ecosystem development.

V. CHALLENGES AHEAD

Despite the progress, Real Betis and similar innovators face significant challenges. Sustainable materials can be more expensive to produce and require new supply chains that may not scale easily across leagues. There are also concerns about durability and performance, especially in elite sports where gear quality directly impacts play.

Another risk is the perception of greenwashing—where sustainability is marketed more than it is genuinely practiced. Real Betis must ensure

transparency in sourcing, production, and disposal. Furthermore, consumer education is vital; fans must understand the significance of the initiative to drive real behavioural change.

VI. CONCLUSION

Real Betis has proven that sustainability in football can go far beyond empty slogans. By turning invasive algae into high-performance jerseys, the club demonstrates how environmental consciousness and brand innovation can go hand in hand. As climate concerns grow and the sports industry comes under increased scrutiny, Real Betis sets a powerful precedent: sustainable leadership begins with action. The question now is—will others follow, or will Real Betis remain the lone champion of green innovation in football?

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