

Final Report

Sustainability, Cricket Gear, Clothing and Apparel: Stakeholder Workshop

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1. Introduction

On the 15th July 2021 a webinar was organised by BASIS and The Centre for Sustainable Design[®] (CfSD) at the Business School for the Creative Industries (BSCI) at UCA that brought together over 30 stakeholders from cricket to discuss sustainability issues associated with cricket equipment, clothing and apparel¹. The presentations and discussion from the webinar are documented below, and shared with the aim of increasing discussion over the topic aligned to the goals of PASIC (Platform for the Acceleration of Sustainable Innovation in Cricket)².

2. Presentations

A series of presentations³ highlighted a range of perspectives over sustainability issues associated with cricket equipment, clothing and apparel.

2.1 Overview

Professor Martin Charter, Director, CfSD, BSCI, UCA
Matt Wetherfield, Researcher, CfSD, BSCI, UCA

- Initial research completed by CfSD identified that cricket is potentially one of the most “gear intensive” sports e.g. over 40 items of equipment, clothing and apparel (‘cricket gear’) that might be used by an individual to play the game
- There are a range of environmental and social issues associated with different stages of the life cycle of cricket gear, in particular in the production stage in outsourced factories in Asia. For example:
 - Environmental Issues
 - Water Pollution
 - Landfill
 - Carbon emissions
 - Microplastics
 - Social Issues
 - Working conditions
 - Employment rights
 - Workplace equality
 - Treatment of female workers
- The BASIS report “Hit for Six”⁴ highlights the broader impact of climate change on cricket globally. For example, if temperature rises continue as

¹ For more information on the workshop - see <https://cfsd.org.uk/wp-content/uploads/2021/10/Delegate-Pack-FINAL-15.7.21.pdf>

² PASIC (Platform for the Acceleration of Sustainable Innovation in Cricket) <https://cfsd.org.uk/projects/cricket/>

³ Presentations can be downloaded from <https://cfsd.org.uk/projects/cricket/webinars/webinar3/>

⁴ See <https://basis.org.uk/resource/hit-for-six/>

predicted over the next thirty years, helmets, clothing and apparel would need to be re-designed to improve ventilation for players playing in the Southern hemisphere

- Cricket is going through a significant change with the growth of the short form of the game worldwide e.g. T20 and T10 leagues in various countries. This change is also highlighted by the launch of the “The Hundred”⁵ in England and Wales in 2021 that aims to increase the popularity of the game. This may be a ‘turning point’ in the game in relation to the dilemma of retaining the tradition of the sport versus moving forward with innovation and change
- The cost of participation in cricket is rising and may be prohibitive for some e.g. a cricket bat can cost £500. This highlighted the question over social sustainability and accessibility of cricket, and that the costs of cricket gear may potentially hinder social inclusivity in the game.
- Issues related to global supply chains were also discussed. The ‘Red List of Endangered Crafts’ completed annually by the Heritage Craft Foundation⁶ highlighted that the production of hand stitched cricket balls was now extinct in the UK. In addition, the report identified that there were only a limited number of cricket bat manufacturers remaining in the UK and that they were classed an ‘endangered species’. Informal conversations with cricket bat manufacturers had indicated that many of the cricket bat making skills were amongst older age groups and therefore these may be lost in the new future, unless apprenticeships and training is provided
- BSI⁷ in the UK have published a series of standards related to the production of cricket equipment and apparel but there is no standard related to cricket bats. However, the MCC ‘Laws of the Game’⁸ highlight issues related to the dimensions, weight and materials to be used in the production of cricket bats e.g. cricket bat should be made from wood
- Little research has been completed into the sustainability impact of cricket gear. To increase awareness and understanding exploratory research was completed by CfSD in 2021 that focused on the environmental impact of materials used in five items of cricket equipment and apparel; clothing was excluded due to lack of time and budget. Some of the findings included:
 - Cricket balls are produced from materials including leather, cork, worsted yarn and nitrocellulose. In the future there may be ethical concerns by some groups of players over the use of animal leather and its production, and ‘vegan leathers’ might be worth exploring.
 - Cricket bats made from bamboo might be an alternative to willow. In 2021, the University of Cambridge produced a bamboo cricket bat

⁵ See <https://www.thehundred.com/>

⁶ See <https://heritagecrafts.org.uk/redlist/>

⁷ See <https://www.bsigroup.com/en-GB/>

⁸ See <https://www.lords.org/mcc/the-laws-of-cricket>

prototype⁹. The bamboo bat prototypes had improved performance but are currently 40% heavier. Further R&D is required to reduce weight of the bat and there is a need for increased testing amongst players to assess performance. There is also some concern that the bamboo bats have a significantly larger 'sweet spot' or 'middle' and may create an imbalance between 'bat and ball'. As indicated above, the MCC 'Laws of the Game' currently specify that cricket bats need to be made from wood and the use of bamboo - which is classified as grass - is technically ineligible and being met with resistance in some parts of the sport.

2.2 Climate change and cricket gear

Dr Russell Seymour, CEO, BASIS

- There is a two-way relationship between sport and the environment. Sport events, at all scales, have an impact on the environment, including contributing to climate change. At the same time cricket and other sports are affected and will be affected by the environment e.g. rising temperatures will affect cricket and other sports in various ways - directly and indirectly
- Wider impacts include the use of materials - sourced globally - that are used in the production of cricket gear, climate change may impact on the availability of materials, supply of cricket gear and the operating conditions of factories.
- BASIS adopts a definition of sustainability that includes the three pillars of social progress, economic activity and environmental responsibility. BASIS simplifies its approach to sustainability by using the concept of health to unify its messages: personal (individual) health expands to community health which grows into planetary health
- 2017 World Scientist's sustainability warning - a Second notice¹⁰ demonstrates how the majority of human impacts and all measured climate responses are trending in the wrong direction and creating problems for the future.
- Climate change will impact on cricket. For example, the effects of global warming and climate change will mean: more games postponed, poorer individual and team performance and decreased motivation due to rising temperatures, games cancelled due to flooding, storms and air quality, challenges with preparation and maintenance of cricket pitches/grounds, etc
- The BASIS Hit for Six report¹¹ examined the impact of climate change on cricket. This was reflected by the BBC Sport 2050 scenarios for cricket in 2050 taking account of rising temperature and climate change¹². These scenarios covered the way the game is played, changes in clothing, etc. Some possible scenarios resulting from increase temperatures, included:

⁹ See <https://journals.sagepub.com/doi/full/10.1177/17543371211016592>

¹⁰ See <https://doi.org/10.1093/biosci/bix125>

¹¹ See <https://basis.org.uk/resource/hit-for-six/>

¹² See <https://www.bbc.co.uk/sport/56972368>

- Test matches up to 6 days due to more rest breaks
- Cricket potentially becoming a winter sport in Australia.
- Cricket will have to find a way forward through innovation/adapting/adjusting to new conditions associated with increases in temperature e.g. the possibility of wearing shorts, increasing ventilation in cricket clothing and apparel, etc.

2.3 World Federation of the Sporting Goods Industry (WSGFI): Pledge for the FIFA Quality Programme

Marc-Ivar Magnus, Vice President, WSGFI

- WSGFI works with FIFA to ensure that the production of certain FIFA licensed products is in compliance with the WFSGI Code of Conduct (CoC)¹³. This system has been improved over the past ten years and ensures that manufacturers are respecting labour and social standards. Audit reports provided by the FIFA licensees must prove that compliance
- There are potential lessons to be learnt for the cricket equipment, clothing and apparel sector from other industry sectors that have addressed sustainability e.g. football
- WSGFI has developed a programme (PLEDGE) that focuses on the social compliance of the production of footballs, artificial turf, floodlights, etc
- WSGFI introduced PLEDGE within FIFA in 1997, to ensure the elimination of child labour in the production of footballs. This led to the establishment of local monitoring organisations in manufacturing countries (IMAC in Pakistan and SGFI in India in 1997 and 1998, respectively)
- The PLEDGE procedure for certification is as follows:
 - Licensees and their manufacturers are requested to fill in and sign a so-called pledge form. This form requires the contact details, location of the production. Furthermore, FIFA licensees and their manufacturers of the licensed product must sign the WFSGI CoC in order to prove that they have understood and undertaken what is necessary to comply with these code principles
 - Manufacturer's conduct external annual audits to prove that they comply with the principles set forth in the WFSGI CoC. The independent third-party auditor must be a member of and accredited by the Association of Professional Social Compliance Auditors (APSCA)
 - WFSGI staff review the audits, coordinate corrective actions with the manufacturers if necessary and finally if they are in compliance, make a pledge for FIFA to issue the licenses to companies
- The impact of PLEDGE includes that FIFA licensors must now confirm that not only child labour is not used in the production of footballs or related equipment but that they are in compliance with the entire WFSGI CoC. The scope of the pledge system has thus been expanded over the years

¹³ WFSGI Code of Conduct is publicly available on the www.wfsgi.org

- PLEDGE embraced global production of soccer balls and other licensed products
- Lessons learnt from PLEDGE
 - Industry commitments and pledges create awareness
 - It's a journey: full compliance with requirements is not likely to be achieved from the start e.g. it will take time
 - Inactivity in football production is no longer an option today
- The next steps in relation to cricket equipment, clothing and apparel sector might include:
 - Opening discussions with cricket's governing bodies
 - Increasing the understanding the existing licensing systems and programmes
 - Assessing the level of environmental and social awareness within the sector.

2.4 Social issues in the supply chain

Guido Battaglia, Head of Policy and Outreach, Centre for Sports and Human Rights

- The Centre for Sports and Human Rights (CSHR) brings together actors in the sports ecosystem to address the impact on human rights in sports and in the sports supply chain
- Stakeholders in the cricket equipment, clothing and apparel sector can potentially learn from approaches being taken by CSHR in other sports
- CSHR draws on the 3 pillars of the UN guiding principles in business and human rights
 - Government (protect human rights)
 - Business (respect human right)
 - Remedy (make right for those harmed)
 and helps the sports industry embed these principles in operational management processes
- Within the complex global supply chains for sporting clothing and equipment, CSHR promotes the adoption of standards to help production processes and suppliers ensure that they are free from: forced labour, illegal child labour, discrimination and other human rights violations
- CSHR experience from various sporting goods sectors highlights that human rights risks may occur in sporting sectors and their complex global supply chains and companies within those areas need to be aware of those risks:
 - Forced Labour
 - Illegal child labour
 - Health and safety breaches
 - Low/Unpaid wages
 - Discrimination
 - Union Intimidation
- CSHR have been promoting internationally recognised human rights standards within the sports industry that outline the following steps for sporting sectors and/or companies within those sectors

- Commit to a human rights policy
- Assess risks of adverse human rights impact
- Integrate human rights into policies, procedures and responsibilities
- Track human rights implementation
- Communicate human rights impacts (be transparent)
- Make right the harm that occurred.

3. Discussion

The below highlights issues emerging from a panel and break-out room discussions

3.1 Panel discussion

A panel discussion centred around the following question: “What is the biggest challenges that the sector will face and what opportunities are there?”

Below are anonymised responses from panellists:

- Panellist #1: There is challenge of tackling environmental and social issues in supply chains and stakeholders need address these issues: stakeholder engagement with impacted groups is needed. Companies should identify human rights issues and risks in supply chains through using existing tools, for example, those provided by the World Benchmarking Alliance ¹⁴
- Panellist #2: Climate change and rising temperatures are becoming increasingly important issues in relation to individual player health and safety. As highlighted by panellist #1, there is a need to engage with manufacturers to ensure that supply chains are functioning better and improving their environmental and social performance. This will require cooperation with governing and standards bodies in terms of monitoring and regulation. There is a need for stakeholder engagement
- Panellist #3: There should be dialogue with stakeholders to “call out” those companies producing cricket gear that have poor environmental and social performance.
- Panellist #4: There is a need for more collaboration between stakeholders: collaboration is the new leadership. The advice was to utilise well developed tools and guidance, and not to “reinvent the wheel”. Using sustainable materials for clothing and accelerating the development of next generation materials will have a big impact on CO2 emissions reduction of cricket gear

¹⁴ See <https://www.worldbenchmarkingalliance.org/>

3.2 Break-out group discussions

There was wider ranging discussion in five breakout rooms ¹⁵ and the key points that emerged have been clustered below:

3.2.1 Clothing and apparel (also see other sections)

- Waste is key issue in clothing and apparel (see findings from Sustainable Innovation 2021 conference ¹⁶)
- CO2 emissions and waste associated with the cricket gear sector are unknown e.g. both at a factory level and in supply chains e.g. embedded carbon
- There are issues related to the over printing of shirts in the 'white ball' game e.g. multiple colours make materials or chemical recycling difficult
- User education is needed in terms of re-use and recycling to extend the life of cricket clothing and apparel, and better infrastructure is needed to enable increased product circularity.

3.2.2 Women's issues

- Women's cricket clothing and apparel is not tailor-made for women and girls which results in issues around "sizing", 'body image', etc
- Cricket clothing (whites) for women is a challenge especially when females have their periods (period shaming is a real problem for young players)
- There is a lack of technical clothing in cricket i.e. Hijab for Muslim women.

3.2.3 Supply chains

- There were indications that child labour may not to be perceived to be an issue in the supply chains of cricket equipment, clothing and apparel, or that it may only be an issue in clothing and apparel. This needs further research
- 'Audit fatigue' exists amongst suppliers. For example, outsourced bat manufacturers in India have to respond to variety of environmental and social requirements from brands
- There is perhaps opportunity to develop a code of conduct related to environmental and social issues associated with cricket gear, and a shared cost approach might be developed e.g. at present suppliers' complete separate audits for separate brand name customers
- Some outsourced manufacturers of cricket equipment are improving environmental performance and becoming more proactive e.g. starting to use solar power
- Supply chain problems are an impediment to innovation
- There is a need for more transparency of global supply chains in processes and material use in cricket gear e.g. use of Kashmir v English willow in cricket bats.

¹⁵ See <https://cfsd.org.uk/wp-content/uploads/2021/10/Delegate-Pack-FINAL-15.7.21.pdf>

¹⁶ See <https://cfsd.org.uk/events/sustainable-innovation-2021/programme/>

3.2.4 Business and innovation

- The heritage of cricket doesn't always allow innovation and performance to flourish. How to combine the need for innovation with cricket's love for tradition? Noting that innovation for 'innovation sake' is not always good
- Some stakeholders felt that cricket is ready for change and innovation.
- Will sustainable innovation of cricket gear increase costs?
- New technology is emerging especially related to analytics, how can this been aligned to reduce sustainable impact of cricket gear and improve performance
- Producers of cricket gear need to keep focused on what players want and need vis a vis performance
- Players need to be engaged in the sustainable innovation of cricket gear
- There should be research into the historical evolution of bats and equipment to identify if performance has improved
- Challenges to sustainable innovation of cricket gear include the commercialisation of new products amongst small producers
- There are many small suppliers of cricket gear globally
- A key issue of motivating younger people around the world to engage and participate in the game: will innovative ideas increase participation?
- As indicated in the main body of the report, cost of cricket gear is a big issue in terms of engaging new audiences
- There is a need to retain and develop skills in relation to design and making of cricket bats in the UK e.g. skills building, sharing and apprenticeships.

3.2.5 Circularity

- Cricket is seasonal: what impact does this have on buying and disposal patterns of cricket gear
- There is a lot of cricket equipment sitting in lofts, basements and garages which eventually goes to landfill
- There is a significant amount of 'stored' cricket equipment, clothing and apparel in the homes of players/ex-players - at every level - that could be re-used by others
- What is the volume of packaging waste associated with cricket gear from shipping through to use? Could this be reduced?
- There is a lack of knowledge over the 2nd, 3rd, etc life use of cricket gear – further research is needed
- What happens to cricket gear e.g. bats, helmets, gloves, etc at 'end of life'?
- To what extent is cricket clothing producing micro-plastics in the washing process?

3.2.6 Materials (also see Circularity)

- Many cricket bat manufacturers in the UK plant more willow than they harvest – therefore are practising sustainable forestry
- Currently customers are not requesting sustainability proof related to sustainable forestry of willow for cricket bats. The only proof required is by government: 1 tree cut, and 1 tree planted

- The emergence of the laminated bamboo bat prototype has caused some concern amongst producers – as it is unknown material
- Laminations of bats are allowed in junior cricket but not widely used
- Are there any quality issues with producing bamboo cricket bats in volume production especially when the material will need to be harvested, produced and transported from Asia?

4. Conclusions

- It is important to look at sustainability in the cricket gear industry from a 'systems perspective' to identify the different stakeholders that are involved and their roles. This will help to identify short, medium and long-term opportunities for improvement and avoid unintended consequences. To support improved environmental and social performance, it will be important to consider where the hotspots and the leverage points are
- There is a need to establish increased engagement and collaboration amongst stakeholders across the cricket gear sector in relation to sustainability
- It is perhaps time for stakeholders to consider establishing a code of conduct that addresses environmental and social impacts associated with cricket gear, including human rights issues in outsourced factories
- Climate change and air pollution are impacting directly on the game now and is predicted to become of increasing concern over the next decades
- There is a lack of understanding over the Circular Economy opportunities and challenges related to cricket equipment, clothing and apparel. Cricket bat repair and refurbishment are a good example of product life extension, but for example, there are issues related to use of colours in cricket clothing that are potentially problematic from a recycling perspective
- A clear map of the supply side of cricket equipment, clothing and apparel needs to be developed: what is the mix of suppliers by type, size and location globally
- There is a need to map environmental and social issues associated with the supply chain of cricket gear sector to identify issues, risks and opportunities for improvement
- There should be increased consideration of sustainable materials within the cricket gear sector e.g. bamboo fibres in clothing for sweat management; can plastics be substituted in various items of clothing and apparel?
- Social barriers to entry to cricket should be examined including the cost of equipment e.g. buying equipment for children can cost an adult's monthly salary in South Africa
- Avenues to retain manufacturing of cricket gear might be explored to protect and regenerate the sector in England and Wales (Red List of Endangered Crafts).