The World Federation of the Sporting Goods Industry (WFSGI) is the global authoritative body for the sporting goods industry. Our members include sporting goods brands, manufacturers, suppliers, retailers, national/regional federations, industry and trade associations and other sporting goods industry related businesses.

The WFSGI plays an important role as a resource for its members and as a platform for sharing best practice. We work to understand emerging and ongoing issues of relevance, assist our members to stay current with those developments, and advocate for appropriate laws and practices.

EXECUTIVE SUMMARY

The prevailing ‘take-make-dispose’ – or linear – model for consumer goods is unsustainable. There are two main ways to make the sporting goods industry more sustainable in this regard:

- By designing and making sporting goods from lower impact raw material sources. This includes educating design and development teams to understand the environmental impact of their processes and raw material choices, and the difference they make. Making better choices at the beginning of the process is better than solving the problem at the end.
- By reducing the volume of waste ultimately disposed of. This includes recovering resources from the waste stream to be used as raw materials, or even repairing items rather than throwing them away.

The material cost savings that can be achieved through using resources more thoughtfully, and the many benefits of participating in the development of collaborative standards for raw materials sustainability, are key drivers for action on this issue.

Improving the environmental footprint of raw materials and reducing waste across the whole sporting goods supply chain are important levers for reducing the overall impact of products beyond compliance-driven programmes. We support moving towards science-based sustainability and performance standards that are consistent across the industry.

We believe that all members need to take responsibility for what is in their sphere of influence.

This paper outlines the context, drivers and challenges associated with shifting to more sustainable raw materials for the production of sporting goods, and provides resources for members who would like to take their next steps towards improved responsibility in this area.
With few exceptions, sporting goods are currently designed, manufactured, sold, used, and then go to landfill – a linear, and ultimately unsustainable, model for a manufactured goods economy on a planet with finite resources and a growing human population.

There are two main ways to make the sporting goods industry more sustainable in this regard:

- By designing and making sporting goods from lower impact raw material sources that have a more sustainable environmental footprint and do not compromise performance (e.g. producing lighter athletic shoes by using fewer components and overlays);
- By recovering resources from the waste stream to be used as raw materials (e.g. recycling plastic waste into usable fibres).

The finite ecosystems that are the traditional sources of high quality raw materials are stressed, or in decline, due in large part to unrestrained human consumption. Companies are now looking deep into their supply chains where the majority of carbon emissions, energy and water use, and material waste take place to identify opportunities for improvement.

Ultimately, if the sporting goods industry is to become truly sustainable it will require investment in infrastructure that enables post-consumer products to be returned to the cycle as raw materials with a low environmental impact. As an industry, we are just starting to work on this – and of course it is a broader issue that will involve a range of stakeholders and is beyond the sole control of our members – so in the short term we encourage our members to focus predominantly on taking steps towards 'closing the loops' in their own manufacturing processes.

RELEVANT LEGISLATION

At the time of writing, measuring and reporting on the environmental sustainability of raw materials falls under the purview of voluntary reporting initiatives on overall environmental performance. There is not yet a legal requirement for sustainable sourcing of materials in any jurisdiction.

VOLUNTARY INITIATIVES

Taking a broad view, raw materials sustainability is relevant not just to sporting goods, but to all manufacturing industries so it is useful to have a common definition of what sustainability means in practice. The Natural Step is an organisation that promotes three basic, science-based principles for sustainability. It states that, in a sustainable society, nature is not subject to systematically increasing the following:

- Concentrations of substances from the earth’s crust (such as fossil CO₂ and heavy metals);
- Concentrations of substances produced by society (such as antibiotics and endocrine disruptors);
- Degradation by physical means (such as deforestation and draining of groundwater tables).

This is a concrete and understandable set of high-level principles that is useful for understanding any voluntary initiative related to raw materials production, sourcing and use.

Nike’s Materials Sustainability Index (MSI) and the Sustainable Apparel Coalition’s Higg Index are tools specifically designed for the apparel and footwear industries that help product teams choose more sustainable options. More information about them is in the case study on page 6.
DRIVERS AND CHALLENGES

Given the context of resource depletion, shifting to more sustainable raw material sources makes sound business sense and mitigates risk due to environmental changes and/or related regulatory action. Moreover, the business case for what is known as the ‘circular economy’ – whereby materials are recovered and regenerated at the end of a product lifecycle – is increasingly persuasive.

There are many opportunities to realise real business value by shifting to lower impact and/or recycled raw materials. Waste, for example, is a potential source of value. Reducing waste in product manufacturing leads to direct cost savings, and new commodity markets for manufacturing by-products are also emerging. Thirty to sixty years from today, 10 billion consumers will be competing for the planet’s finite resources – accelerating the need for efficient use of those resources.

Businesses that have invested in developing specialised knowledge, technologies and cross-sector collaborative relationships will be able to extract value several times from a single unit of a raw material resource.

Another driver is standards-based collaboration – and the industry is moving into a ‘post-competitive’ era of collaboration on ‘non-competitive’ issues such as material standards and workplace safety. The social and business benefits of these collaborations – including opportunities for efficiencies and cost reductions through pooling resources and establishing common platforms, as well as enhanced collective influence – are widely recognised.

A third driver is that consumer behaviour around product use is also changing. Sporting goods brands are presented with an opportunity to engage consumers who, evidence suggests, are beginning to demonstrate a greater interest in lifestyle than accumulating material possessions – with an emphasis on product quality, design, and local sourcing and manufacturing.

CHALLENGES FOR OUR MEMBERS

Despite these drivers, and widespread awareness and interest across the industry in taking action to reduce the environmental footprint of their supply chains, putting intentions into practice gives rise to a number of technical and logistical challenges.

Perhaps foremost, sporting goods companies rely on high quality raw materials from specific places and limited supplies. While some fabrics are well-suited for recycling, others are not: “unlike pure wool, which can be re-spun with hardly any loss of quality, fabric blends are still difficult to separate for recycling without degradation in value.” Many materials do not have immediately available lower impact substitutes. Even in cases where substitutes may exist, in the form of innovative materials, recycled products, and/or new chemical formulations, relevant safety standards and materials data may not yet exist, and testing and developing these new products can be costly and time consuming.

Retooling a production line to use new materials is also a costly barrier. Even a credible threat of a future ban on some kinds of PVC plastic has not been sufficient for some manufacturers to switch to an alternative, because it costs several times as much and would require different machinery.

Furthermore, for closed loop materials and products, the supply chain is still nascent. In most cases there isn’t a sufficient market for waste materials to warrant the cost of sorting and preparation for resale – particularly given the relatively low cost of simply disposing of items – nor is there infrastructure for collection and resale.

Smaller companies may face particular challenges with regard to the technical capability, resources and influence to make changes in the supply chain and market. Even the sporting goods industry as a whole represents only a small portion of the global demand for fibres, plastic pellets and dyestuffs, and demand for raw materials sustainability from the sporting goods sector alone is not sufficient to initiate fast, large-scale changes.

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1 For example: http://www.theguardian.com/business/2016/jan/18/weve-hit-peak-home-furnishings-says-ikea-boss-consumerism

Improving the environmental footprint of raw materials and reducing waste across the whole sporting goods supply chain is a significant issue that represents an important lever for reducing the overall impact of products beyond compliance-driven programmes. We believe that all members need to take responsibility for what is in their sphere of influence.

Action is urgently required – and we believe that collaborative adherence across the industry to common standards in respect of the environmental footprint of raw material inputs is a question of ‘when’, and not ‘if’. We support moving towards science-based sustainability and performance standards that are consistent across the industry to define lower impact materials – this would be of benefit to all players in the supply chain as well as to the end consumer.

The starting point for most members will be to build their understanding of the raw materials that are used in their products and, subsequently, to begin measuring and reporting on the sustainability of these inputs. For manufacturers, understanding the footprint of their manufacturing processes is an important starting point.

UNDERSTANDING THE BENEFITS

Members who take action stand to realise cost savings from reducing waste in product manufacturing. Members may also reduce the cost of monitoring and performance measurement by collaborating on standards.

Taking action mitigates regulatory risk, especially for raw materials that are most scarce, or that come from endangered or at-risk habitats; finding alternatives to these raw materials also lessens the pressure to compete for resources that are becoming, for any reason, increasingly scarce.

SUPPORTING OUR MEMBERS

The WFSGI will support its members by providing a network for companies to collaborate; working with other industry forums; and promoting unity across the industry.

To this end, the WFSGI provides a range of valuable information and advisory services to assist its members with their reporting and other CR challenges. These include:

- Ad-hoc support to members through the CR Helpdesk;
- Alerting members to important legal developments and regulatory changes;
- Guidance and direction on CR developments and best practices.

A further benefit of WFSGI membership is the support available from other members. The network offers the scope for all member companies to support each other on reporting and other common challenges.
CASE STUDY: DESIGNING SUSTAINABLE PRODUCTS – NIKE

Nike has been investing in ways to design more sustainable products for years. Nike takes two approaches to measuring and managing raw materials sustainability in its supply chain. The first is through developing and publishing the Nike Materials Sustainability Index (MSI) and producing the MAKING app, and the second is through the company’s active support for the Sustainable Apparel Coalition (SAC) and the organisation’s development of the Higg Index.

In order to best support Nike designers, the company spent eight years creating the Nike Materials Sustainability Index (MSI). Nike MSI provides scores for materials based on a variety of environmental criteria – energy, water, chemistry and waste – allowing designers and product creators to make informed decisions. Then Nike released this information to the public in the form of Nike’s MAKING app, powered by the Nike Materials Sustainability Index – an easy-to-use reference guide to compare the impacts of materials, so that designers and creators can make better choices about the materials they use. The MAKING app is available for free on iTunes and provides the information to enable users to make real-time, predictive decisions about the types of material that they choose.

THE HIGG INDEX 1.0 AND THE MATERIALS SUSTAINABILITY INDEX (MSI)

In July 2012, Nike provided its MSI to the Sustainable Apparel Coalition (SAC) to be incorporated as a foundation for the Higg Index, a tool that measures the environmental and social performance of apparel and footwear products. The Higg MSI is included in the Product Module of the Higg Index 1.0 to help product teams select materials with lower environmental impacts, as reflected by better scores on MSI. The Higg MSI is a cradle-to-gate index informed by life cycle assessment (LCA)-derived inventory data to engage designers and the global supply chain of apparel and footwear products in environmental sustainability. The cradle-to-gate life cycle spans the origin of raw materials to a finished textile or component part, ready to be shipped to a product manufacturing facility. The Higg MSI influences the design and make phases of the product life cycle but does not include consumer use or end-of-life reuse phases.

The Higg MSI uses life cycle assessment thinking and principles but is not an LCA tool, nor is it intended to be a substitute for LCA studies. MSI’s approach to weighting and assigning a single score does not conform to standard LCA methods. To enhance collaboration, transparency and innovation, the complete MSI dataset is open source and available to developers worldwide. You can access the data in JSON format at http://msi.apparelcoalition.org/#/developer. The improved and enhanced version of the Higg MSI will be released by the SAC in the summer of 2016.

As more footwear and apparel companies have an opportunity to use, customise and share materials data, it becomes a mechanism to promote data transparency and collaboration across the industry for systemic change towards materials sustainability.

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2 http://msi.apparelcoalition.org/#/
3 http://msi.apparelcoalition.org/#/about
OVER THE COMING YEARS we expect to see the business case for the ‘circular economy’ gain further momentum as its benefits – and the opportunities it provides – become more apparent.

Heightened awareness among businesses of the risks associated with using unsustainable raw materials for product manufacture will be matched by an increased appreciation of the opportunities to save costs by reducing waste and to create value by shifting to more sustainable raw materials. Forward-thinking companies will find creative ways to maximise these opportunities.

As apparel and footwear companies increasingly recognise the benefits of collaborating on ‘non-competitive’ issues – and as consumer behaviour and priorities continue to shift – we also expect to see a growth in support for the development of collaborative standards for raw materials sustainability.

SUMMARY AND CONCLUSION

The WFSGI provides a platform for sharing best practices and actively engages members in realising a CR vision grounded in shared values and principles. As an association, WFSGI is both a voice for the industry and a trusted advisor on CR and strategy issues for its members. We believe that members that take up and act on the advice and resources WFSGI offers will be the best positioned to respond and thrive in the face of emerging trends and evolving regulation over the coming years.

We appreciate the complex challenges and evolving context our members face. However, we believe that companies have both a responsibility to begin moving away from unsustainable raw material use and have strong incentives to do so – from mitigating the risks of supply disruptions and potential regulation to saving costs and enhancing long-term value. We believe that industry-wide collaboration will play an important role in achieving this.

As the voice of the industry, we will continue to monitor trends, build our understanding of emerging best practice, and support our members to make progress in this important area.

FURTHER INFORMATION

Ellen MacArthur Foundation – Circular Economy
http://www.ellenmacarthurfoundation.org/circular-economy

Nike – MAKING app
http://nikemakers.com/#/

Sustainable Apparel Coalition and Higg Index
http://apparelcoalition.org/the-higg-index/

The Natural Step
http://www.thenaturalstep.org/
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