

Wavechanger and Surfers for Climate presents

# SURFER VS PLANET

2022 EDITION

A guide to minimise environmental impacts and  
plan for a sustainable future in the surfing industry.



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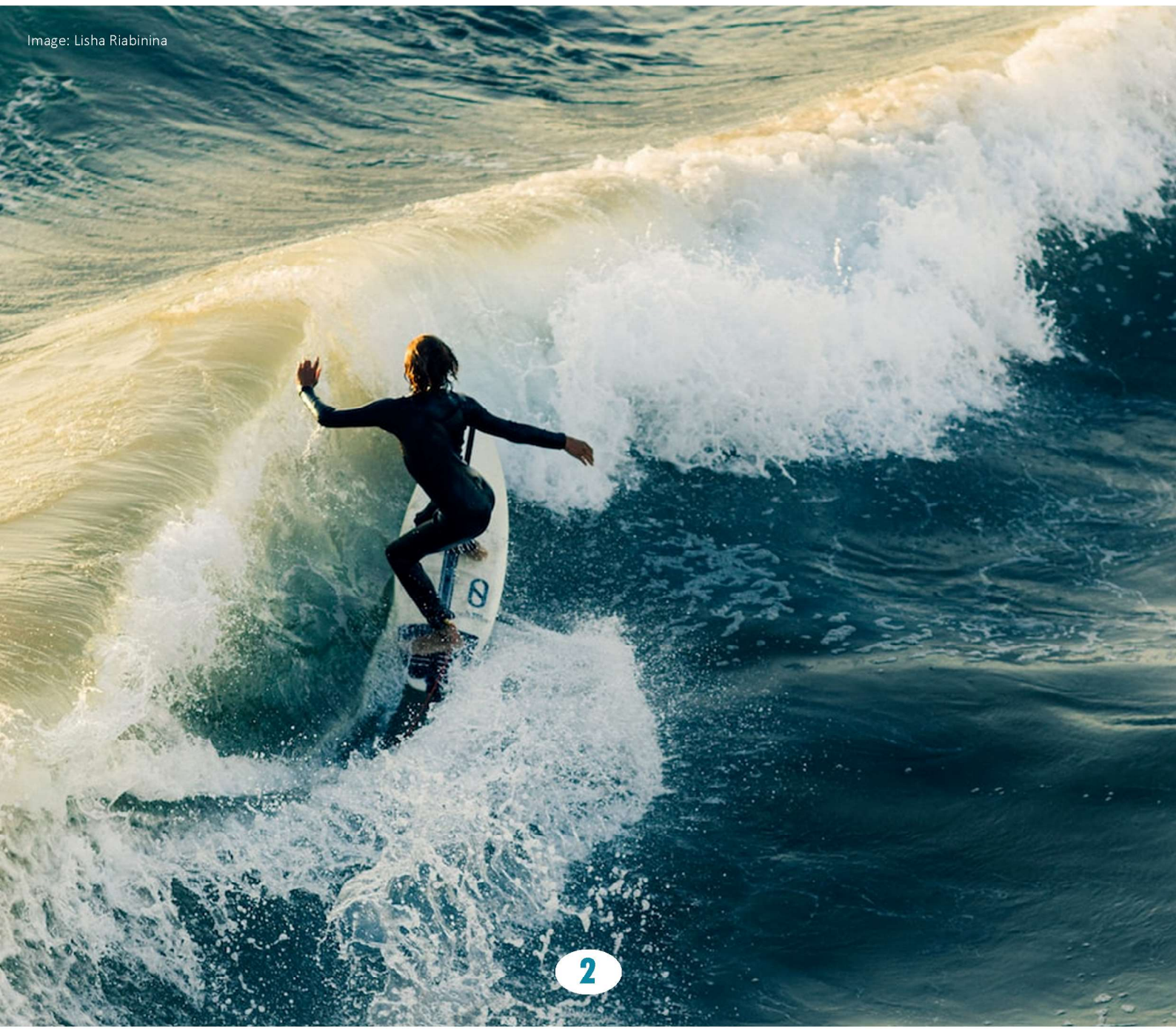
Front page photo by Silas Baisch on Unsplash

# Introduction

We dissect the present and future of environmentally conscious wave-riding with our annual guide. Immerse yourself in the latest innovations unfolding within the vibrant surfing community, shedding light on how surfers and industry trailblazers are wholeheartedly embracing the evolving tide. Learn about sustainable surfboards, cutting-edge material experimentation, and explore innovative gear that not only shapes the trajectory of the sport, but also contributes to the preservation of our beloved oceans. Additionally, we leverage insights from a spectrum of industries (external of surfing) to enrich and apply invaluable lessons, fortifying the growth and sustainability of the surfing world.

The resounding success of our inaugural 2021 edition, with over 3000 downloads, solidified our commitment to making this an annual publication.

Image: Lisha Riabinina



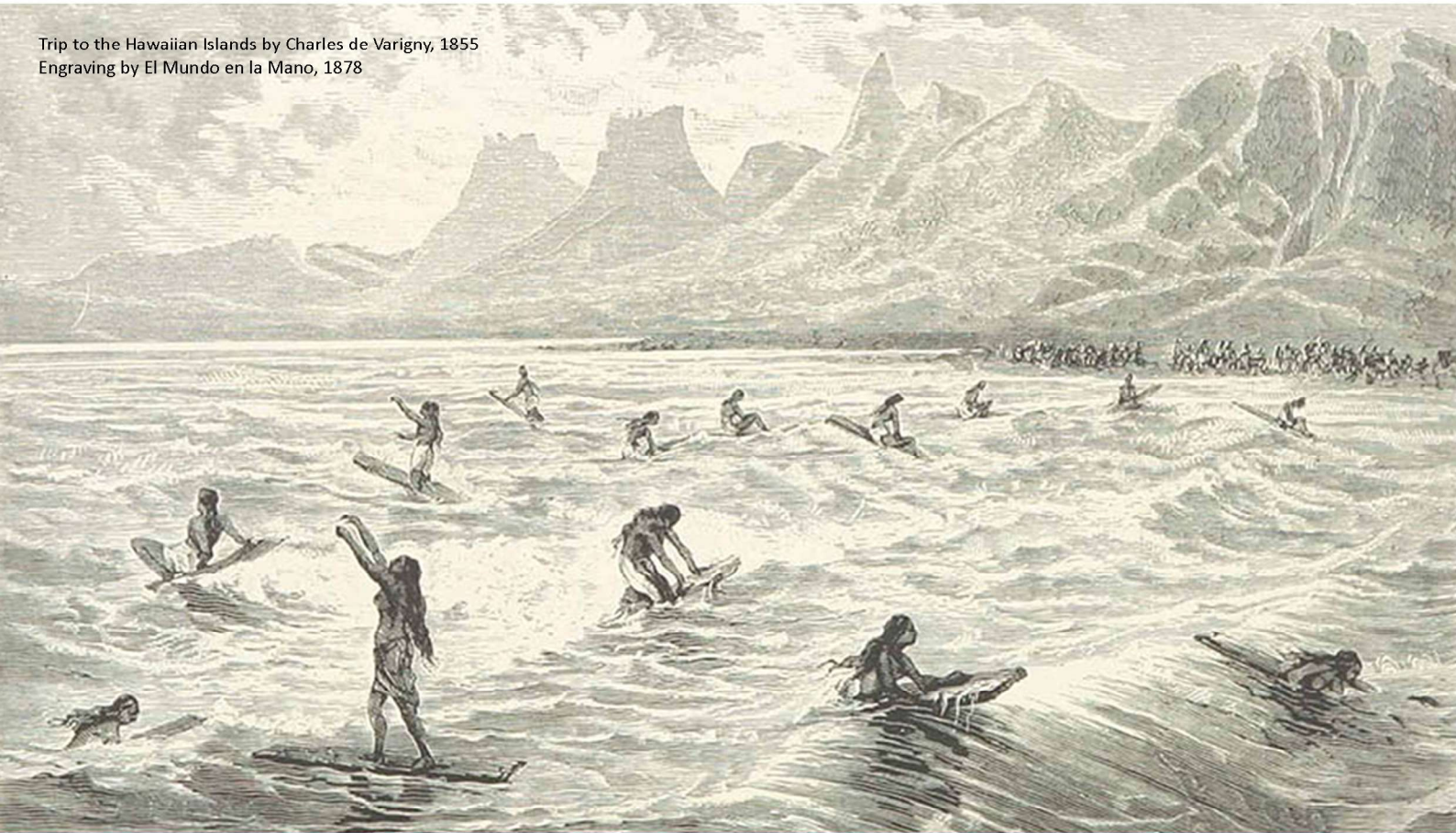
# The Resurgence of Timber Surfboards

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It is of significant importance to contemplate the historical origins of surfing.

The genesis of surfboards traces its roots to the Polynesian Islands of the Pacific Ocean, with a history spanning over a millennium. These early surfboards, crafted predominantly from indigenous timber, often extended to lengths of up to 15 feet, bearing considerable weight. While wave riding was also documented in regions like West Africa and Peru, it was in Hawaii that the sport evolved profoundly, acquiring intense spiritual and social significance.

Trip to the Hawaiian Islands by Charles de Varigny, 1855  
Engraving by El Mundo en la Mano, 1878



Surfboards were traditionally crafted from natural resources, utilizing locally sourced timber for the board's core, using coral and stones for sanding, and extracting tree bark sap or nut oil for treatment, coloring, and preservation. These materials can be viewed as early predecessors to the contemporary substrates employed in modern surfboard construction.

Before the 1950s, timber reigned as the predominant material for surfboards. Could we now contemplate a return to its utilization as the optimal material for surfboard production? Considering its robustness, minimal environmental footprint, and innate aesthetic appeal, it prompts the question, "Why not?"

Timber surfboards are experiencing a burgeoning surge in popularity, a phenomenon that could be chiefly attributed to the expanded reach of the internet. Prominent platforms such as Instagram, YouTube and various craft and hobby websites are abound with inspiring examples, tutorials, testing and reviews, and an overall high-level of stoke and passion.

If you're in the market for a timber surfboard, there's no shortage from around the globe:

**Varuna Surf**, **Tom Wegener Surfboards** and **Sine Surf** in Australia.

**KAYU Surfboards** and **Kinallo Surfboards** in Indonesia.

**Hess Surfboards** and **Grain Surfboards** in the USA.

**Ertha Surfboards**, **Linfa Surfboards**, and **No-Made Boards** in Italy.

**Aro Wooden Supply** and **Nobbywood Surfboards** in Japan.

**MIO Boards** and **Backwood Surfboards** in Germany.

**Zurf Boards** and **Siebert Surfboards** in Brazil.

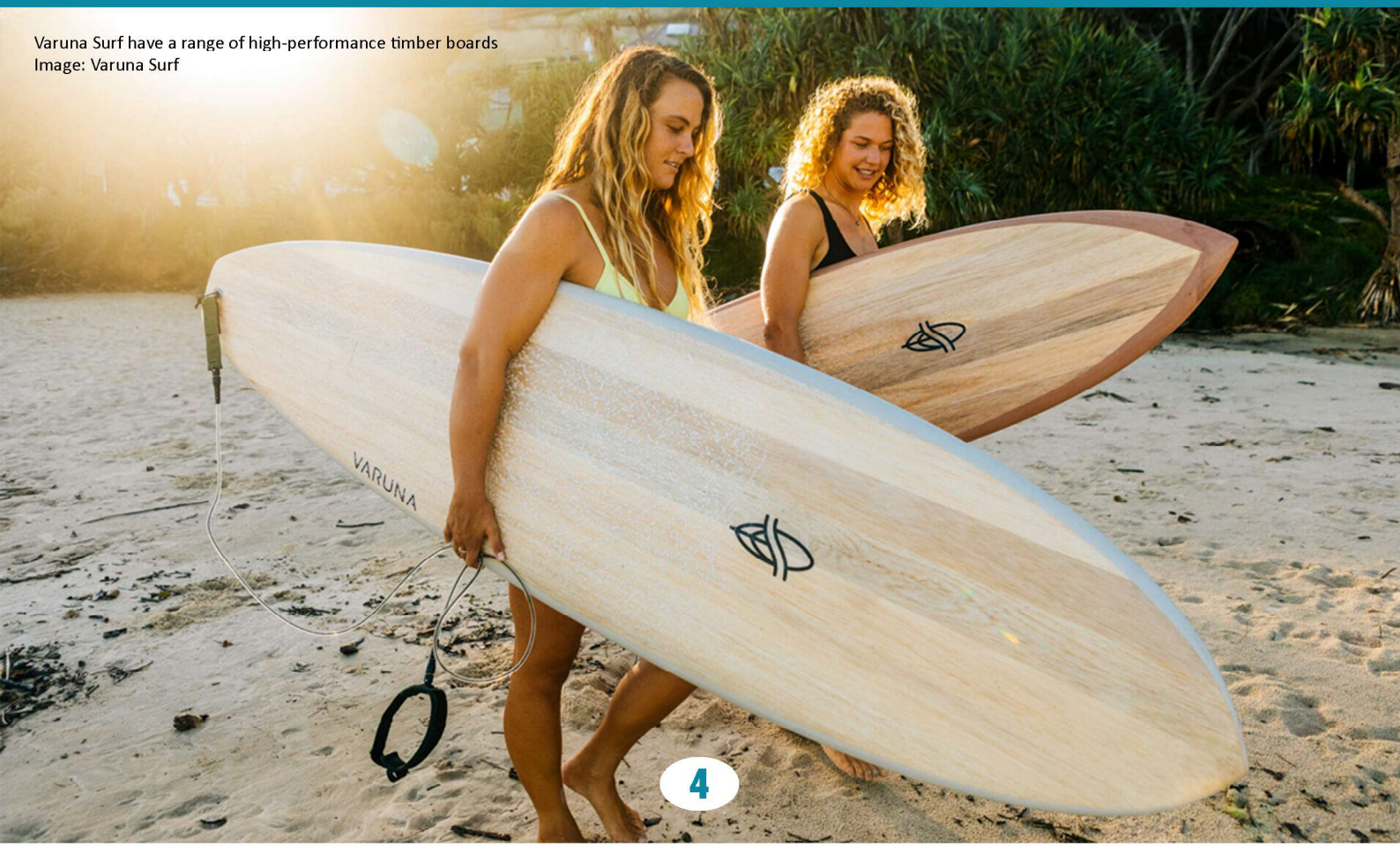
**Honu Woods** and **Yoni Surfboards** in Portugal.

**Burnett Surfboards** and **WAWA Wooden Surfboards** in South Africa.

**MedSwells** and **Kun\_tiqi** in Spain.

**Tonn Surfboards** in Ireland.

Varuna Surf have a range of high-performance timber boards  
Image: Varuna Surf



Within the surfing world, a wave of innovative shapers proudly craft surfboards from locally sourced timber, engaging community members to not only reduce the carbon footprint but also uplift the local economy and residents' well-being.

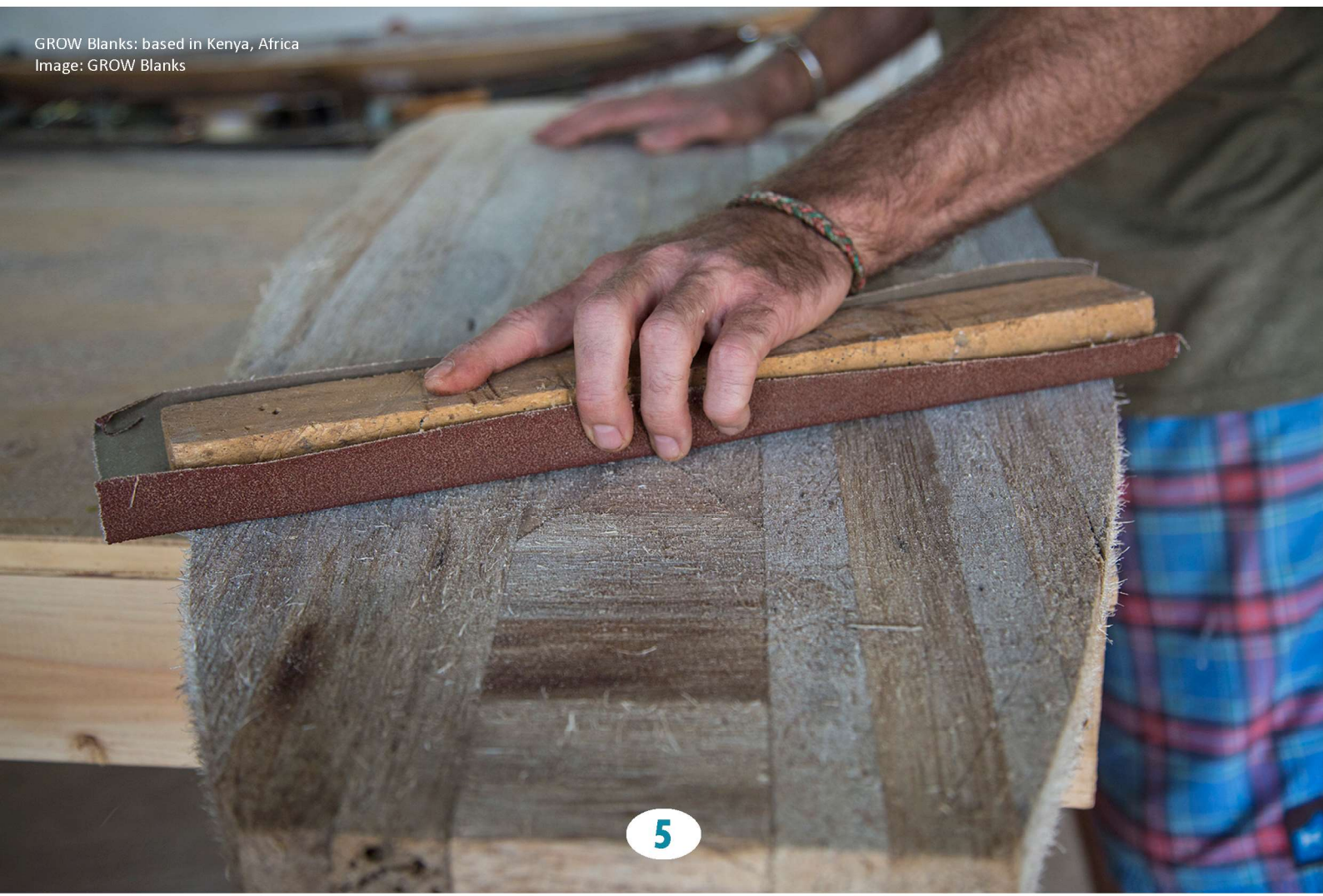
Moreover, surfboard enthusiasts can immerse themselves in the art of board crafting through workshops. **Otter Surfboards** in picturesque Cornwall, UK, offers a captivating five-day experience. Similarly, **David Weber Surfboards** in Brazil and **Piña Surfboards** in Costa Rica extend comparable services, providing a hands-on journey into the heart of surfboard creation.



DIY surfboard workshop by Otter Surfboards, UK. Image: Otter Surfboards

Located on a large African sisal agave farm in Kenya, **GROW Blanks** use the plants' poles (the part of the plant that's typically discarded) and sell raw, sustainable blanks- ready for shaping. Their sustainable and community-oriented approach not only produces high-quality surfboards but also addresses environmental and social concerns, making them a pioneering force in the industry. **GROW Blanks** invests in training local artisans, equipping them with the skills necessary to create high-quality surfboards. This skill development not only elevates the craft and end product, but also empowers individuals with valuable vocational expertise.

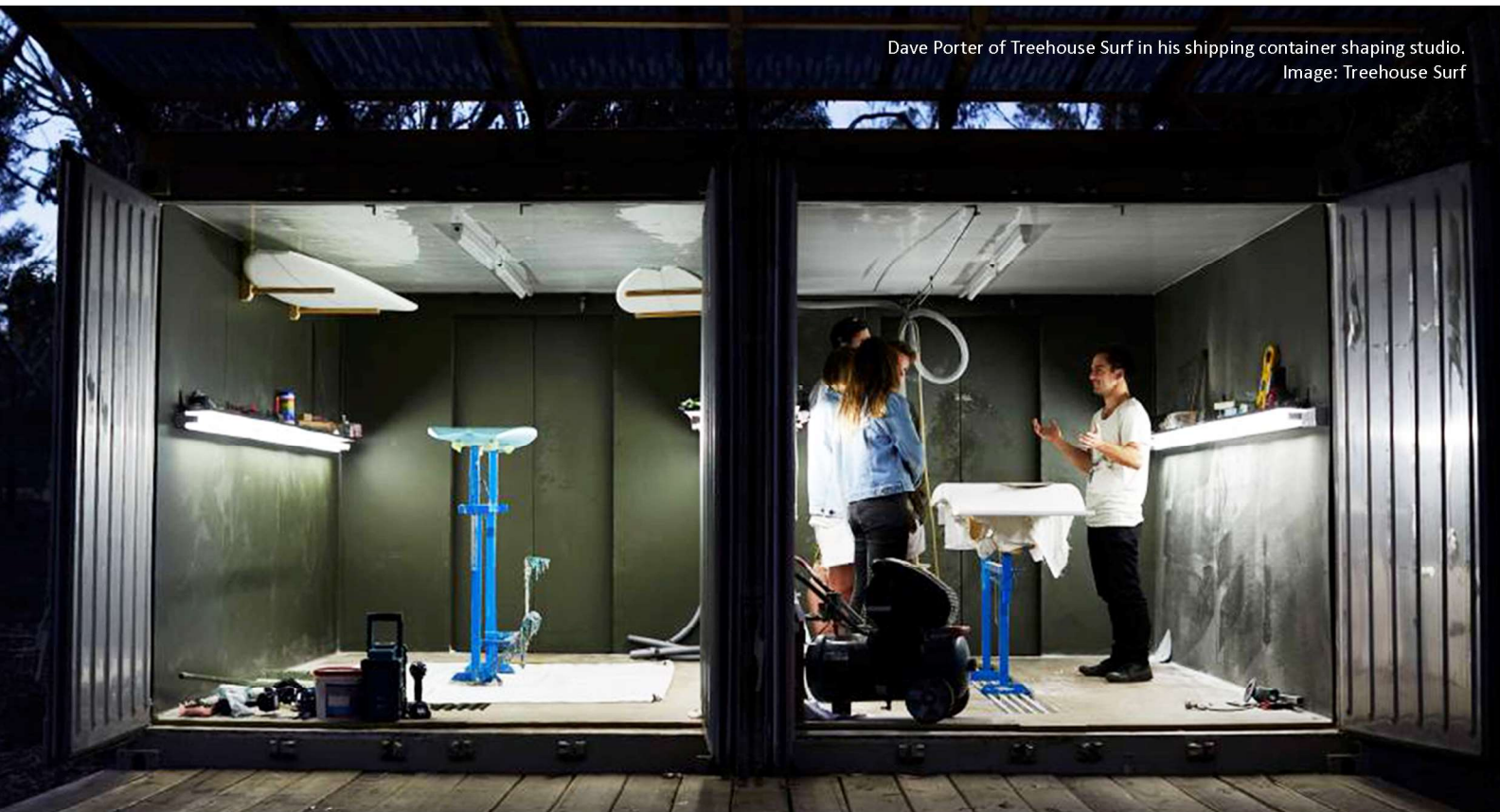
GROW Blanks: based in Kenya, Africa  
Image: GROW Blanks



# Hybrid Magic: Reimagining Materials

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What comes after the timber surfboard sensation? Consider swapping synthetic components for natural, low-impact alternatives. For example, shapers are embracing nature's bounty by adding fins, veneers and rails made with bamboo, cork and timber, that serve both form and function.



Dave Porter of Treehouse Surf in his shipping container shaping studio.  
Image: Treehouse Surf

To ensure timber veneers adhere seamlessly, vacuum bagging emerges as a vital technique. Traditional fiberglass reinforcements make way for eco-conscious options like flaxseed, hemp, linseed cloths, or even recycled and upcycled fabrics, enhancing aesthetics while reducing environmental impact.

In Australia's scenic Gold Coast, visionaries like **Grant Newby Surfboards** and **Rocket Ace Eco-Surfboards** showcase captivating eco-material creations, ever-evolving in design. Meanwhile, south of Sydney, **Treehouse Surf** crafts exquisite boards from a repurposed shipping container, exemplifying eco-surfboard ingenuity.

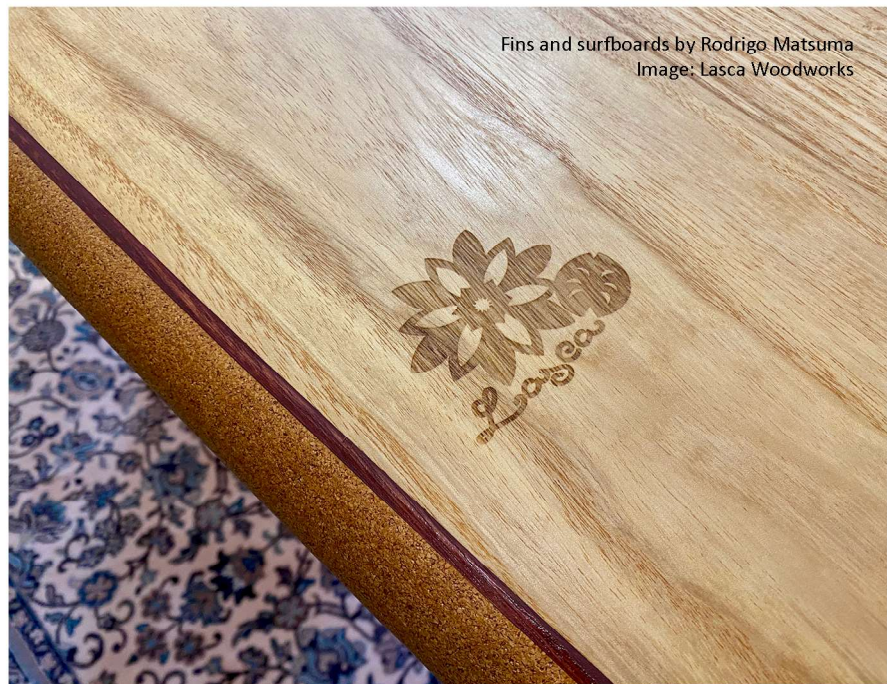
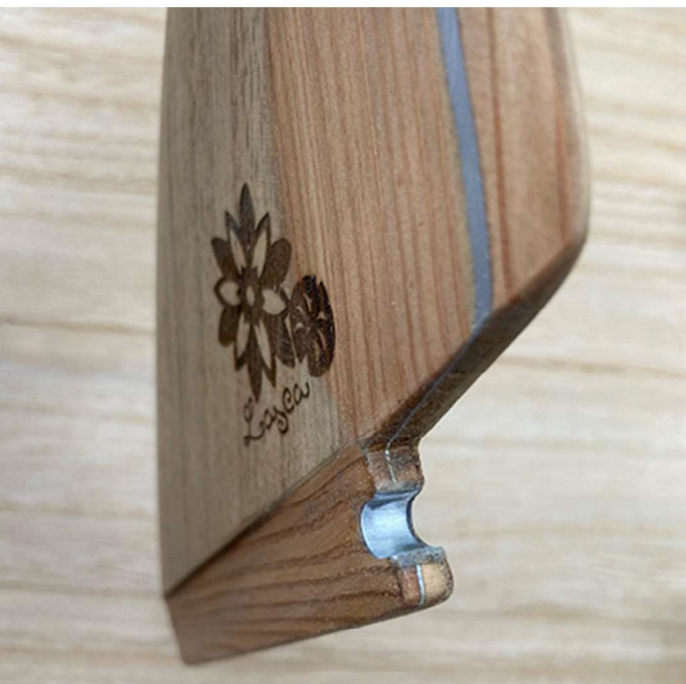
Embark on a journey along the Sunshine Coast in Queensland, where **Hughies Boards** and **Etc Surfboards** unveil a captivating lineup of boards adorned with timber, cork, and recycled EPS foam.

Across the Tasman Sea in New Zealand, **Verdure Surf** takes the eco-conscious path, fashioning surfboards from locally sourced timber and weaving in hemp fibers.



'Performance Twin' by Verdure Surf, New Zealand  
Image: Verdure Surf

Brazil's surfboard design landscape is experiencing a transformative wave, led by visionary shaper **Mario Ferminio**. His boards stand out for their revolutionary finish – a bio-resin crafted exclusively from 100% vegetable-based materials. Each board is a testament to his dedication to sustainable design. On a parallel creative current, Brazilian-Japanese shaper **Rodrigo Matsuda** draws inspiration from his rich and diverse heritage to craft surfboards that are not just functional but also cultural masterpieces.



Fins and surfboards by Rodrigo Matsuma  
Image: Lasca Woodworks





Ashley Lloyd builds boards by hand, and signs each one "made with love"  
Image: Kaili Reynolds

**Ashley Lloyd**, hailing from the USA, fuses her passion for music, art, and environmental sustainability into crafting surfboards. She employs diverse materials, including flaxseed cloth as a low-impact alternative to fiberglass.

In LA, **Ryan Harris**, a versatile shaper, operates a zero-waste studio, ingeniously repurposing shaping remnants into innovative products.

Seattle's **Soule Surfboards** embrace eco-conscious practices, employing bio-resin and flaxseed cloth. **Furrow Surfcraft** offers finless surfers an array of unique timber Alaias and Paipos.

**Everyday Surfboards by Kelly Connelly**, also based in the USA, seamlessly blend fabrics and petals, infusing artistry into structural elements. These artisans epitomize creativity, sustainability, and individuality in surfboard design.

Experimental seaweed-foam, in its original form  
Image: Charlie Cadin / Stab Magazine



In Europe, an innovative collaboration unfolds between **Charlie Cadin** and **Hervé Surfboards** in Jersey, UK, and **Sustainable Surf** in the USA. Their pioneering project aims to replace conventional EPS and PU foam with a seaweed-derived alternative. Charlie, renowned for his seaweed experimentation, leads the charge in this groundbreaking initiative.

In the northern region of Cornwall, **Predn Surf Co** and **Magical Mushroom Company** (MMC) have forged a strategic partnership aimed at revolutionizing conventional bodyboard construction. Their pioneering endeavor involves the development of a plant-based bodyboard crafted from mycelium (the root system of a mushroom plant) and hemp.

This innovative approach prioritizes biodegradability, non-toxicity, and exceptional performance, marking a significant advancement in sustainable bodyboard design.

Hemp, present in 98% of MMC products, sequesters around 15 tonnes of CO2 per hectare, making the boards carbon-positive. MMC explores various other natural by-products too, including wheat and sawdust.



Bodyboards by Predn Surf Co and Magical Mushroom Company  
Image: Magical Mushroom Company

Collaborative surfboard by YUYO Surf + Basaltex + R\*Concept  
Image: YUYO Surf



When it comes to pushing the boundaries of design, France has emerged as a noteworthy contender. **NOTOX Surfboards**, with their seasoned team, maintain a commitment to innovation. They have recently expanded their portfolio to include cutting-edge skateboards, made in France.

**YUYO Surf** has been at the forefront of developing intriguing hybrid solutions, recently partnering to create a 3D-printed board from recycled content (and can be recycled by reverse-chemical engineering), with **Basaltex** for cloth reinforcement and **R\*Concept** for bio-based resin technology.

Additionally, **WYVE** have demonstrated continuous growth, expanding their operations and diversifying their range of cyber-punk, 3D-printed surfcraft, showcasing their dedication to pushing the boundaries in surfboard design.



**Polyola**, located in southwestern France, showcases their eco-friendly initiatives, including a remarkable polyurethane foam blank crafted from recyclable materials. **Nomads Surfing** offers surfboards constructed with their bio-sourced polystyrene BIOM foam, some without stringers, and reinforced with natural flax and basalt cloth, contributing to their eco-surfboard credentials.

**Kanoa Surfboards**, founded in Germany but developed through collaboration with French partners, establish their boards on the Honey Roots Technology (HRT) framework. HRT encompasses a **Polyola** foam core combined with an array of natural materials like timber, cork, cotton, hemp, eucalyptus, and jute. The surfboards feature a bio-resin finish and incorporate an innovative 3D honeycomb lamination technique, enhancing flex and durability.



KANO's boards boast extra flex and durability  
Image: KANO Surfboards



South Africa serves as the birthplace of **Donald Brink**, renowned for his innovative hybrid designs and unconventional (yet brilliant) material combinations.

In the same region, **WAWA Wooden Surfboards** stands out for their commitment to locally sourced timbers, including Swamp Cypress, Pencil Cedar, and Redwood, further exemplifying the region's dedication to sustainable material choices.

**Black Sands**, located in the Canary Islands, specializes in the construction of 3D-printed surfboards crafted from recycled PET plastic and repurposed old surfboards—a unique approach that embodies sustainability and circular design principles.

# The Wonders of Cork

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Portugal, home to the planet's largest area of cork oak trees, has long recognized the importance of preserving its national tree. Since the 13th century, legislation has protected these trees. The cork oaks undergo a sustainable harvesting process, where the bark is carefully removed every 9-12 years, without causing harm to the trees. This practice ensures a renewable and eco-conscious source of cork, underlining Portugal's commitment to sustainability. Cork exhibits remarkable sustainability as it regenerates with each harvest, also acting as a CO2 absorber. Cork trees boast impressive lifespans of 100 to 300 years. This natural, eco-friendly material not only biodegrades entirely but also lends itself to easy recycling, devoid of toxic residues.



Removing bark from a cork oak tree in Spain  
Image: Pablo Blazquez Dominguez / Getty Images

Cork traction pads, or tail pads, combine eco-friendliness with aesthetic appeal. **ecoPro**, located in Portugal, offers an impressive selection of stylish cork pads, capitalizing on the region's reputation as a cork hub. Barcelona-based **RSPro** produces pads and modular tiles crafted from cork, while South Africa's **The Kook Co** specializes in cork tiles for your surfboard. **Nomads Surfing** offer a cork traction pad composition comprising 15% raw cork bark, 65% recycled wine corks, and 20% cork wastage.



**Timber Surf Co**, headquartered in California, offers a diverse selection of surfboards featuring cork-fleeced materials. Similarly, **NOTOX**, with a presence in both France and Australia, presents the Korko range. New Zealand's **Cork Bodyboards** caters to bodyboard enthusiasts seeking eco-friendly options.

Nearly a decade ago, in 2013, **Mercedes** joined forces with renowned big-wave surfer **Garrett McNamara**, who resides in Portugal. Together, they showcased their design prowess by developing a high-performance, cork-based surfboard tailored for conquering significant waves, marking a noteworthy collaboration at the nexus of automotive and surfing industries.

Mark Richards x Flama Surf  
Image: Flama Surf



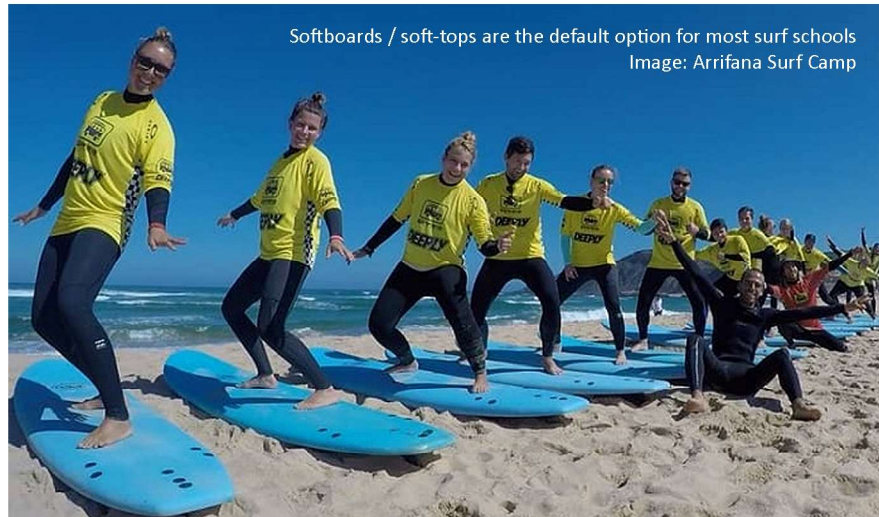
In 2018, **Album Surfboards**, based in the USA, ventured into innovative material fusion by combining cork with aluminum.

Australian four-time World Champion **Mark Richards** embarked on a cork exploration in collaboration with Spain's **Flama Surf**.

**Lost Surfboards**, also in the USA, employed a vacuum bagging process to craft a unique surfboard utilizing carbon and cork materials. These pioneering efforts underscore the industry's commitment to pushing the boundaries of surfboard design.

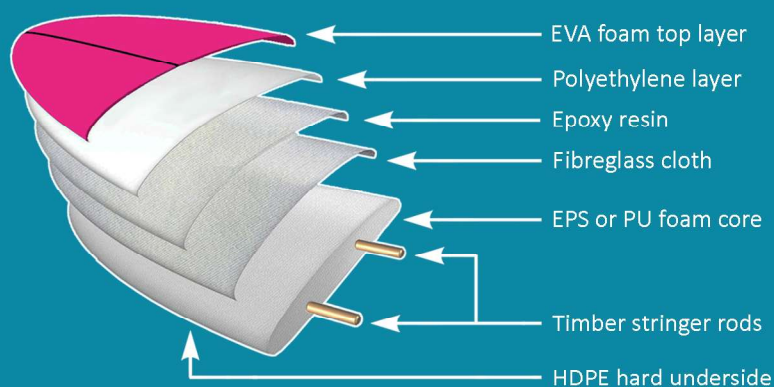
# On Trend: Softboards

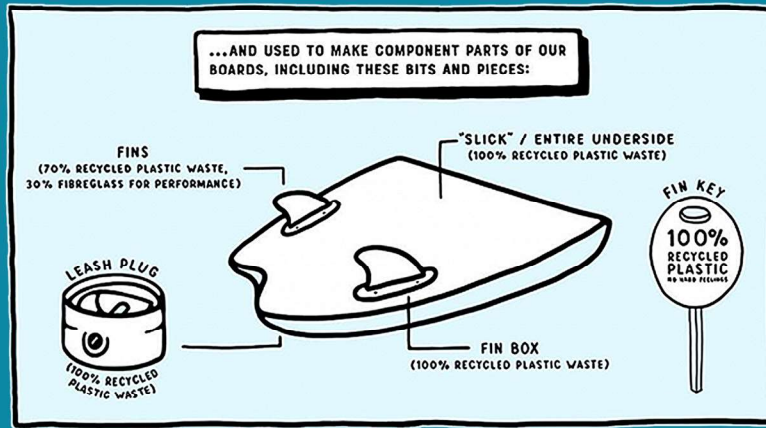
Softboards, also referred to as soft-tops, frequently remain overlooked in the context of environmental discussions. However, they command a substantial share of the market when factoring in their popularity among rental services, surf instructors, and novice surfers. At present, we are witnessing a resurgence in the availability of high-performance softboards, offering surfers an enjoyable addition to their diverse range of surfboards.



Softboard manufacturers are encouraged to explore sustainable alternatives as replacements for plastic components in their product designs. Some commendable initiatives in the industry have already incorporated environmentally friendly materials such as cork and recycled plastics. Conventional softboard construction relies on Ethylene-Vinyl Acetate foam (EVA), known for its recycling challenges due to the heat-sealing process used in layering during production.

Given the limited competitive nature of these boards, an ideal opportunity exists to create modular boards that can be disassembled for efficient recycling, ideally made with more sustainable materials.





Spooked Kooks' surfboard components  
Image: Spooked Kooks

**Spooked Kooks** stands at the forefront of the soft-top surfboard industry in Australia, utilizing recycled plastic as its primary material. In the United States, **Formula Fun** offers a full recycling program for returned softboards, ensuring a 100% recycling rate. **INT Softboards** are known for their recyclable foam blanks and their utilization of bio-based epoxy resin. Furthermore, the **NOTOX** Koriko series, classified as softboards, integrates natural cork into its upper soft layer, eliminating the need for wax through the useful friction characteristics of cork.



NOTOX Koriko. No wax needed. Image: NOTOX



Softboards/Soft-tops dominate the rental and surf school markets  
Image: t\_rust from iStock

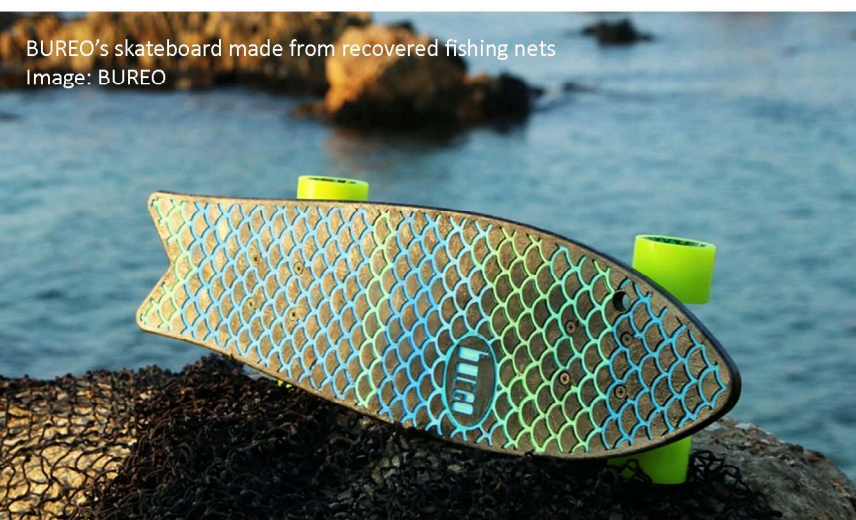


# Easing Landfill Strain: The Recyclers

**Nomads Surfing**, based in France, is a frontrunner in global surf recycling, demonstrating innovation in sustainable materials. Their product range includes a traction pad crafted from repurposed sandals, fins constructed from problematic fishing nets, and a surfboard leash ingeniously fashioned from discarded seatbelts and wetsuits, all sourced and manufactured in Europe. Also in France, **NOTOX** teamed up with **Airbus** to recycle carbon fibre (finished with bio-resin) transforming it into high-performance surfboards for big-wave surfing.



Nomads' traction pad, fins, and leash are all made from recycled content. Images: Nomads Surfing



BUREO's skateboard made from recovered fishing nets  
Image: BUREO

**Bureo**, a company headquartered in the United States, is proactively addressing the pressing concern of abandoned fishing nets. They have developed a diverse product portfolio utilizing recycled plastic fishing nets, encompassing sunglasses frames, apparel, and unique skateboards with a distinct sense of style and craft.

In the domain of wetsuit recycling, it is noteworthy to acknowledge the efforts of Australian brands **Rip Curl** and **Project Blank**. They have implemented recycling programs, frequently complemented by incentives like future purchase discounts. These initiatives effectively transform old wetsuits into environmentally friendly products, diverting them from their typical end-of-life disposal in landfill sites.



**WAW Handplanes**, used in bodysurfing, are crafted from sustainable, recycled, and reclaimed materials, exclusively sourced from Australia. Presently, they procure recycled plastic from two specific sources: the Great Barrier Reef, gathered by **Eco Barge Clean Seas**, and the Coffs Harbour River System, sourced through the efforts of the **Mimmi Aboriginal Corporation**.

**Slater Designs** have recently forged a strategic partnership with **BLOOM**, resulting in the development of a traction pad composed of problematic algae biomass sourced from freshwater reservoirs. The process involves the extraction of this biomass from toxic pond scum, followed by solar drying, pulverization, and foaming, ultimately yielding an innovative alternative to conventional petroleum-based EVA foam.



Algae-based traction pad by Slater Designs  
Image: Slater Designs



The surge in 'expression sessions' at professional events have evolved to showcase eco-surfboards, drawing substantial attention to the pressing issue of global waste. Notably, the **Unwanted Shapes** event by **MEO** and the **WSL**, an exhibition that exemplified this movement by issuing an "Open Call" for shapers to contribute surfboard designs crafted from the waste generated during the Covid-19 pandemic.

# Against the Grain: Novel Approaches

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We all have the power to improve our collective future by working together. Community initiatives and actions based on sharing (rather than outright ownership of products) can help shift behaviours that benefit our planet.

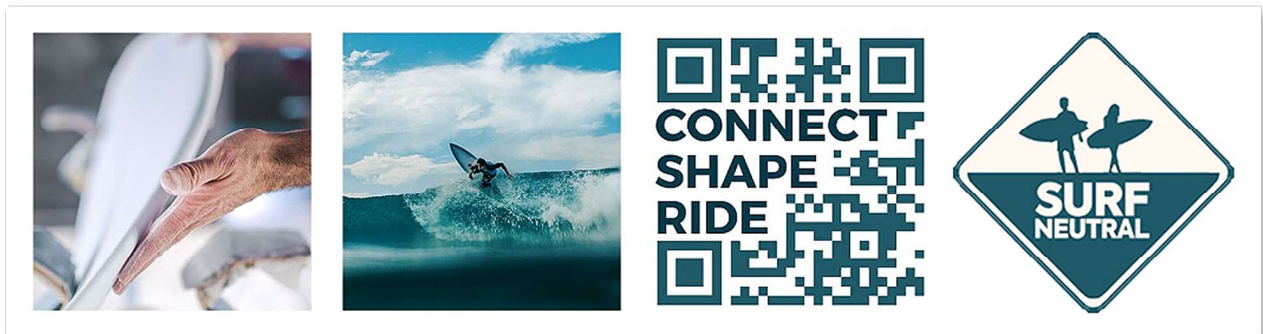
Take inspiration from **The Goat Shed**, a friendly space for locals based in New Zealand. It's a community surfboard library, shaping room and a space to talk about all things surfing. You can even get your bike fixed. **Carve Surf & Coffee** offer a similar set-up. Based in Florida, it's primarily a café but with surfboards for rent and a membership-based service called *The Board Club*.

For those living in Japan, grab a second-hand surfboard from **usedsurf.jp** who have an impressive range available. Their Instagram account is regularly updated with the latest boards to browse.



Carlos and Lucas, founders of The Goat Shed, New Zealand  
Image: The Goat Shed

**Surf Neutral**, a pioneering initiative based in South Africa, introduces an innovative concept that incorporates QR codes onto surfboards. This technology empowers both shapers and surfers to trace the board's origin and location. Furthermore, **Surf Neutral** offers the possibility to rent surfboards through their platform, with the added convenience of optional damage insurance.



Surf Neutral offers benefits to both shapers and surfers  
Image: Surf Neutral

Numerous nations are either on the cusp of, or have already, embarked on the path to prohibiting detrimental plastics and chemicals, effectively rendering the creation of new products containing these substances illegal. This development ushers in an exciting era of design and innovation, as the emergence of non-toxic materials promises transformative opportunities.

Plant-based materials, which are gaining traction across diverse industries, offer valuable insights. For instance, designer **Sarah Harbarth's** inventive use of banana skins to craft shoe soles, or bio-designer **Laura Muth's** introduction of biodegradable, modular footwear with an expiry date, exemplify progressive approaches. In light of such innovations, the prospect of surf equipment meeting or exceeding these standards appears within reach.

Shoe soles made with banana peels  
Image: Sarah Harbarth, Alina Saladin





Adidas FutureCraft Loop is made from one material  
Image: Adidas

Although several years have elapsed since its introduction, it remains critical to highlight the innovative **Adidas** shoe constructed exclusively from Thermoplastic Polyurethane. This remarkable example illustrates a closed-loop product cycle, wherein the material can be shredded and seamlessly remolded into another shoe.

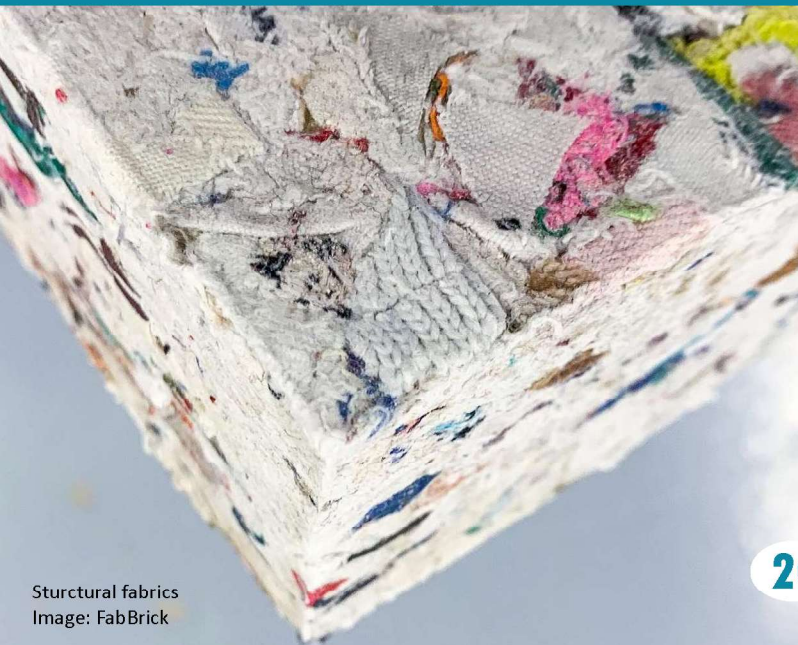
Envision the potential of crafting surfboards and wetsuits from a singular, recyclable material, facilitating a perpetual recycling process, fostering sustainability, and minimizing environmental impact.

The prospect of a biodegradable shoebox crafted from mushrooms is indeed enticing. This collaborative endeavor involves **Adidas**, in conjunction with designers **Mr. Bailey** and **Black Ink Project**, alongside the expertise of scientists from the **Magical Mushroom Company** and **Ecovative**.

Intriguingly, this same sustainable material finds application in the creation of 'living' coffins, a pioneering initiative by the Dutch startup **Loop**.



Could this be the shoebox of the future?  
Image: Adidas / Mr Bailey / Magical Mushroom Company



Structural fabrics  
Image: FabBrick

**UPPAREL**, an Australian-based company, excels at repurposing discarded clothing into fresh upcycled garments. **FabBRICK** offers the innovative option to convert textile waste into bricks, available in diverse shapes and hues. Additionally, a notable collaboration is currently in progress between **Piping Hot Australia** and the **University of Technology Sydney**, with the objective of crafting textiles from seaweed, showcasing a forward-looking initiative.

**Piñatex**, a synthetic leather crafted from cellulose fibers derived from discarded pineapple leaves – a byproduct of the fruit's cultivation in the Philippines – presents an intriguing prospect. Might this bio-material find application in the design of wetsuits, traction pads, board bags, and beyond?

Italian researchers at **VEGEA** have innovatively engineered a leather substitute from the leftover grape skins produced during winemaking, offering a sustainable alternative.

Similarly, **Krill Design**, another Italian entity, showcases a 3D-printed lampshade created from discarded orange peels, effectively repurposing waste materials that would otherwise be discarded. These initiatives underscore the potential for environmentally conscious design solutions.



Faux leather from pineapple leaves  
Image: Piñatex



Shoes made with grape skins  
Image: VEGEA

Lampshades made with orange peels  
Image: Krill Design



# Navigating Tomorrow: Future Steps

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The current state of our natural environment poses a significant threat, compelling us to take decisive action. Within the surfing community, there lies an opportunity to make this journey not only responsible but also exciting.

Leadership with a positive impact often originates from the highest echelons. It's commendable to witness the **World Surf League**, the global governing body for professional surfing, actively engaging in environmental and social endeavors, exemplified by **WSL Pure** and their **One Ocean** campaign. This juncture presents an ideal moment to establish a clear timeline for the introduction of eco-friendly surfboards as mandatory in **World Surf League** competitions. Such a move would signify a monumental commitment and could serve as an inspiring catalyst for other professional sporting organizations to follow suit.



In a remarkable display of leadership, **Yvon Chouinard**, the Founder of **Patagonia**, made an extraordinary announcement on September 14, 2022, declaring his intention to dedicate the entire company towards combatting climate devastation.

At the age of 83, **Chouinard** has established a unique trust structure that preserves **Patagonia** as a for-profit entity, channeling its proceeds toward environmental initiatives. This innovative approach, as disclosed in **Patagonia's** official statement, safeguards the company from potential sales or public offerings that could compromise its core values.

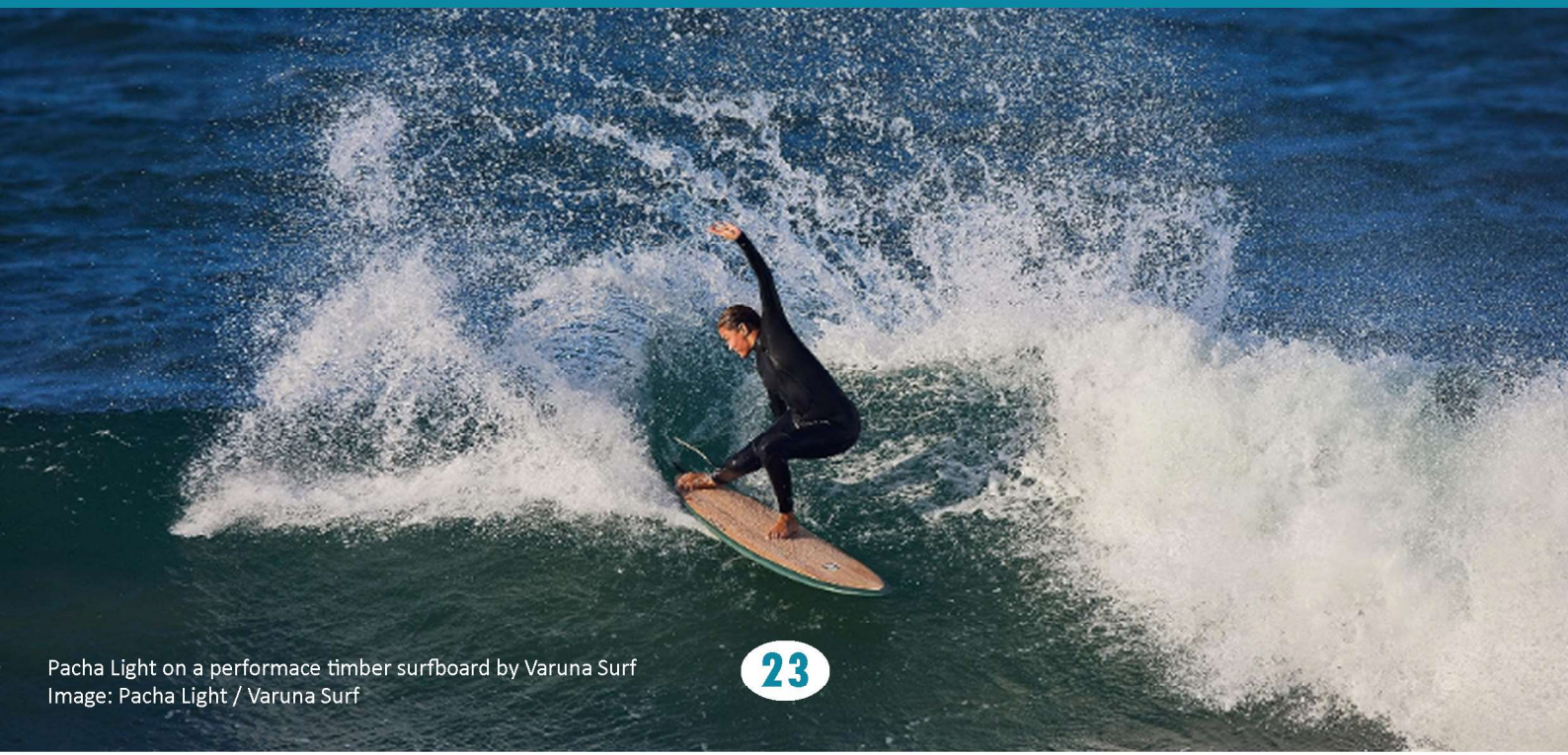


In 2019, Adrian Buchan (far right) won the WSL Pure Award For Outstanding Ocean Advocacy  
Image: Surfrider Australia

In this era of heightened collective consciousness, numerous organizations have emerged to confront critical environmental and social challenges. Among them are **Surfrider**, **Sustainable Surf** and also their restorative **Sea Trees** initiative, **Save the Waves Coalition**, **Surfers for Climate**, and **Surfers Against Sewage**, to name just a few prominent examples.

Leadership roles extend beyond organizational boundaries and encompass athletes who wield significant influence as role models, often connecting with large fan bases through social media platforms. In recent years, Australian professional surfers **Pacha Light** and **Adrian Buchan** have demonstrated exceptional courage by vocalizing their concerns and taking tangible actions on climate-related issues.

Notably, **Pacha Light's** recent partnership with **Varuna Surf**, renowned specialists in timber surfboards, represents a bold and impactful statement that is poised to inspire fellow professional surfers and ripple through the surfing community.



Pacha Light on a performance timber surfboard by Varuna Surf  
Image: Pacha Light / Varuna Surf



Empower yourself to make a difference. We invite designers, entrepreneurs, and changemakers to explore and refine their innovative concepts in the realm of surfing or environmental sustainability. A plethora of startup incubators, competitions, and hackathons await, often offering substantial cash rewards, mentorship, and invaluable industry connections.

We've handpicked a few notable selections, highlighted below.

### The James Dyson Award

### Ocean Impact Organisation

### Climate-KIC

### Green Business Challenge

### Singapore Green Tech Challenge

### Earthshot Prize

### Green Industry Challenge

### On Program by CSIRO.



Pitch Fest by Ocean Impact Organisation  
Image: Ocean Impact Organisation

When embarking on the development of a tangible product, prioritize materials that either possess recyclable attributes or demonstrate biodegradability. It's advisable to assess the potential environmental consequences of your chosen materials and product by contemplating the worst-case scenarios. If the task seems daunting, commencing with smaller initiatives and gradually gaining momentum can be a prudent approach. The ongoing wave of next-generation materials, a few of which are highlighted in this guide, stands as a testament to the transformative potential currently reshaping the market landscape.



3D-printed with algae-based composite materials  
Image: Paradoxal Surfboards

**Paradoxal Surfboards**, based in France, serves as an exemplary case study of blending nature, science, and technology.

Their pioneering 3D-printed surfboards incorporate 750 grams of locally sourced green algae per board, showcasing a concerted effort to introduce innovative materials and production techniques, with the intent to redefine the market landscape.

Consider implementing a comprehensive strategy aimed at minimizing, if not entirely eliminating, your current packaging footprint. In many instances, plastics can be seamlessly substituted with biodegradable alternatives, with cardboard often serving as a straightforward solution. Employing recycled materials can further enhance sustainability efforts (and brand credibility).

Furthermore, it's useful to evaluate branding and logos, as their application may involve harmful inks, adhesives, or superfluous materials. A viable approach to address this is through embossing, a particularly effective technique for paper and cardboard surfaces.

**Flexi-Hex**, founded by twin brothers **Sam and Will Boex** in Cornwall, UK, specializes in producing cardboard packaging solutions with a unique flexible honeycomb structure. Originally designed for surfboards, their innovation rapidly gained acclaim. Since then, they have successfully diversified into packaging solutions for products such as wine, homewares, and electronics, demonstrating the versatility of impactful innovations across industries.



Sam and Will Boex with their cardboard surfboard packaging sleeve  
Image: Flexi-Hex

Consider developing a 'disposal plan' alongside your product, which may entail packaging instructions or a QR code for online disposal guidance. This facilitates recycling, returns, or responsible disposal. Incentivizing consumers to return items to the manufacturer is an effective method that promotes a circular production model.

London-based **Teemill** offers organic cotton clothing designed for return and recycling. Each product includes a barcode for customers to access return instructions to **Teemill's** UK facility, with shipping costs covered and a discount code for future purchases, simplifying recycling and guiding consumers toward sustainable choices.

The **Australasian Recycling Label**, conceived by **Planet Ark**, provides a straightforward yet impactful illustration of gently influencing consumer behaviour. This achievement raises the question of whether the surfing sector should contemplate a similar widespread effort designed to diminish the number of surfboards ultimately consigned to landfills.



Consumer instructions for recycling  
Image: Planet Ark / Australasian Recycling Label

The matter of traditional offshore manufacturing remains a complex subject. It frequently presents the allure of cost savings and, at times, circumvents more stringent environmental regulations prevalent elsewhere.

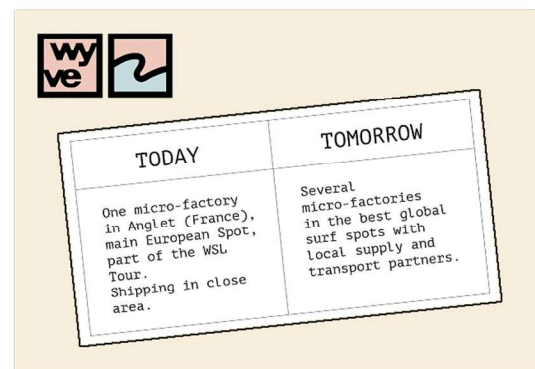
In Australia, there is a compelling case for policy reform to facilitate cost-effective and viable onshore manufacturing. As we witness the phasing out of Styrofoam and other single-use items, it's reasonable to anticipate similar regulations affecting surfboard construction in the future. This then leads to an examination of whether overseas environmental regulations, or the absence thereof, are being exploited in the manufacturing process.



Sine Surf make their boards in Australia  
Image: Sine Surf

Local manufacturing offers significant advantages such as a reduced travel carbon footprint, superior product quality, and contributing to a robust local economy.

Numerous emerging French surf brands have made a commitment to maintain their operations within their homeland for these compelling reasons. Additionally, **Wyve Surf** has proposed the concept of establishing micro-factories at frequented surf locations, a development to watch closely for potential advancements in this space.



Micro-factories at popular surf spots  
Image: Wyve Surf

# Wipeout or Win: Closing Thoughts

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Within the surfing community, a shared commitment to sustainability extends from surfers and shapers to surf retailers, brands, manufacturers, and industry entities.

Opting for natural and plant-based materials offers a substantially more sustainable alternative to petroleum-based counterparts, making it an ideal foundation for anyone starting from scratch with a business idea, or those looking to tweak their existing production methods.

The traditional surfboard manufacturing paradigm is ripe for re-evaluation in the interest of Planet Earth. **Varuna Surf** present an intriguing case study, utilizing invasive and overgrown Indonesian balsa wood for their timber surfboards, while concurrently engaging in land regeneration through permaculture practices. Collaboratively, they are working with the Indonesian government to expand green zones, breathing life back into barren landscapes.

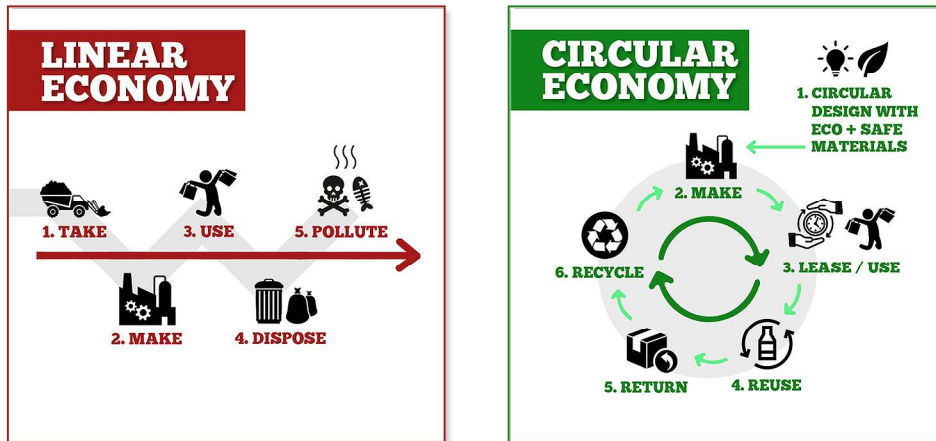
In the global battle against waste, diverting problematic waste streams away from landfills is of paramount importance. **Nomads Surfing** and **Spooked Kooks** have embarked on innovative journeys, transforming plastic waste into an array of products, including surfboards, fins, leashes, and fin keys. Both brands have established partnerships with notable organizations, **Sea Shepherd** and **Plastic Bank**, respectively, as sources of reclaimed plastic. These collaborative efforts not only facilitate skill and knowledge sharing but also broaden customer reach.

To distinguish themselves from competitors, businesses can offer unique and novel propositions. **ERTHA Surfboards**, based in Italy, markets DIY hollow timber surfboard kits, providing consumers with an engaging approach to surfboard creation and ownership.

Blending in with nature, a goal we should all aim for  
Image: ERTHA Surfboards



Revamping conventional consumer patterns could manifest through the implementation of a leasing framework, replacing the conventional concept of surf equipment ownership. This strategic transition aligns with the pursuit of sustainability and a circular economy, ultimately reshaping the narrative around prevailing tendencies of excessive consumerism.



Linear Economy vs Circular Economy  
Image: Wavechanger

## 5 Key Insights for Driving Substantive Transformation:

- 1. Exemplary Leadership:** Meaningful change in the realm of surfing requires proactive leadership from prominent brands, governing bodies, and influential athletes. They must set the tone for a sustainable future in the sport.
- 2. Empowering Innovation:** Supporting disruptive innovators on the periphery of the industry with increased funding and a broader platform is pivotal. These catalysts will nurture and amplify groundbreaking ideas.
- 3. Transitioning Production Practices:** A crucial aspect of this shift is aiding manufacturers of surfing equipment as they navigate away from harmful materials and traditional production techniques. Adapting to eco-friendly alternatives is imperative.
- 4. Regulation of Toxic Materials:** There is an urgent need for dialogues to commence or intensify regarding the regulation of toxic substances within the sport. Transitioning to safer, environmentally friendly alternatives is paramount for the industry's sustainability.
- 5. Engagement and Positivity:** To be part of this transformative journey, active involvement is key. Join, participate, innovate, disrupt, share knowledge, and maintain a positive attitude.

Rather than assuming an infinite supply of natural resources, it's essential to recognize their limitedness and the need for protection. This shift in perspective reveals numerous avenues for positive transformation. By blending historical insights with innovative thinking, surfing can lead the way in promoting environmental sustainability.



**Surfer vs Planet 2022**  
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**Wavechanger is a program of Surfers for Climate.**

We're dedicated to the continual research and support of innovative equipment, accessories and packaging for the surfing industry. To do this, we aim to challenge existing norms and fast-track a new era of responsible materials and processes.

We're also committed to an ongoing analysis of consumer behaviours (consumers = surfers) and the product life cycle of surf equipment, i.e. we think stuff should be designed and manufactured with thoughtful consideration to its end-of-life.

#### **Our Vision**

Create a carbon neutral, waste-free surf industry that's respectful to nature, yet retains the innovation, high performance and excitement we all expect from surfing.

#### **Our Mission**

Leading the surf community to embrace sustainable solutions and reduce the environmental impact of surfing.

The featured products, organisations and ideas in this publication are intended to give a brief snapshot of what's currently available and potentially on the horizon, to the best of our knowledge. The content of this guide has in no way been paid-for or sponsored.

[www.wavechanger.org](http://www.wavechanger.org)  
[www.surfersforclimate.org.au](http://www.surfersforclimate.org.au)

[ Game Changer ]

*"an event, idea, or procedure that effects a significant shift in the current way of doing or thinking about something"*



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