

Making a Fibershed:

Place-Based Textile Economies as a Testament
to the Return of the Maker

By Jess Daniels, Fibershed Project Manager, Economic Development & Education Programs

Photo Credit: Paige Green

At its core, Fibershed is a concept that grounds the act of wearing clothing and the practice of making textiles in the local landscape. What began with a personal challenge to create a liveable, wearable, regional wardrobe over the course of one year has grown into a network of prototypes making a new way forward.



What is a Fibershed?

In 2010, Rebecca Burgess, an educator, natural dye artist, and author of *Harvesting Color*, embarked on a challenge to cultivate a wardrobe made of local fiber, with local dyes, and by local labor. Drawing on the term watershed, and the more recent notion of a foodshed, a fibershed is a geographical landscape that defines and gives boundaries to a natural textile resource base. As tributaries flow to lakes and across land parcels, so too fiber flows from the soil to the mill to the maker, the wearer, and the waste stream. Awareness of this bioregional designation engenders appreciation, connectivity, and sensitivity for the life-giving resources within our homelands.



Burgess's *One Year Wardrobe* initiative gave rise to a community organization that revolves around an iterative approach to creating a circular, soil-to-soil textile economy. The Northern California Fibershed is comprised of maker-members: producers who cultivate fiber from the landscape, artisans who create wearable and durable goods, and retailers who offer localized economic impact and educational opportunities; the Fibershed Affiliate program is an international network of maker-members organizing and building community around local fiber.

As a non-profit organization, Fibershed works to support and connect the membership, build awareness through educational campaigns, and develop new methods and technologies to fill community supply-chain gaps.

Situating Fibershed in the Globalized Textile Economy

In 2015 we saw the externalities of the fashion system exposed to a mainstream audience through the documentary *The True Cost*. Interviewing factory workers and investigating pollution streams, the film traced textile supply chains as they traversed the globe from field to factory to fashion emporium.

Indeed, American expenditures on clothing continue to drop as “fast fashion” prices plummet – from 10.4 per cent of household spending in 1960 to just 3.5 per cent of spending in 2013¹. But shifting production to underpaid, over-polluted nations across the world has generated another major cost: the dismantling of the US textile supply chain. In the late 1980s and early 1990s, Fibershed producer member Sally Fox could articulate an almost entirely regional supply chain. From her organic cotton fields in California’s Capay Valley, Fox could send the raw fiber to a Northern California mill to be cleaned, spun, woven or knit into bolts of cloth. With the passage of the North American Free Trade Act, and the expansion of global textile supply chains, regional manufacturing options have all but evaporated.

Making Clothing; Making a New Way Forward

Fibershed’s inaugural projects, Rebecca’s wardrobe staples, produced not only articles of clothing but a series of relationships between makers. Bridging the gap between the urban world of fashion design and the rural landscape of fiber production, we used honest communication as our tool for renewal, iteration, and growth.

Rather than a return to an industrial heyday, Fibershed seeks out and sets forth new pathways that build on our textile legacy and incorporate climate beneficial and socially just systems. In October 2015, our *Grow Your Jeans* event and fashion show exemplified the possibilities for bioregional wardrobes.

Grow Your Jeans: Revisionist Denim Combines Heritage and Innovation

In October, we welcomed guests to a historic barn in Bolinas, California. At the entryway, tall vases held two plants: 'Polygonum tinctorium' and 'Gossypium barbadense'. More than decorative greenery, these are the true material sources for denim: indigo and cotton.

The 'know your farmer' spirit of the slow food and 'locavore' movements have opened a new dialogue around transparency and spurred a new educational framework. In rural landscapes, young farmers are reinventing the homestead and diversifying family farms, while urbanites tend community gardens and tomato cages on balconies. From field to plate, there is a growing awareness of where food comes from and how it is raised, but what about beyond the dinner plate?

Many of the same relationships exist for fiber as for food: seeds planted in soil beget cultivated crops, which are harvested, transported, and prepared for use. Grow Your Jeans began with this premise: tracing clothing production back to the soil, and re-envisioning the possibilities for each relationship along the way from seed to wearer.

Denim is an American and fashion icon, a wardrobe staple that originated in De Nimes, France. Not 100 miles from San Francisco, where Levi Strauss popularized the American blue jean, we set out to re-envision what it means to make jeans from soil to soil.

A pair of locally grown jeans begins with organic cotton raised in the Capay Valley by Sally Fox. Fox is a farmer and an accomplished plant geneticist, having dedicated over 30 years to traditional breeding methods that produce high quality, naturally colored cotton. Each seed saved and cotton boll spun is an act of resistance at a time when over 80% of the cotton planted in the United States is genetically engineered to withstand the application of synthetic herbicidesⁱⁱ.



Just as the organic cotton crop has dwindled in recent years, so too have the manufacturing possibilities in the United States. To make local cotton into jeans, we had to extend beyond the Northern California Fibershed to one of the few remaining mills that can spin cotton yarn in the United States. When the yarn returned from a family-owned mill in North Carolina, it was dyed with locally grown indigo. Though many commercial denim labels list 'indigo blue' as their color, true indigo blue is itself a lengthy and involved process. After growing indigo on a small scale, Fibershed expanded our Indigo Project to the largest ever documented in North America, west of the Mississippi River. The leaves were harvested, dried, and composted for 100 days on a specially-constructed floor following traditional Japanese specificationsⁱⁱⁱ.

Composted indigo, called 'sukumo', serves as the source of a fermentation indigo vat, a unique dye bath that can yield rich, deep blue hues without chemical additions. In our denim supply chain, this process eliminated the harsh washing agents and metallic-based synthetic dyes used by major manufacturers to achieve long-wearing blues.



Stripping down the denim supply chain altered not only the material inputs but the mechanical possibilities. Foregoing the solutions added to cotton yarn to make it rigid for weaving, we shifted our manufacturing scale from mill to maker, and enlisted the talents of local weaver Leslie Terzian Markoff. At her weaving studio, TangleBlue, in Hunter's Point, San Francisco, Markoff prepared weaving styles and samples to approach a twill denim in a different capacity. For over 60 hours, the denim cloth was hand loomed without use of electricity, further reducing the carbon footprint of these jeans.



Cut from the loom, the cloth traveled across the Bay to the studio of Daniel DiSanto, an award winning pattern maker and skilled sewer. There, each pair of jeans was custom fit for the wearer. Grow Your Jeans embraced the handmade scale of the initial prototype and took a cue from its roots in small-scale farming, setting up a Community Supported Agriculture model to accept pre-orders for the limited supply of jeans.



At the launch event and celebration, the Grow Your Jeans runway show paired local denim with 'grass-fed' tops, a collection of artisan-made clothing grown and raised from pasture-based systems. As guests dined on grass-fed beef and a colorful, locally-grown feast, the connection between food and fiber vocabulary was no coincidence.



In 2012 Fibershed's survey and analysis of the California wool industry showed that only 0.03 per cent of the state's wool was processed in state, and nearly 50 per cent was effectively wasted^{iv}. The [Grow Your Jeans](#) fashion show featured the latest iterations that answer the open-ended question of how to get California wool out of the landfill and into the studios and wardrobes of our community.

Regenerating Landscape and Livelihoods

By connecting fiber producers with makers, Fibershed creates a novel, open-sourced model for supporting community development. Launching in early 2016, our [Wool Book](#) will further this commitment by cataloguing tactile perspectives of the land. The [Wool Book](#) highlights individual fiber producers in the Northern California bioregion and includes material samples and swatches that demonstrate the usability and characteristics of wool and fine fibers.

The [Wool Book](#) will be provided to local design schools, artisans, and fashion brands with the express purpose of moving more wool into the regional economy and supply chains. By building relationships and awareness, we can grow demand and thereby support our land base.

Each project and program is rooted in the landscape, adding value and facilitating the regeneration of soil. With our [Climate Beneficial Wool](#) program, we are connecting academic research, climate change activism and pasture systems toward a practical economic ends. The pilot projects feature three wool producers who have implemented carbon farming systems – an application of compost and a methodology of grazing that can result in a carbon footprint differential of over 150 pounds of CO₂ per garment, compared to conventional production^v.

The resulting [Climate Beneficial Wool](#), will be a material embedded with meaning: a functional climate solution. Our initial project partners are making [Climate Beneficial Wool](#) into wearable and usable items, including a knit hat and a mattress.

Return of the Maker

As a community organization, Fibershed could not exist without a growing network of makers. From farmers raising wool, fine fiber, and cotton, to mill owners making yarn, dye gardeners making local color, and artisans making garments, to climate scientists making soil carbon estimates and consumers making a choice to purchase a locally grown and sewn good.

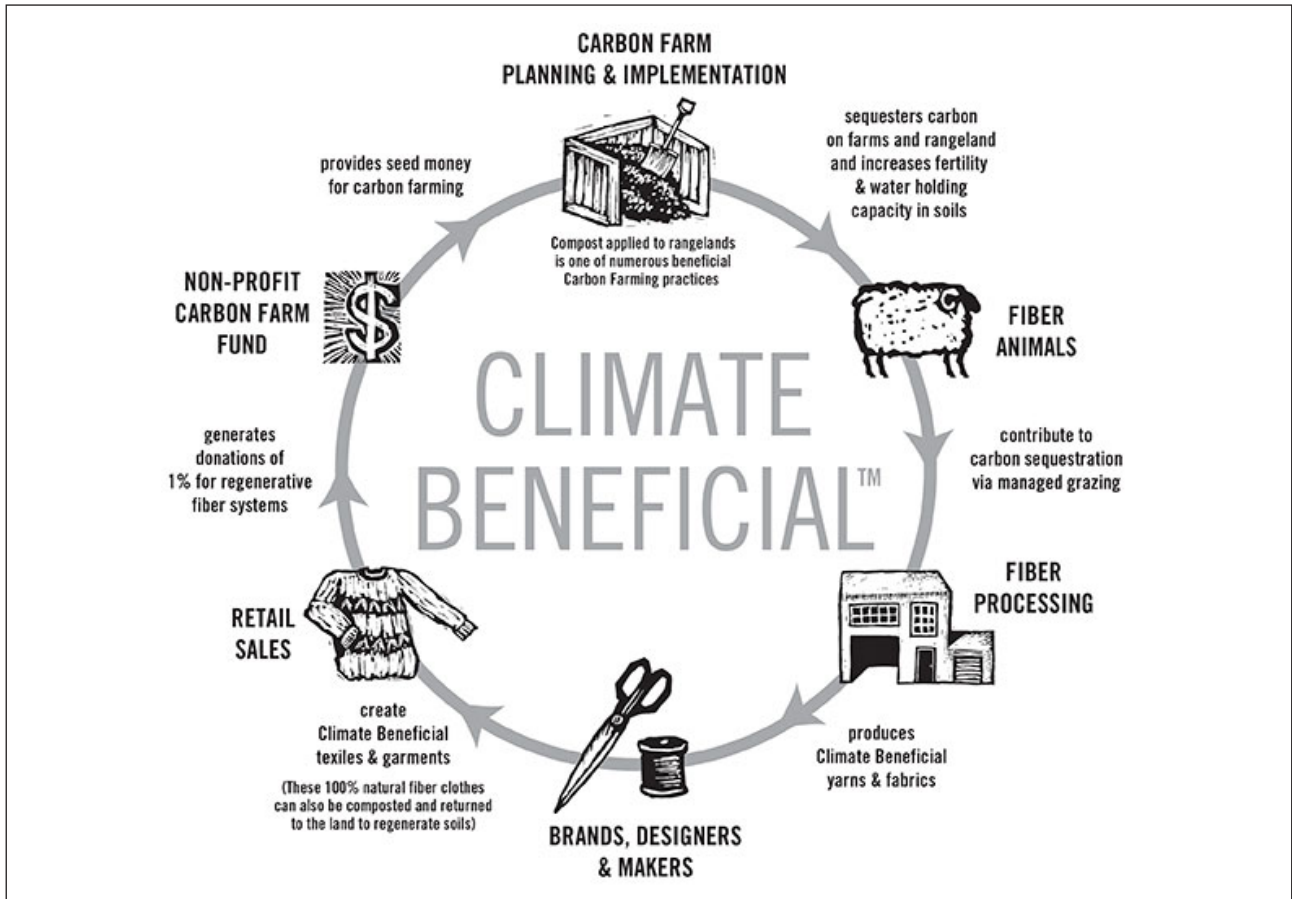
As an open system, and a proposition, Fibershed is a testament to the return of the maker. While in many ways we draw strength from the local food movement, a single garden plot can rarely support a full garment. To re-localize our fiber systems, we must renew our commit to supporting and expanding a network of makers.

Fibershed as One Facet of the Solution: a Tangible, Place-Based, Accessible Opportunity

In the face of the globalized fashion industry and unaccounted externalities, regionalized textile economies provide a tangible framework for supporting people and planet. A Fibershed is both a conceptual lens and a practical tool for assessing and connecting farmers, makers, and buyers. By imposing a geographical scope, we can trace the material flows of our community, account for the true costs of a soil-to-soil system, and innovate new systems for meeting our supply chain needs.

And yet, a Fibershed is just one of many opportunities for grassroots change in a global community. Embracing the diversity of our landscape and examining our community resources, we can support local makers and create intentional, reciprocal relationships with communities beyond our 'shed.' Closing the loop on material flow does not equate to closing our doors to the assets, skills, and just economies of other regions; rather, we can see the Fibershed as a model for replication, iteration, and cross-pollination.

At the recent COP21 meetings in Paris, the French government launched the 4 per 1000 campaign to rebuild soil and capture carbon. Our global future depends on taking action to reduce the negative effects of climate change, and the soil in our own backyard presents the opportunity to make a difference. Rooted in the soil and reliant on local action, Fibershed is poised as both a tool and a movement to engage in making community, making clothing, and making the future.



i <http://www.bls.gov/opub/uscs/report991.pdf>; <http://www.bls.gov/cex/csxann13.pdf>

ii <http://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-adoption.aspx>

iii <http://www.fibershed.com/economic-development/the-indigo-project/>

iv <http://www.fibershed.com/wool-inventory-mapping-project/>

v <http://www.fibershed.com/life-cycle-assessment/>