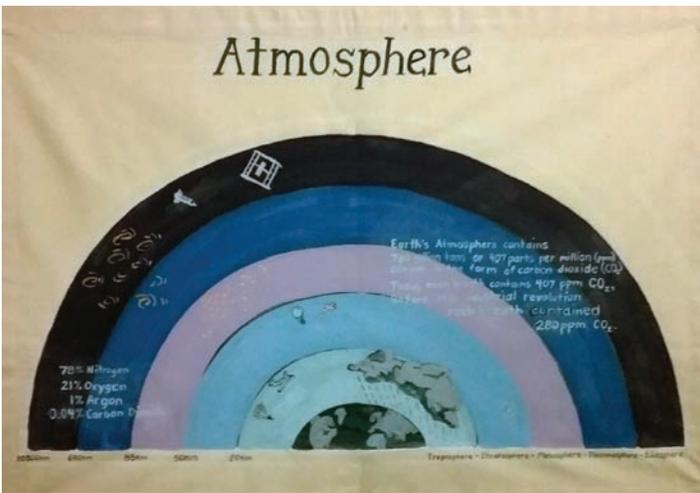
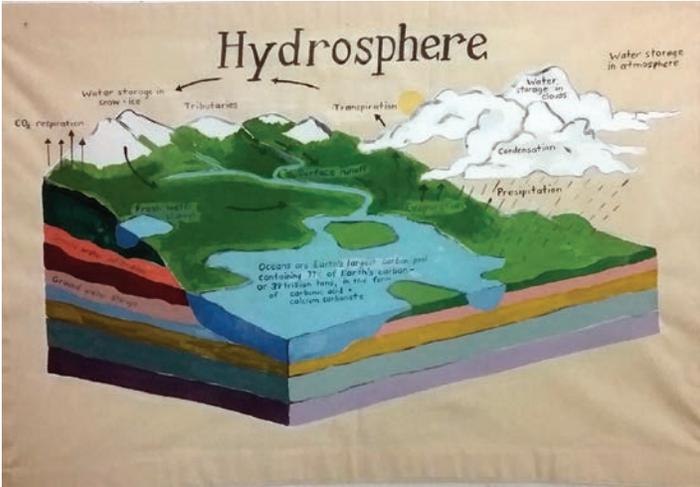


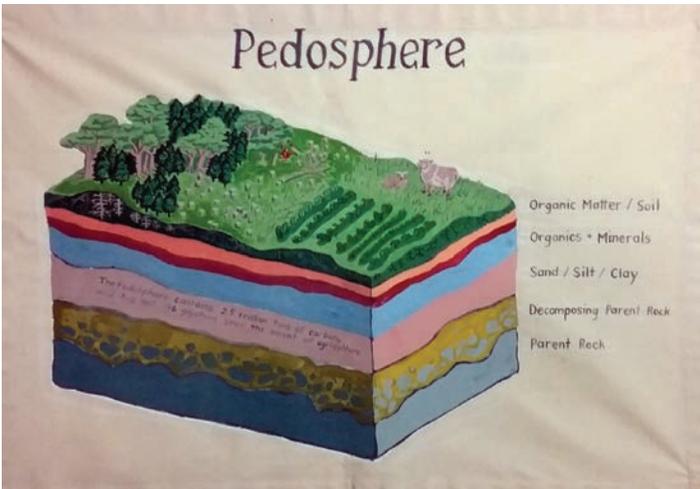
# Atmosphere



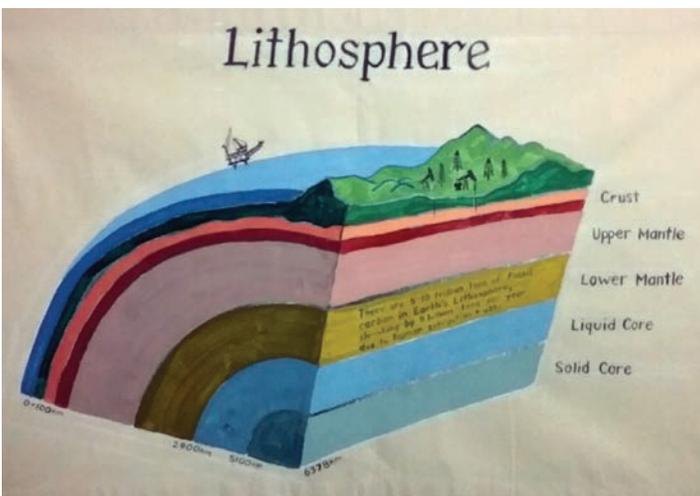
# Hydrosphere



# Pedosphere



# Lithosphere



# Fibershed Gala September 23, 2017: Climate Beneficial Clothing

*You are here tonight— walking, breathing, thinking and socializing within the biosphere, one of earth's five carbon pools.*

**C**ARBON is mutable and shows up in different forms depending on where it is within the carbon cycle. The clothing you are wearing today is generated or grown from one or more of these carbon pools. During both the growing and manufacturing process, and once we bring our garments into our wardrobes, our clothing (like our food) continues to make impacts that change the quantity and flow of carbon transferred between pools.

We invite you tonight to become a modern day tracker—a carbon tracker—a human willing and curious to discover, engage and harmonize with the carbon cycle through giving yourself the time to consider and contemplate which carbon pool is responsible for your choice of color and texture. This event is an opportunity to engage with new and yet ancient processes of clothing creation that are responsible for enhancing the movement of carbon out of the atmosphere and into our soils, while bridging the economies of urban and rural communities within our region of Northern California.

Tonight you have the opportunity to engage directly with the farmers, ranchers, makers and manufacturers who are working to build an equitable and climate change ameliorating social and economic movement to clothe you.



**FIBERSHED**

Local Fiber, Local Dye, Local Labor

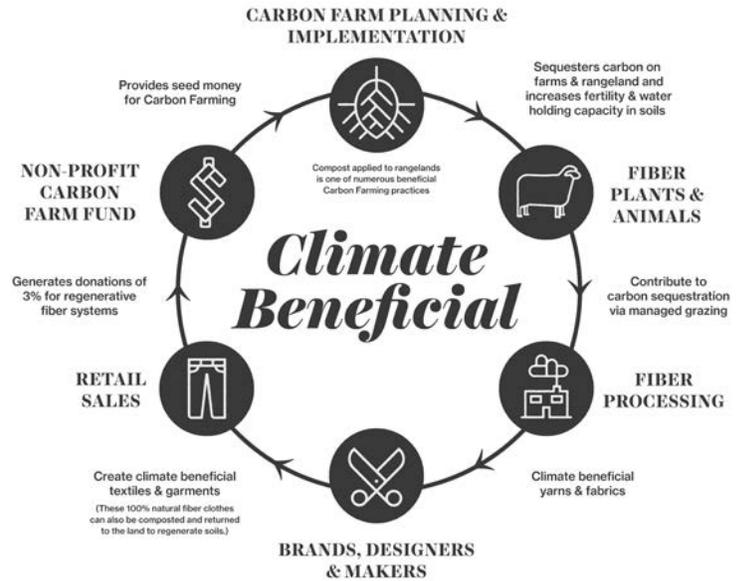
# Carbon Farming

**WORKING DEFINITION:** Carbon Farming involves implementing practices that are known to improve the rate at which CO<sub>2</sub> is removed from the atmosphere and is transformed into plant material and or soil organic matter. Carbon farming is successful when soil carbon gains resulting from land management exceed soil carbon losses.

The plant community is actively and constantly ‘inhaling’ carbon from the atmosphere to provide the raw material for its very structure and form. Natural fiber systems rely upon a plant’s utilization of the sun’s energy to capture carbon from our atmosphere and transform this captured carbon dioxide into the oxygen we breathe and into carbohydrates and complex carbohydrates known as cellulose, which become both what we wear directly (cotton, hemp, flax, nettle) or what feeds an animal whose fiber we wear (wool, alpaca, mohair, angora). The remainder of the carbon that is embodied in a plant’s residue or in the manure of a grazing animal (the parts we don’t wear or eat), eventually becomes part of the soil’s structure—this broken down plant material is a feedstock for micro-organisms whose activity generates the existence of soil organic matter. The vast majority of our agricultural systems could implement natural management strategies that increase photosynthetic capture and plant biomass, and in turn lead to the generation of increases in soil organic matter. Soil organic matter is approximately 58% carbon—if we continue to work towards enhancing the movement of carbon downward into our soils, our fiber and food growing systems could be transformed from net emitters to net removers of atmospheric carbon dioxide. In essence, our task is to move more carbon into the agricultural system than we pump out and lose to the atmosphere, while increasing the water holding capacity in our soils and overall productivity

**Latest talk on carbon:** Christina Figueres, the former Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), presented in the Spring of 2017 just outside of Paris to a group of farmers, scientists, policy writers and negotiators. Her clarion call included these words: *“2020 is a very serious milestone. Within this decade we must begin to bend the curve of emissions downward, we must end deforestation, we must restore 150 million hectares of degraded soil, and ecological carbon capturing farming practices will have to be the practices of choice. We already know that the reasons for doing this are equally about our security. Globally corn yields are down 4%, wheat is down 5%, 60 million people have been displaced by extreme weather, and the number is growing.”*

We work as a producer-focused, member-based community to support an understanding of the technical and economic realities and the economics of how we can draw down carbon from our atmosphere and into our soils, and the implications for this work in regard to the climate crisis. In addition to building an understanding of the climate change mitigating and ameliorating benefits of Carbon Farming, we also focus on the primary and ancillary benefits of increasing soil carbon levels, including the enhancement of the soil’s water holding capacity and increases in net primary productivity.



## What is Climate Beneficial Wool?

**A** SIGNIFICANT NUMBER OF THE SHEEP in our region are moved through and grazed upon the vegetation of California’s rangeland, pasture, perennial and annual cropland systems. Currently alpaca, llama and mohair producers also utilize pasture (managed, grazed domestic forage) and to some degree rangeland (grazed resident vegetation) for their agricultural practices. All of these grass-fed, fiber-producing animals have the potential to graze on managed landscapes where Carbon Farming practices are being implemented, thus creating products that are Climate Beneficial™, by virtue of their integral place in the Carbon Farming system.

Carbon Farming Practices can be measured and monitored for the enhancement of soil carbon storage, and therefore material coming from these landscapes can be verified as Climate Beneficial. In an initial research study by Dr. Marcia deLonge of UC Berkeley’s Silver Lab, it was shown that sheep grazed on compost-applied rangelands produced wool with a net carbon benefit. Moving that net negative footprint wool through a regional and renewable energy powered supply chain would produce a garment with a negative CO<sub>2</sub> footprint. Comparing conventional to Climate Beneficial production shows a carbon footprint differential of over 150 pounds of CO<sub>2</sub> per garment.

## Implications for Brands and Artisans

Fibershed assessed California wool for its quality and quantity. It is now known that a considerable amount of California’s wool (over 900,000 pounds per year) is a fine enough micron count for some form of garment production, and over two million pounds is suitable for felt, bedding, and durable goods. Regional and place-based clothing and durable goods offer a new wave of opportunity to explore the potential of our landscape to be managed for carbon draw-down while providing essential goods for human need. Together, we can build collaborations between farmers, ranchers, land managers, makers and end-users to move carbon out of our atmosphere and into our soils, while building our local economies and generating heirloom quality and place-based durable goods and textiles.

## Schedule

4:00 - 6:00 pm

**Appetizers & Beverages**

**Fibershed Marketplace**

**Hands-on Demonstrations**

**Silent Auction Preview**

**Live Music:**

Gaucho (gauchojazz.com)

Marcella Stone-Fox

**Raffle**

6:00 - 7:00 pm

**Program at the Main Stage:**

**Fibershed Producers Lani Estill & Ryan Huston  
and Fibershed Founder Rebecca Burgess**

**Climate Beneficial Fashion Show**

7:00 - 8:00 pm

**Final Bidding in the Silent Auction**

**Silent Auction and Raffle Winners Announced**

**Dessert**

## Marketplace Vendors

**Sarah Keiser** / Wild Oat Hollow

**Peggy Agnew** / Red Creek Farm

**Robin Lynde** / Meridian Jacobs

**Mary Pettis-Sarley** / Twirl Yarn

**Lani Estill** / Lani's Lana

**Sally Fox** / Vreseis Ltd.

**Marie Hoff** / Full Circle Wool

**Megan Bre Camp** / Summer Sequoia

**Leslie Adkins** / Heartfelt Fiber Farm

**Hazel Flett** / Bodega Pastures

**Carol Frechette** / 2NFrom

**Jackie Post** / Sheep to Shop

**Marlie de Swart** / Bo-Rage Yarns & Designs

**Heidi Iverson** / HIJK

**Amy Keefer** / Blaer Knits

**Brittany Cole Bush** / Shepherdess Holistic Hides

**Lydia Wendt** / CA Cloth Foundry

**Myrrhia Resneck** / Myrrhia Fine Knitwear

## Appetizers & Beverages

**Local Farms included in our Menu**

**True Grass Farms** – Estero Americano, Marin

**Flatbed Farm** – Glen Ellen, Sonoma

**Oakhill Farm** – Glen Ellen, Sonoma

**Paul's Produce** – Sonoma

**Big Mesa Farm** – Bolinas, Marin

**Gospel Flat Farm** – Bolinas, Marin

**Oz Family Farms** – Dry Creek Valley, Sonoma

**Holistic Ag** – Pepperwood Preserve, Sonoma

### Local Cheeses

**Cowgirl Creamery** – Point Reyes, Marin

**Bellwether Farm** – Valley Ford, Sonoma

**Bleating Heart** – Marshall, Marin

**Nicasio Valley Cheese** – Nicasio, Marin

Bread: **M&H Bakery** – San Anselmo, Marin

### Beverages

**North Coast Brewing Co.** – Fort Bragg, Mendocino

**Thackrey Wines** – Bolinas, Marin

Fifi (rosé), La Pleiade (white blend), Pleiades (red)

**St. George Spirits** – Alameda

Botanivore Gin, Terroir Gin, California Citrus Vodka

**Revive Kombucha** – Petaluma, Sonoma

**Equator Coffee** – San Rafael, Marin

**Gathering Thyme** – San Rafael, Marin

Loose Leaf Herbal Teas

### Catering

**Isa & many helping hands** (isa@vom.com)

**True Grass Farms** (truegrassfarms.com)

## Hands-on Demos

**Chico Flax Project** / Flax Processing

**Red Twig Farm** / Natural Dyes

**Twirl Yarn** / Fiber Animals

**Spindles & Flyers Spinning Guild** / Spinning Cotton

**Spindles & Flyers Spinning Guild** / Weaving

**Harvest + Mill** / Organic Cotton Textiles

**Huston Textile Co.** / Organic Cotton Cloth

# Climate Beneficial Clothing

**M**ANY OF THE GARMENTS created by the designers in this evening's show were made with the first finely woven Climate Beneficial Wool that our state has ever produced. Bare Ranch is the source for the Rambouillet wool that was woven by our region's first mechanical weaving mill—Huston Textile Company opened their doors in May of 2017. The project represents a strong potential for how we can grow value for protein fiber producers in our state with a material that has for too long been disregarded as an economic by-product. This project to create a fine wool cloth not only restores economic value to regionally produced and raised fibers, but addresses the land management associated with those fibers.

In 2016, the first large scale Carbon Farm Plan was completed for Bare Ranch—the plan outlines that the greenhouse gas impact for implementing Carbon Farming practices will sequester 111,581 metric tons of CO<sub>2</sub>e over the 20-year span of time required to see many of the projects into maturity, which is equal to offsetting the emissions produced by 23,740 passenger vehicles in a year. The increase in soil water holding capacity at the ranch was measured at over 520 acre feet, or 169.5 million gallons, this amount of water holding capacity is equivalent to the amount of water used by 1,730 California households in a year. Once each practice is implemented (and that is underway now), the green house gas mitigation and carbon sequestration impact would be 4,068 metric tons of CO<sub>2</sub>e annually—this annual draw down rate would effectively offset 6 to 9.3 times the green house gas emissions associated with the ranch's wool production each year.



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## 1a–Victoria's Shoulders Capelet

**Designed by Marlie de Swart of Bo-Rage Yarns & Designs**

*Materials:* Rambouillet yarn from Lani's Lana, Wensleydale curls from Black Mountain Farm

*Process:* Machine knit, needle felting

*Size:* One size

*Starting bid:* \$165

## 1b–Felted Wool Vest

**Designed by Theresa Markwood of Treehouse Felt**

*Materials:* Lani's Lana fine natural grey Rambouillet wool

*Process:* Wet felting technique

*Size:* Medium

*Starting bid:* \$100

## 1c–Whitecap Tee Dress

**Designed by CA Cloth Foundry**

Available in the Fibershed Marketplace or at [clothfoundry.com](http://clothfoundry.com)

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## 2a– Gaucho Style Wrap Pants & Cropped Apron Top Set

**Designed by Rachel Kulinski of Running River Designs**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed with locally harvested black walnuts.

*Process:* Sewn on machine, cut and dyed by hand

*Size:* Small

*Starting bid:* \$150

## 2b–Yerba Buena Hat

**Designed by Carol Frechette of 2Nfrom**

Climate Beneficial Wool hat in natural/white, with wide brim and handwoven hat band

*Materials:* Wool fleece from Full Circle Wool; hat band of Foxfibre® organic cotton, Spring Coyote Ranch Navajo Churro and wool from Bodega Pastures

*Process:* Picking, cleaning and carding wool fleece, needle felting carded batting, needle felting hat parts together, machine stitching specific parts of the hat, loom weaving of hat band

*Size:* M/L

*Starting bid:* \$100

## 2c–Wool Felt Backpack

**Designed by Matt Katsaros of Matt Katsaros Studio**

*Materials:* Wool felt from Casari Ranch, veg tanned leather, copper rivet, oak wood

*Process:* Needle felted, cut & sewn

*Starting bid:* \$250

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### 3a–Irma Jumpsuit

**Designed by Geana Sieburger of GDS Cloth Goods**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company)

*Process:* The Irma Jumpsuit was created by combining two different patterns—the top from the Porto Alegre apron and a pants pattern we produced several years ago. We added two pockets at sides and a third almost hidden side bib pocket for a wallet or phone. It's easy to slip into and shapes perfectly to the body. A little peep hole allows the strap to come from back to front and tie in a comfortable position. The piece is undyed in case the winning bidder wants to dye the piece themselves or work with a dyer to choose their own color. I can offer suggestions for dyers if they would like to take that route.

The jumpsuit is named after the designer's paternal Brazilian-German grandmother, coincidentally timed with the recent hurricane hitting the East Coast.

*Size:* fits sizes 0-4

*Starting bid:* \$480

### 3b–Clogs

**Designed by BRYR Studio**

Available on [bryrstudio.com](http://bryrstudio.com)

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### 4a–Persephone Tunic

**Designed by Sally Fox of Vreseis**

**Machine knit by Myrrhia Resneck of Myrrhia Fine Knitwear**

*Materials:* Vreseis organic superfine merino wool from Viriditas Farm, certified Biodynamic by Demeter; Foxfibre® Colorganic® Sierra Sienna red cotton, certified Biodynamic by Demeter

*Size:* Medium

*Starting bid:* \$500

### 4b–Capsaicin (pepper) Spray Lace Collar

**Designed by Amy Keefer**

*Materials:* Foxfibre® organic pima cotton thread

*Process:* Handmade Irish crocheted lace

*Size:* One size

*Starting bid:* \$425

### 4c–Waxed Cloth Tote

**Designed by Matt Katsaros of Matt Katsaros Studio**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), veg tanned leather, copper rivets

*Process:* Naturally dyed with pine bark, waxed, cut & sewn

*Starting bid:* \$300

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### 5a–Riverbend Reversible Halter Top

**Designed by Karen Hess of Local Dialect**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed with indigo on one side, and oak galls with iron on the other side; sewn with silk thread

*Size:* M/L

*Starting bid:* \$350

### 5b–Riverbend Skirt

**Designed by Karen Hess of Local Dialect**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed with indigo, sewn with silk thread

*Size:* M/L

*Starting bid:* \$450

*Process:* In Petaluma, where the designer was born and still lives, the Petaluma River bends through town, causing all the streets for a few blocks to have a bend in them as well. The natural shape of the river dictates the shape of the town itself. Likewise, the cloth used for this project influenced the design. The thicker, twill-like fabric asked for a structured, bias-cut design in order to fit and flow. The local nature of the materials also guided the process: both top and skirt wrap to close and to fit. The top is also reversible, like the town's river, which is actually a tidal estuary that reverses course with the tides.

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### 6a–Men's Casual Dress Chambray Shirt

**Designed by Laurie Berliner of Madge & Me**

*Materials:* Huston Textile Chambray self; contrasts (under collar and sleeve facing) of Vreseis USA-grown and manufactured organic cotton flannel; pocketing of Foxfibre® USA-grown, Japan-milled organic cotton; notions (interfacing, buttons and braid) purchased at Britex, San Francisco CA

*Process:* Made to measure, flat paper pattern, manually cut and machine sewn

*Size:* Large

*Starting bid:* \$150

### 6b–Men's Casual Dress “Union Cloth” Trousers

**Designed by Laurie Berliner of Madge & Me**

*Materials:* Huston Textile “Union Cloth” of 50/50 Climate Beneficial Wool/organic cotton, walnut dyed by Red Twig Farm; contrasts (waistband and back pocket flap facing) of Vreseis USA-grown and manufactured organic cotton flannel; pocketing of Foxfibre® USA-grown, Japan-milled organic cotton; notions purchased at Britex, San Francisco CA; USA manufactured zipper by Custom Zippers, Norwalk CT

*Process:* Made to measure, flat paper pattern, manually cut and machine sewn

*Size:* Men's 34-inch waist

*Starting bid:* \$200

## 6c–Men’s Climate Beneficial Wool Bomber-style Winter Jacket

**Designed by Laurie Berliner of Madge & Me**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani’s Lana and woven by Huston Textile Company), walnut-dyed by Heather Podoll and Gina Smith of Red Twig Farm; quilted lining of Vreseis USA-grown and manufactured organic cotton flannel, local wool batting from Full Circle Wool and imported silk organza; cross back and under collar contrasts of Chico Flax woven with Foxfibre® Colorganic® cotton (custom woven by Sandy Fisher, Chico Flax Project); sleeve and waistband facing, and hand warmer pocketing of Vreseis USA-grown and manufactured organic cotton flannel; pocketing and bodice facing flat piping of Foxfibre® USA-grown, Japan-milled organic cotton; notions (buttons and interfacing) purchased at Britex, San Francisco CA; USA manufactured zipper by Custom Zippers, Norwalk CT

*Process:* Made to measure, flat paper pattern, manually cut and machine sewn

*Size:* Large

*Starting bid:* \$350

## 6d–Backyard Beanie

**Designed by The North Face**

*Materials:* Climate Beneficial Rambouillet wool from Lani’s Lana, natural white

*Size:* One size

Available on [thenorthface.com](http://thenorthface.com)

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## 7a–Nikki’s Coat

**Designed by Daniel DiSanto**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani’s Lana, woven by Huston Textile Company), indigo dyed by Heather Podoll and Gina Smith of Red Twig Farm

*Process:* Cut and sew

SOLD

## 7b–Whitecap Tee Dress

**Designed by CA Cloth Foundry**

Available in the Fibershed Marketplace or at [clothfoundry.com](http://clothfoundry.com)

## 7c–Nepeta cataria (catnip) Lace Collar

**Designed by Amy Keefer**

*Materials:* Foxfibre® Colorganic® green cotton thread

*Process:* Handmade Irish crocheted lace

*Size:* One size

*Starting bid:* \$425

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## 8a– Phoenix Kimono Duster

**Designed by Andrea Plell & Myrrhia Resneck of Halcyon Love**

*Materials:* Lani’s Lana fine Rambouillet wool yarn, plant dyed pink with locally foraged loquat leaves; machine knit

*Size:* One size

*Starting bid:* \$500

## 8b–Bralette Crop in Ginkgo

**Designed by Andrea Plell & Myrrhia Resneck of Halcyon Love**

*Materials:* Foxfibre® Colorganic® green cotton

*Process:* Machine knit

*Size:* Medium

*Starting bid:* \$50

## 8c–Kiki Shorts in Ginkgo

**Designed by Andrea Plell & Myrrhia Resneck of Halcyon Love**

*Materials:* Foxfibre® Colorganic® green cotton, vintage buttons

*Size:* Medium

*Process:* Machine knit

*Starting bid:* \$75

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## 9a–Shepherd’s Pinafore

**Designed by Carol Lee Shanks**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani’s Lana, woven by Huston Textile Company), Lani’s Lana 4-ply Rambouillet yarn, cotton thread

*Process:* Cut and sewn; surface embellishments include hand and machine stitching, fulling, folding, piecing and patching

*Size:* Medium

*Starting bid:* \$400

## 9b– Shepherd’s Jacket

**Designed by Carol Lee Shanks**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani’s Lana, woven by Huston Textile Company), Lani’s Lana 4-ply Rambouillet yarn, cotton thread

*Process:* Cut and sewn; surface embellishments include hand and machine stitching, fulling, folding, piecing and patching

*Size:* Medium

*Starting bid:* \$300

## 9c–The Sophia Hat

**Designed by Carol Frechette of 2Nfrom**

*Materials:* Shetland wool from Joshua Farm, alpaca fiber

*Process:* Picking, cleaning and carding wool fleece, needle felting carded batting, needle felting hat parts together, machine stitching specific parts of the hat, braiding the alpaca/shetland hatband

*Size:* S/M

*Starting bid:* \$100

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## 10a–River Trees Top

**Designed by Kori Hargreaves of Ecotone Threads/Dawn Creek Farm**

*Materials:* Warp is Foxfibre® Colorganic® buffalo brown cotton, overdye with oak galls and iron to create a deep warm brown/black. Weft is Lani's Lana Rambouillet yarns (and some hand spun), dyed in eucalyptus, willow and oak galls collected from trees along the designer's local riverbank, and with madder and indigo from her farm.

*Process:* Handwoven, hand-dyed, some hand spun, cut and sew

*Size:* Medium

*Starting bid:* \$200

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## 10b–Celeste Skirt

**Designed by Kori Hargreaves of Ecotone Threads/Dawn Creek Farm**

Sleek, high-waisted pencil skirt

*Materials:* Vreseis organic cotton rib knit fabric, overdye with oak galls and iron

*Process:* Cut & sew

*Size:* Medium

*Starting bid:* \$275

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## 11a–Ponja winter pants

**Designed by Industry of All Nations**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company)

*Size:* Medium

*Starting bid:* \$100

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## 11b–Drewster Hand-Knit Sweater

**Designed by Industry of All Nations  
Knit by Lily Reid of Apprentice Studio**

*Materials:* Lani's Lana fine Rambouillet yarn, hand knit

*Size:* Medium

*Starting bid:* \$200

## 11c–Sport Coat

**Designed by Victor Kali of Kali Made Garments**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company)

*Size:* 42

*Starting bid:* \$200

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## 11d–Waxed Cloth Tote

**Designed by Matt Katsaros of Matt Katsaros Studio**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), veg tanned leather, copper rivets, dyed with oak galls and iron

*Process:* Naturally dyed, waxed, cut & sewn

*Starting bid:* \$300

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## 11e–Porteños Saddle Loafers

**Designed by Industry of All Nations**

*Materials:* 100% leather, hand-stitch in Buenos Aires, Argentina

Available on [industryofallnations.com](http://industryofallnations.com)

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## 12a–Above/Below (worn as top)

**Designed by Prairie Underground**

Introduced in the Prairie Underground Fall 2015 collection "Worn Both Ways," Above/Below is a convertible boatneck pullover or sarouel trouser interpreted in Community Supported Cloth. It can be worn as a top or pants by turning the garment upside down. Patch pockets remain functional in both directions.

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), Lani's Lana Rambouillet yarn, Fox Rich 100% organic cotton sateen used as facings.

*Process:* Cut and sew

*Size:* fits 4-6

*Starting bid:* \$300

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## 12b–Hand Loom Short

**Designed by Prairie Underground**

*Materials:* Lani's Lana fine Rambouillet yarn in natural white  
A mid-rise wool hot pant with cover stitched elastic waistband.

*Process:* Knitted on a hand loom in the Prairie Underground studio, it has been pre-laundered for ease in care.

*Size:* fits 4-6

*Starting bid:* \$120

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### 13a–Sleeveless Mini Dress

**Designed by Heidi Iverson of HIJK**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed with oak galls and iron

*Size:* fits size 6 - 10

*Starting bid:* \$250

### 13b–Shawl Collar Vest

**Designed by Heidi Iverson of HIJK**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed with oak galls and iron

*Size:* One size

*Starting bid:* \$200

### 13c–‘Jess Brown for Fibershed’ Doll

**Designed by Jess Brown Designs**

Handmade custom Jess Brown rag doll

*Materials:* 100% linen stuffed with sustainable corn fiber and detailed with bamboo thread. Dress and hair of Avocado-dyed Community Supported Cloth (made of Rambouillet wool from Lani's Lana and woven by Huston Textile Company), felt mouth and alpaca knit stockings.

*Starting bid:* \$175

### 13d–Wool Felt Tote

**Designed by Matt Katsaros of Matt Katsaros Studio**

*Materials:* Wool felt from Sheep to Shop, veg tanned leather, copper rivet

*Process:* Needle felted, cut & sewn

*Starting bid:* \$200

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### 14a–Oak Cloak

**Designed by Ashley Eva Brock**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), lined with Foxfibre® USA-grown, Japan-milled organic cotton chambray; dyed with local oak gall, eucalyptus leaf and sukumo indigo, grown by Rebecca Burgess at Riverdog Farm; cotton thread

*Size:* Inclusive medium (small-medium to medium-large)

*Starting bid:* \$1,200

### 14b–Red Tail Hawk Striped Tank

### 14c–French Terry Joggers in Oat

**Designed by CA Cloth Foundry**

Available in the Fibershed Marketplace or at [clothfoundry.com](http://clothfoundry.com)

### 14d–Waxed Cloth Tote

**Designed by Matt Katsaros of Matt Katsaros Studio**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), veg tanned leather, copper rivets, biodynamically grown madder root from DaVero Winery

*Process:* Naturally dyed, waxed, cut & sewn

*Starting bid:* \$300

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### 15a–Fall Sunset Shawl

**Designed by Robin Lynde of Meridian Jacobs**

*Materials:* Wool from Anderson Ranch and Timm Ranch blended with Jacob wool from Meridian Jacobs, coreopsis and dahlia

*Process:* Naturally dyed, hand woven

*Starting bid:* \$250

### 15b–Red Tail Hawk Striped Tee Dress

**Designed by CA Cloth Foundry**

Available in the Fibershed Marketplace or at [clothfoundry.com](http://clothfoundry.com)

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### 16a–Phyllis Coat

**Designed by Molly de Vries of Ambatalia**

Inspired by a black and white check wool coat made by Pendleton my mother bought my grandmother in 1955 downtown Mill Valley at the Meyers department store.

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company)

*Process:* Free hand drawn and cut pattern, 50% machine sewn and 50% hand sewn.

*Size:* Small

*Starting bid:* \$300

### 16b–Estelle Halter Top

**Designed by Molly de Vries of Ambatalia**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), dyed pink with locally foraged loquat leaves; Vreseis buffalo brown organic cotton flannel

*Process:* Hand cut pattern from memory of the halter that my grandmother wore in the 60s, no-waste patch work, 50% machine sewn and 50% hand sewn

*Size:* Small

*Starting bid:* \$120

## 16c–Annabel Pants

**Designed by Molly de Vries of Ambatalia**

*Materials:* Vreseis buffalo brown organic cotton flannel

*Process:* Hand-cut pattern, machine sewn, handmade deer antler button

*Size:* Small

*Starting bid:* \$110

## 16d–Patchwork Bento Bag

**Designed by Molly de Vries of Ambatalia**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company); Foxfibre® Colorganic® cotton terry cloth; dyed with locally harvested oak galls and loquat leaves

*Starting bid:* \$175 (value: \$225)

## 16e–Wood sandals

**Designed by Molly de Vries of Ambatalia**

*Materials:* Local fallen oak, Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company)

*Process:* Woodworking by Jim Lino, sewing and construction by Molly de Vries

*Size:* 7.5

*Starting bid:* \$125

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## 17a–Wool Moth Coat

**Designed by Prairie Underground**

First introduced in 2008 the Moth Coat remains a staple in Prairie Underground's wardrobe and collection. Dual corded channels and button closures offer a variety of styling options to adjust the length, lapel shaping and overall silhouette.

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), Lani's Lana Rambouillet yarn.

*Size:* 4-6

*Starting bid:* \$450

## 17b–Handloom Tank

**Designed by Prairie Underground**

A fully fashioned, wool tank with a deep v-neck. Knitted on a hand loom in the Prairie Underground studio, it has been pre-laundered for ease in care.

*Materials:* Lani's Lana fine natural white Rambouillet yarn

*Size:* 4-6

*Starting bid:* \$175

## 17c–Above/Below (worn as pant)

**Designed by Prairie Underground**

Introduced in the Prairie Underground Fall 2015 collection "Worn Both Ways," Above/Below is a convertible boatneck pullover or sarouel trouser interpreted in Community Supported Cloth. It can be worn as a top or pants by turning the garment upside down. Patch pockets remain functional in both directions.

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), Lani's Lana Rambouillet yarn, Fox Rich 100% organic cotton sateen used as facings.

*Process:* Cut and sew

*Size:* fits 4-6

*Starting bid:* \$300

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## 18a–Strata dress

**Designed by Cassidy Wright of The Moon**

*Materials:* 100% wool yarn (Lani's Lana fine Rambouillet yarn, Twirl yarn, Vreseis organic merino yarn), dyed with local indigo and coffeeberry

*Process:* Hand crocheted

*Size:* S/M

*Starting bid:* \$500

## 18b–Gathering Cloak

**Designed by Cory Gunter Brown of The Moon**

*Materials:* Community Supported Cloth (made of Rambouillet wool from Lani's Lana, woven by Huston Textile Company), Twirl mohair tips (from Cashew the goat), leather, local oak galls

*Process:* Cut & sew, hand dyed with locally foraged oak galls using an itajime clamp resist

*Size:* S/M

*Starting bid:* \$250

## Credits

*Event Planning:* Andrea Plell, Ecologique Fashion

*Hair:* Darby Ciampi

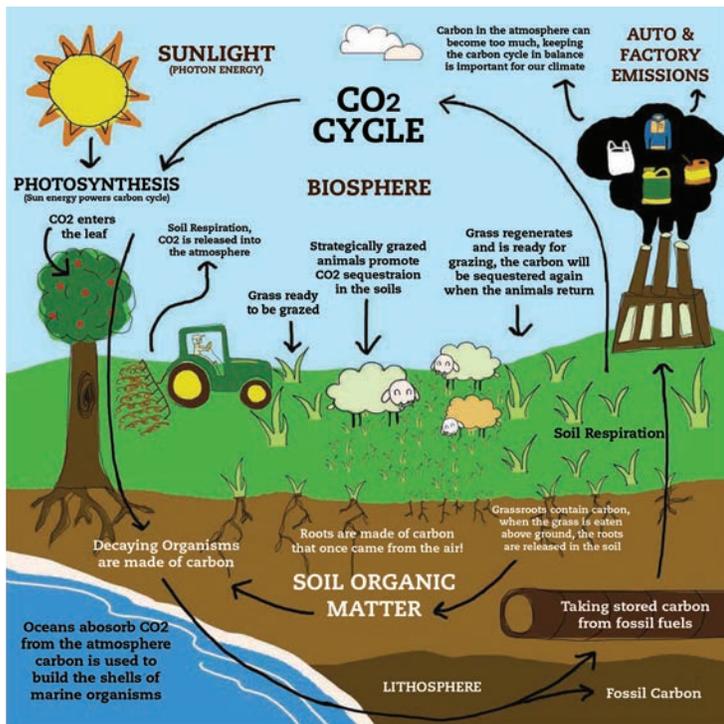
*Makeup:* Amy Frugard

*Models:* Celeste Thompson, Michael Hayes, Natalia Bertotti, Annabel de Vries, Victor Kali, Serah Blackstone-Fredericks, Nikki Silvestri, Sierra Reading, Asha Richardson, Sophia Elliott

*Set Design:* Courtney Scott

*Photography:* Paige Green Photography

*Fibershed Staff:* Rebecca Burgess, Jess Daniels, Marie Hoff, Heather Podoll



The scientific community has concurred that the last time the earth had this much carbon in the atmosphere, the planet was much warmer and humans did not exist. Research in the journal *Science* states that the last time CO<sub>2</sub> was this high was in the Middle Miocene period, 20 million years ago, and sea levels were 80-140 feet higher than they are today.<sup>5</sup>

## Economic Challenges to Balancing the Carbon Cycle

**D**UE TO MAINSTREAM CONSUMPTION HABITS we have allowed for and hastened the move towards consolidation and centralization of what are fragile material production systems. From food, fiber and energy, industrial era design thinking has no analogy within the natural world. Nowhere in nature does an ecological system rig the design to preferentially benefit the status of a few species over the wellbeing of the many. Within the fiber system, it has proved financially advantageous to move production to countries with very little to no environmental or labor regulations. The world's second largest exporter of clothing is Bangladesh—the country produces upwards of \$19 billion worth of garments per year for major global clothing brands, produced by nearly 4 million individual textile workers. In the summer 2017, more than one third of the country found itself submerged and underwater by the epic monsoon rain events that have displaced more than 24 million people in the region. The country has little infrastructure, and little to no regulation that would support the generation of the infrastructure required to sustain resilient communities.

Even with climate destabilization impacting people's lives in such core ways, and even with significant and detrimental impacts to large scale brands' bottom lines, the textile industry remains unaccounted for within global carbon cycle modeling—unlike energy and food systems, we've yet to concretely map and measure the climate impact of the current global textile industry. Very rough estimates that do not include the impact of agriculture assume that textiles account for 10% of global emissions—while the number is well circulated in blog articles, it shows to be a generic figure with many uncited references. Because we have little understanding of the carbon cycle impact of fiber systems, we have little to no global agreement about how to address a problem whose magnitude has remained unmeasured.

What we can say about our current predicament is that there is an imperative to take productive action to ameliorate the carbon cycle imbalance and the resulting social and economic injustices that this imbalance creates. We know that consumers prop up centralized global supply chains through chasing low prices, and this pushes on the brands and manufacturers to externalize costs such as carbon dioxide

## The Carbon Cycle

**T**HE OCEANS are the largest carbon pool on earth and contain approximately 39 trillion tons of carbon, which accounts for 77% of the earth's carbon<sup>1</sup>—within this pool carbon exists as carbonic acid (which is causing ocean acidification) and calcium carbonate (ingredient in sea shells). Within the earth's LITHOSPHERE, carbon shows up as fossil carbon, and there are 5 to 10 trillion tons of fossil carbon within our earth, a number that is shrinking by 8 billion tons per year due to human extraction and use.<sup>2</sup> The PEDOSPHERE, or soil carbon pool—contains 2.5 trillion tons of carbon and is known to have lost 136 gigatons since the advent of agriculture.<sup>3</sup> The BIOSPHERE (including everything that is alive between the soil and the atmosphere) contains 560 billion tons of carbon. In the ATMOSPHERE carbon exists as carbon dioxide and this carbon pool currently contains 780 billion tons, which equates to approximately 407 parts per million of carbon dioxide within our air (and this figure is rising). Every breath you take today has 407 parts per million of carbon dioxide in it (and this number is on the increase); if you'd taken a breath of air before we began burning fossil fuels in the pre-industrial revolution era, you might have inhaled 280 parts per million of carbon dioxide into your lungs with each breath.

Because of our consistent and large-scale burning of fossil carbon, the oceans have been functioning to balance the carbon emissions to seek equilibrium, and by doing so they have largely absorbed the excess carbon dioxide that has been pumped and dumped into our atmosphere to the tune of 2.3 billion tons per year.<sup>4</sup> Ocean acidification is a consequence of this equilibrium effect, and this process has negatively impacted the health of the ocean life at every trophic level.

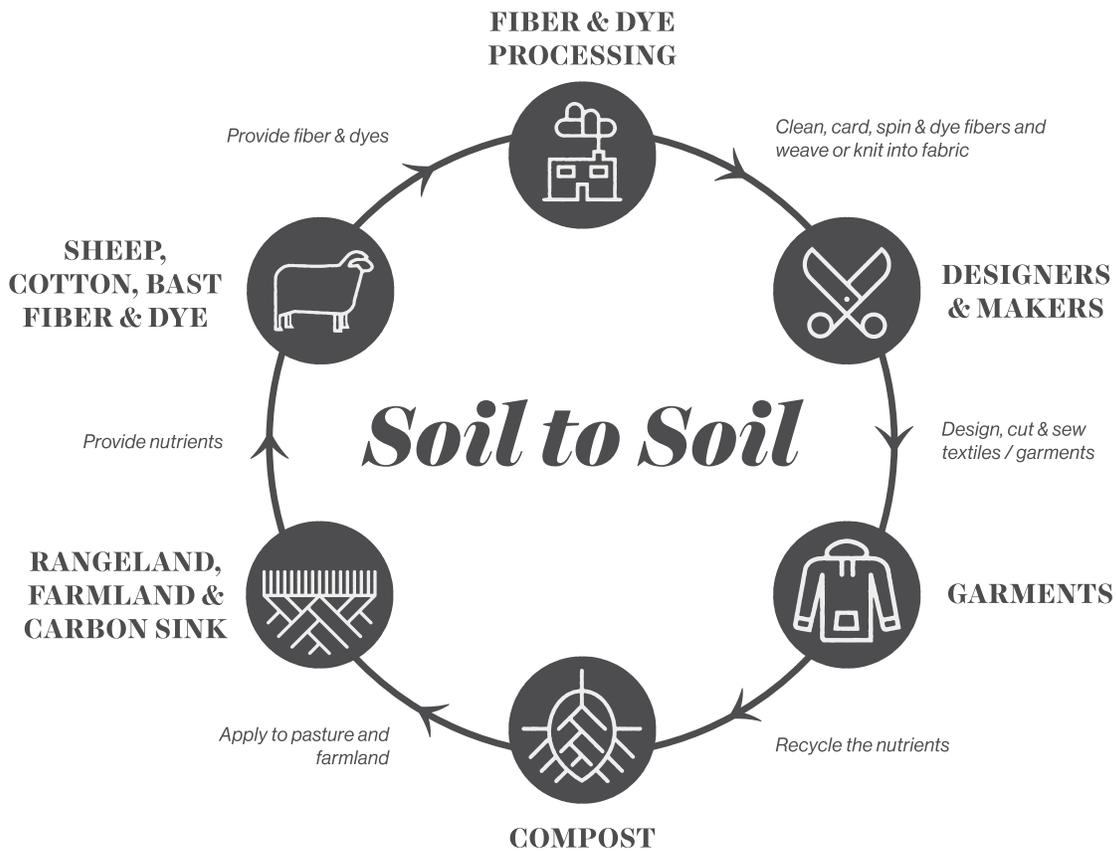
<sup>1</sup> Eric Toensmier, *The Carbon Farming Solution*, 9

<sup>2</sup> Eric Toensmier, *The Carbon Farming Solution*, 10

<sup>3</sup> Eric Toensmier, *The Carbon Farming Solution*, 10

<sup>4</sup> Eric Toensmier, *The Carbon Farming Solution*, 10

<sup>5</sup> <http://science.sciencemag.org/content/326/5958/1394>



emissions, and it forces a heavy reliance on \*cheap\* fossil carbon derived fibers and dyes, all of which pushes these production centers into becoming net contributors to carbon imbalance, and thus contributors to extreme weather that impacts us all but leaves the most vulnerable subject to the greatest risk. When the second largest exporter of textiles in the world is submerged by extreme monsoon flooding and rising sea levels, we are given immediate insight into the lack of resilience that has been built into the design of our global manufacturing systems.

## Fibershed's Theory of Change

**F**IBER SYSTEMS (like food systems) will need to construct themselves like an ecosystem to maintain resilience within the world we are entering and have already caught a glimpse of. A combination of both decentralizing and scaling closed-loop, mid-tear, vertically-integrated, soil-to-soil value chains strategically across the landscape will provide opportunities to clothe human populations while enhancing livelihood development (re-skilling and re-shoring). These decentralized growing and milling systems will ensure local oversight and transparency of all aspects of fiber system production (easier monitoring of soil carbon building, animal welfare and labor standards). Decentralization and some level of redundancy will enhance the resiliency of our fiber and food systems and will generate opportunities for rural and urban communities to form economic bridges, social understanding and mutual respect.

We evaluate our work to develop fiber systems with criteria that ensures resilience at a global scale, while simultaneously

focusing on how fiber and food systems can function to ameliorate the carbon cycle imbalance that is creating climate change and the resulting social and economic injustices:

- We execute projects that focus on regional economic pathways to transition from fossil carbon fueled systems to biosphere-based systems (sustaining and generating land-based livelihoods).
- We focus on projects within our Fibershed communities that utilize 475 million years of evolutionary intelligence embodied in our land based plant species.
- We focus on projects that produce fibers based upon 200 million years of evolutionary intelligence embodied within fiber producing animal species.
- We execute projects that focus on the innate qualities that exist within plant and animal fibers to bring forth properties that we may have yet to fully recognize through new blending recipes.
- We ensure all clothing can return to the soil to generate more life.
- We focus on projects that merge food and fiber systems to minimize our agricultural efforts and land-use conversion and maximize our yields.
- We develop projects that approach 'whole systems' thermodynamically, with a focus on building carbon capture opportunities on the farms and ranches within our communities.



# FIBERSHED

Local Fiber, Local Dye, Local Labor

## Carbon Capture Opportunities: A Regional Road Map

In early 2017, Fibershed began to offer soil carbon testing for our producers in collaboration with the University of California Davis’s Gaudin Lab. As a stakeholder community, we have captured and assessed the organic carbon levels for 38 farms and ranches within the last 9 months. To keep the community engaged in our analysis, we developed a soil sampling practice known as *The Citizen Science Protocol* that can be implemented by a land manager or a farm helper, while still being rigorous enough to retain accuracy. Twenty two Fibershed producers have a fully completed soil profile, including what is known as a ‘bulk density’ analysis.

The land area represented by our first round of soil carbon sampling includes **10,463 acres**, all of which is managed by many of the farmers and ranchers who are here this evening with you. (Our producer community as a whole manages a land area 100 times this size.)

If soil organic carbon levels increased by 1% on this 10,463 acres, our community could draw down **333,324,672.50 pounds of carbon**.

- This is equivalent to 151,236 metric tons of carbon
- This is equivalent to 555,037 metric tons of CO<sub>2</sub>e (Greenhouse gas equivalent used by state, federal and global agencies)
- By increasing soil organic carbon by 1% on this small portion of acreage we could offset the emissions produced by driving 118,092 passenger vehicles in one year.
- By increasing soil organic carbon by 1% we can increase the water holding capacity of these soils by 284,091,376 gallons; and reduce irrigation requirements

Is increasing soil organic carbon by 1% do-able? Those who manage land, and who prescriptively graze, utilize compost applications, cover crops and other various carbon capturing practices believe this to be very possible and believe this can be done quickly, depending on the technical and economic support provided.

We asked those living and working on these 10,463 acres what some of their preferred Carbon Capturing practices would be to achieve this 1% increase in soil organic carbon; below are the estimates based upon local costs:

- Riparian Restoration: \$45,882
- Windbreak: \$161,419
- Hedgerow: \$4,535
- Silvopasture: \$65,099
- Mulching: \$97,330

- Compost: \$4,034,895
- Prescriptive Grazing: \$46,846
- Re-seeding: \$985,279
- Cover crop: \$31,670
- Water Infrastructure: \$202,250
- Riparian Forest Buffer: \$45,882
- Critical Planting Area: \$24,488
- Residue and Tillage Management: \$19,364

**\$5,764,939 total, or \$551 per acre of land**

A significant portion of these soil organic carbon increase costs can be met through growing climate beneficial businesses that provide goods that are inclusive of the land restoring costs for generating a 1% increase in soil organic carbon.

**Adding value to our region’s Climate Beneficial fibers is 100% contingent upon having accessible and high quality milling services within the community.**

Whether you’re a wearer, designer or an investor looking for mission driven impact, each of us currently has the opportunity to invest in our region’s first weaving mill—Huston Textile Co. This new weaving facility in the Sacramento Valley is seeking to purchase 8 looms to yield over 71,000 yards of high quality, garment-ready textiles from Climate Beneficial Wool and certified organic cotton on a per year basis. Having access to quality textiles at this scale is the first opportunity of its kind since the late 1890s, when there were twelve working vertically integrated mills throughout California. This new mill allows our community to grow and wear regionally, at accessible price points. Operating at full capacity, this mill provides value-addition services to wool derived from animals that graze over one million acres of grazed rangeland, and offers value-addition services to farmers who manage over 130 acres of certified organic cotton. **For more information on how to invest in Huston Textile, please email: [scott@hustontextile.com](mailto:scott@hustontextile.com).**

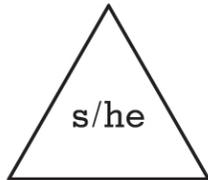
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