



Sustainability & Regenerative Practices

TOOLKIT

VERSION 2.0

Sustainable Herbs Program
AMERICAN BOTANICAL COUNCIL

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Executive Summary

Ensuring the long-term supply of the medicinal plants on which your company depends is crucial to your company's success. But it can be overwhelming to know where to begin without a tool and a guidebook. That's why the Sustainable Herbs Program Toolkit 2.0 (SHP Toolkit 2.0) was created.

The SHP Toolkit 2.0 is a user-friendly, expansive collection of tools and resources to generate awareness and engage industry leaders, including you, in implementing ecologically and socially responsible practices in the botanical industry. (And the rewards to a company for doing that work are extensive, both financially and ethically, and discussed in detail in Section 3 of the SHP Toolkit, Making the Business Case, Why Invest in Sustainability?)

The SHP Toolkit 2.0 is organized in a way that breaks down key areas related to implementing sustainability practices in your business making it easier to focus your time and/or your team on issues that are important to your company's specific circumstances and needs.

The SHP Toolkit 2.0 is supported by a series of webinars with experts on related key topics and other resources found on the SHP website, www.sustainableherbsprogram.org.

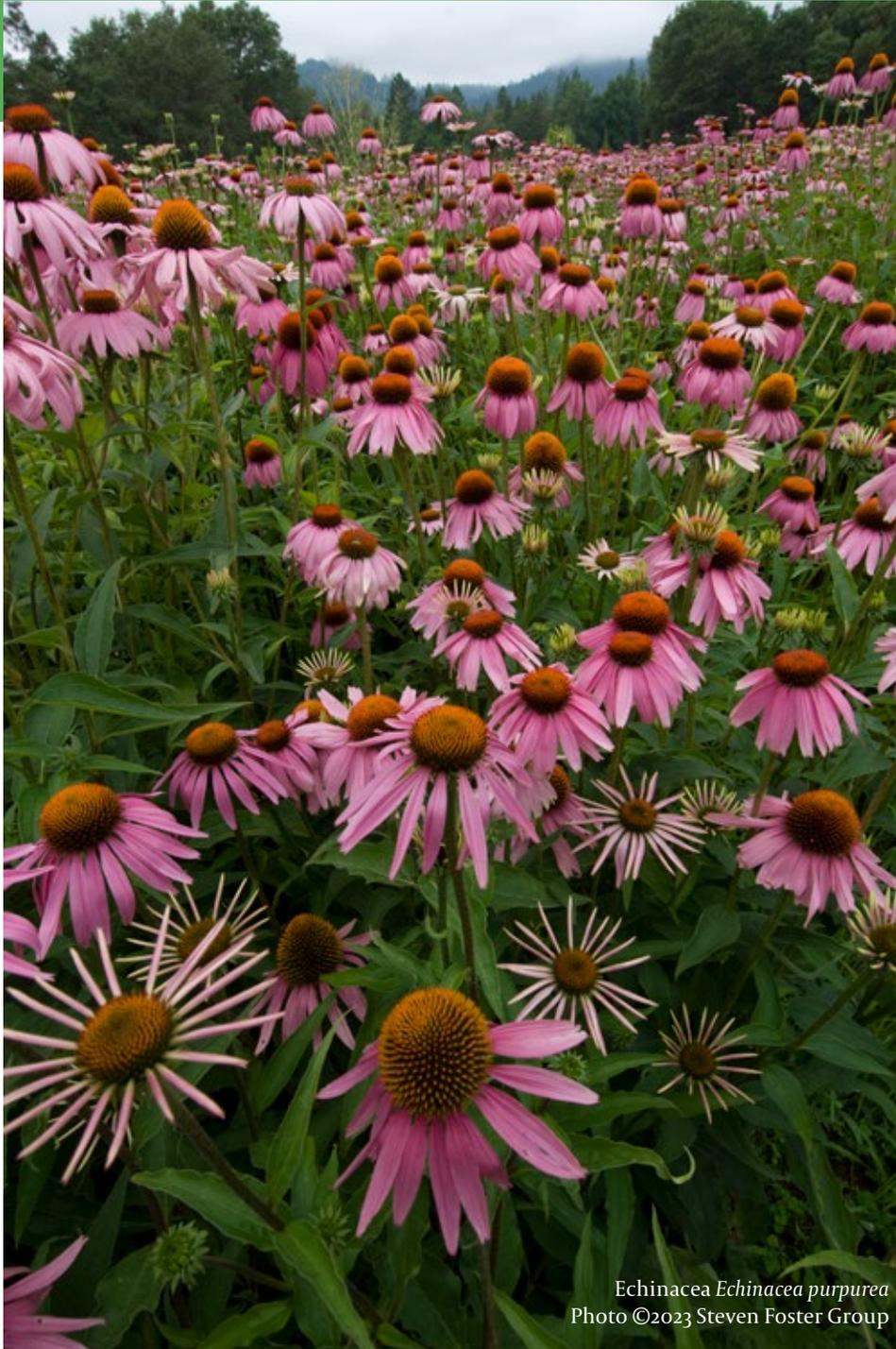
You can use this toolkit as a self-guided program for employees, or as a road map to help educate others about why sustainability, regenerative practices, and equity matter in uplifting quality and profitability in the botanical industry.

Using the SHP Toolkit 2.0, you can move your company forward into sustainable and regenerative practices that not only benefit your company, but the entire planet.

** We use 'sustainable' and 'sustainability' because those are the words in current common use, recognizing the limitations of this concept. Our language, like the work required, is a work in progress.*



Chamomile *Matricaria recutita*
Photo ©2023 Steven Foster Group



Echinacea Echinacea purpurea
Photo ©2023 Steven Foster Group

How to Begin

In *The Responsible Company: What We've Learned from Patagonia's First 40 Years*, authors Yvon Chouinard and Vincent Stanley outline the following steps for becoming a responsible business:

1. **Research.** Look into both the issue and how that relates to your own company. What are some of the best things your company does? What areas need improvement? What are some of the worst things your company does? What bothers you the most whenever you hear about it? What problem do you think your company will be good at taking on?
2. **Act.** Decide what to do. Name your priorities. Determine how much time and money you will spend. Define success.
3. **Tell stories.** Share what you learn. Build on the trust you earn from employees and customers and the confidence in what you accomplish to ask what can I do next? Telling stories builds collaboration. It inspires others to take steps they might not otherwise have the courage to take.

Following this framework, we have structured this toolkit as follows:

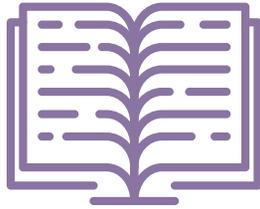
1. **Learn** — Information to get you started and questions to apply to your own company. We include videos and case studies, questions for discussion, and resources for further exploration.
2. **Dig Deeper** — Additional resources to explore how other companies and sectors have successfully approached a problem or question.*
3. **Act** — Action steps. Pick one that resonates with your needs and dive in.
4. **Tell Stories** — While we don't outline steps for sharing stories, see [Summer Singletary's](#) reflections on marketing with purpose.

* SHP has worked to find resources that address underlying issues that are relevant and useful now and in the future. These links include our recommendations as of early 2023. If a link is broken, go to the organization's website and search its content directly. We encourage you to sign-up for the SHP newsletter where we share the most up-to-date information.

Making the Business Case

1. Why Invest in Sustainability?

LEARN



Biodiversity loss, the climate emergency, and social inequity threaten the raw materials on which the natural products industry depends. If there are no plants, or no people willing to work with plants, there will be no industry or consumers to buy products. Addressing these social and environmental issues is an essential risk-management strategy as well as the ethical choice.

- **Save Money** — Based on research conducted in 2016 with 153 companies across the globe each with revenue of at least \$250 million, Pure Strategies found that benefits from sustainability actions reached several billion dollars. Survey respondents reported benefits across three areas: greater productivity, reduced risk, and enhanced growth (brand loyalty). See the research summary [here](#).
- **Brand Awareness** — Companies in 1% for Planet report greater employee engagement, stronger sales, and growing brand awareness due to their sustainability commitment and effective storytelling.*
- **Employee satisfaction** — The 2018 Global Talent Trends study by Mercer found that employees are three times more likely to thrive when working for a company with a strong sense of purpose. [Mercer's 2021 Global Talent Trends Study](#) shows that American business leaders are extending success metrics beyond shareholder return and placing individual and societal well-being at its core.

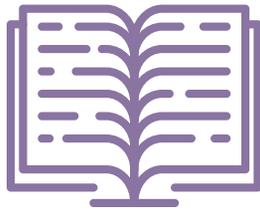
**Kate Williams, Executive Director, 1% for Planet, personal communication, January, 2020.*



Making the Business Case

1. Why Invest in Sustainability? (cont.)

LEARN

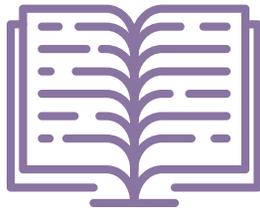


- **Consumer demand** — Studies indicate that purchase decisions are moving toward what the Natural Marketing Institute (NMI) calls a ‘whole health’ perspective where individual health concerns merge with planetary health concerns. The article, “[Climate-Conscious Consumers Prioritize Sustainable Herbal Products](#),” by Karen Ratterman in ABC’s peer-reviewed journal *HerbalGram*, highlights key points from 2021 National Marketing Institute (NMI) and Hartman Group surveys on consumer behavior and sustainability. Below are some key takeaways:
 - The 2021 NMI report surveyed 3,000 US adults in October 2020. They found that 62% of surveyed consumers felt more personally responsible for protecting the environment than they have in the past. This is up from 49% in 2009, a growth of 27%.
 - Forty-five percent of surveyed consumers indicated greater commitment to buying products from companies that follow environmentally friendly and sustainable practices.
 - The NMI report found that 18- to 39-year-olds are significantly more likely to make personal sacrifices than older generations and the report found study showed increasing concern about sustainable agriculture, particularly among millennials.
 - “In addition, there appears to be evidence that the COVID-19 pandemic may have ignited a stronger conviction towards environmental protection and sustainable behaviors, as the fragility and interconnectedness of the human and planetary condition has been made more apparent than ever,” the article notes.
 - “While more consumers are taking responsibility... a significant number of the NMI respondents said they believe that corporations, retailers, and the US government should be leading the way with respect to protecting the environment, but believe they are falling well short of that goal.”

Making the Business Case

2. What are the risks?

LEARN



Changing the system begins with seeing the system. How well do you understand the current and future risks climate disruption, urban migration, and loss of biodiversity to the global supply of medicinal plants?

Here are some resources for understanding what is at stake if your company does not take action:

- The [2022 IPCC Climate Change Report](#) clearly spells out the risks of inaction on the climate crisis.
- The [2019 U.N.'s Intergovernmental Science-Policy Assessment on Biodiversity and Ecosystem Services](#) reports that species extinction rates are accelerating and that the current global response is insufficient.
- [Plants in Peril: Climate Crisis Threatens Medicinal and Aromatic Plants](#), the November 2019 *HerbalGram* article, outlines the impacts of these threats to medicinal plants.

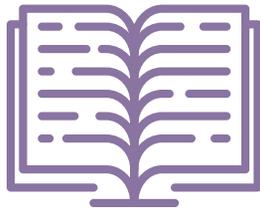
How have those risks impacted your company?

- **Shortages:** What shortages have you faced? What are the immediate causes of those shortages? What are the underlying causes?
 - **Labor:** Is urban migration impacting your ability to source specific species? What conditions in sourcing communities underlie those disruptions? What are the risks of urban migration for the continued growing, harvesting, and processing of raw materials for your company?
 - **Risks of Political Instability:** What are the risks of political instability due to increased migration from environmental disruptions, including loss of topsoil, water scarcity, flooding, sea level rise, and pandemics, among other factors?
- Impact:** How have those shortages impacted your company? What are the costs of being out of stock, panic buying, shortages, loss of customers and their loyalty, and more?

Making the Business Case

3. Develop the Business Case

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From this information, develop the business case for your company to engage. Investing in supply communities helps ensure the longterm viability of your business.

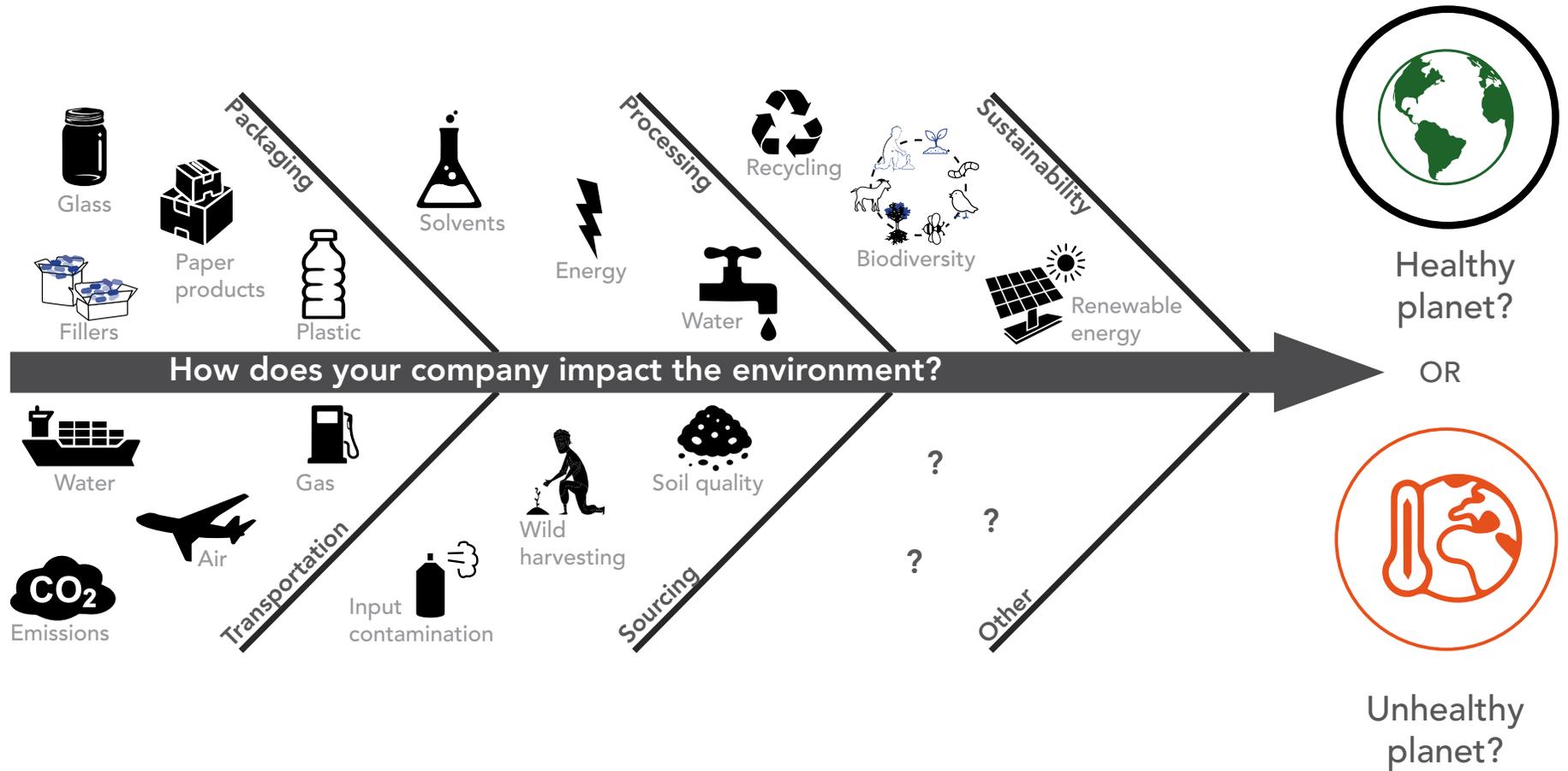
Resources for Making a Business Case

- *The World Business Council for Sustainable Development (WBCSD)* publishes *CEO Guides* on environmental issues that impact business and case studies on utilizing business to accelerate the transition to a sustainable world. For example, the *CEO Guide to the Circular Bioeconomy* presents a business case for establishing a circular bioeconomy that addresses five environmental priorities: climate change, biodiversity loss, land use change, food loss and waste, and resource scarcity. The WBCSD website provides free resources and *Business for Nature* is a global coalition that communicates the business case for reversing nature loss and demonstrates the opportunities created by addressing the nature crisis.
- “*Business is ready to step up investment in nature*,” a 2 ½ minute video by the World Business Council for Sustainable Development (WBCSD), discusses why it is essential for businesses to address environmental impacts.

Resources for How Other Sectors Approach Sustainability

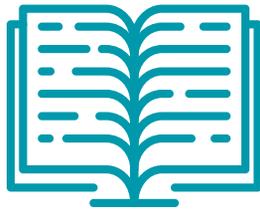
- *Made for Change* outlines VF Corporation’s Sustainability and Responsibility Strategy and includes *traceability maps* for key supplies.
- *General Mills* outlines how they address sustainability in specific focus areas: climate change, ecosystems, food waste, regenerative agriculture, and more. Additional resources on their approach to being a responsible company are summarized in their *Global Responsibility Report*.
- Walmart’s *open source self-assessment tool* is part of their Responsible Sourcing Program.

It is Time to Choose Your Company's Legacy



Leadership: Creating a Regenerative Culture

LEARN



How can you build the urgency needed into day-to-day decision-making and actions?

Building sustainable and regenerative supply networks and companies requires moving toward more holistic and humane metrics, putting growth in the service of life.

To make meaningful change, senior management, founders, key personnel, and board members must be willing to make decisions that impact the bottom line, making choices for people and the planet, as well as profit. This depends on strong leadership and a clear mission statement.

- **Leadership in Mission-Driven Companies:** Key takeaways from the SHP Toolkit webinar “Creating a Culture of Sustainability and Regeneration. In conversation with Sebastian Pole and Tal Johnson.”
- **Building a Regenerative Culture at Pukka Herbs:** Co-founder Sebastian Pole outlines how Pukka developed and implemented their vision and mission.
- Below are highlights from the webinar and case study. Read the case study and watch the video clips for more details.
 - **Value and Mission:** Have a clear mission. Embed that mission in the culture of the company. Include a diversity of employees in the process.
 - **Make the Vision Concrete:** Outline how that vision translates into day-to-day decisions (see below for suggestions).
 - **Don’t Compromise:** If you start to compromise on the values which define your brand, you will start to lose your brand’s value.
 - **Leadership:** People are your business. Have a strong board. Invest in good leadership. Create a mission council or advisory group of experts. Pukka’s Mission Council includes experts in agriculture, the environment, health, and regenerative farming.
 - **Third-Party Certifications** help ensure you are practicing what you claim and challenge you to go further.
 - **Have Fun and Celebrate!**

Leadership: Creating a Regenerative Culture

1. Create a Concrete Mission Statement



Define Your Mission

- Review your mission statement.
- Are there areas where you can be more specific or more ambitious?

Make the Vision Concrete

Below are some questions to guide you as you make sure your mission is embedded in your company's day-to-day decision making.

- How does this mission inform the goals of each department?
- How do you address climate change, social equity, biodiversity, and regenerative practices in the goals of each department?
- Does your Human Resources Department have directives to hire people committed to your mission?
- How does your mission guide the specifications used for sourcing materials?
- Do you measure mid-to-long-term investments in building secure and stable supply networks as investments for the company and savings on the bottom line?
- What indicators are used in annual employee performance evaluations for those responsible for procurement, sourcing, and sustainability? Do these indicators measure how economic, environmental, and social conditions are improving in sourcing communities? Do they reward employees for these impacts?

Transplanting Fair for Life certified tulsi in South India.
Photo ©2023 Ann Armbrecht

Leadership: Creating a Regenerative Culture

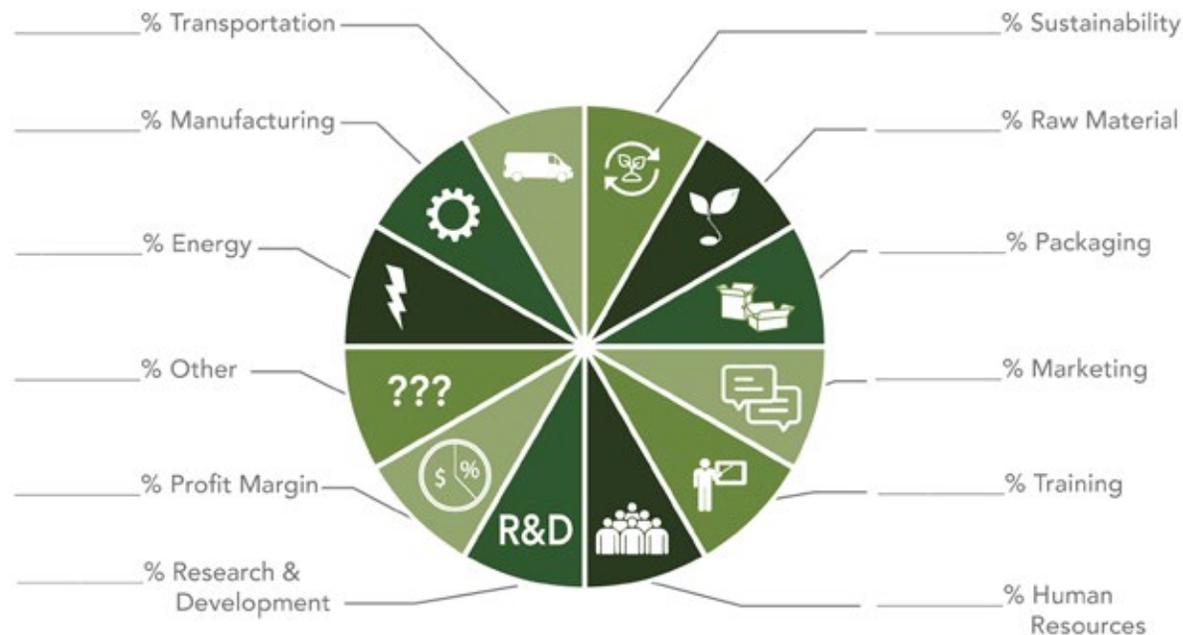
2. Evaluate Your Impact: Where Does the Money Go?

Create an infographic for a finished product you produce.

- What percentage of money goes to raw material?
- What percentage goes to certified and uncertified raw materials?
- How much goes to transportation, manufacturing, packaging, energy, marketing, etc.? Don't worry about being completely accurate; just do this to get a general picture.

Reflect and Discuss:

- How does the flow of money compare with your mission and the stated values of your company?
- Where are the greatest discrepancies?
- What is one action you can take to address one or more of these discrepancies?



Leadership: Creating a Regenerative Culture

3. Leadership in the Industry

Saw Palmetto *Serenoa repens*
Photo ©2023 Steven Foster Group



If your company already has a strong mission statement that is expressed in day-to-day decision-making, how can you use your leadership in the industry to have a greater impact?

What can you do on an industry-wide level to help create a culture in which collaboration, cooperation, and transparency are valued and rewarded?

Below are resources for collaborating on an industry level to inspire change.

- *Future of the Corporation* — The Future of the Corporation program, a program of the British Academy, explores the role of business in society. This 2019 report sets out eight principles for purposeful business creating a framework that supports a new notion of the purpose of business: “to profitably solve the problems of people and planet, and not to profit from creating problems”.

Leadership: Creating a Regenerative Culture

4. Leadership Training Programs

ACT



The leadership training programs listed below go beyond traditional management models. Each offers free tools, resources, and online training to provide leadership skills to meet the unique challenges of our time. Here are several of our favorites:

- **Presencing Institute** (renamed to u-school for Transformation), founded by Otto Scharmer, offers online courses (free and paid) and resources on the internal and external changes needed for awareness-based systems change. The Sustainable Herbs Program is hosting the SHP Learning Lab for SHP Underwriters that utilizes the tools from the Presencing Institute. The [SHP Blog Post, Changing the System Begins with Listening](#), describes this process.
- **Inner Development Goals: Transformational Skills for Sustainable Development**. Inner Development Goals (IDGs) is a nonprofit organization that conducts research and collects and communicates science-based skills and qualities to live purposeful, sustainable, and productive lives. The current IDGs framework represents 5 categories and 23 skills and qualities which are especially crucial for leaders who address Sustainable Development Goals.
- Regenerative Business Leadership. **How to Build a Conscious Company from a Living Systems Perspective** by Carol Sanford outlines one company's journey to becoming a conscious company from a living systems perspective. For more information on Carol Sanford's books and other offerings see [Carol Sanford Institute](#).
- **Co-Creative: Collaborative Innovation for Shared Prosperity and Sustainability** – Resources and training programs in collaborating to address complex problems.

Tools

1. True Cost Accounting



There are several tools available for making the transition to sustainable and regenerative practices. We outline three below. Pick the ones relevant to your needs and dive in.

True Cost Accounting

Actions taken without questioning the fundamental question of growth will have little impact in addressing the roots of the problems we now face.

As author and systems thinker Donella Meadows asked in her 1988 essay, “*Have We Finally Come to the Limits of Growth?*” we need to ask hard questions about growth, such as: **“Growth of what? For whom? For how long? At what cost? Paid by whom? Paid when?”**

True Cost Accounting is a tool that asks and begins to answer these questions. It calculates the typical financial values as well as the hidden costs of production—water pollution, greenhouse gas emissions, soil erosion, biodiversity impacts, health costs—that are often off-loaded into the future.

These impacts represent the true costs of a product, which are rarely reflected in the actual price.

True cost accounting assumes these externalities should be addressed at the beginning of the chain, not at the end, and in the present, not the future.

Passionflower (*Passiflora incarnata*) harvesting.
Photo ©2023 Steven Foster Group

Tools

1. True Cost Accounting Resources

LEARN



- *[True Cost Accounting: The Real Cost of Cheap Food](#)*— A two-minute video explaining true cost accounting and why it is important.
- *[This video](#)* produced by International Panel of Experts on Sustainable Food Systems (IPES-Food) shows the true cost of cheap food, issues that apply to cheap botanicals as well.
- *[True Cost of Food: Measuring What Matters to Transform the U.S. Food System](#)*— a 2021 report by The Rockefeller Foundation on the costs of the US food system to our health, environment, and society. The website includes additional resources for taking action.
- *[The Sustainable Food Trust](#)*— A UK-based organization focused on sustainable food and health has compiled a wealth of resources on the true cost of food such as research reports, films and podcasts, and summaries of panel discussions among leaders in this movement.
- *[Soil and More](#)*— A consulting company using true cost accounting to help create resilient food and agricultural supply networks.
- *[TEEBAgFood](#)* (the Economics of Ecosystems and Biodiversity or Agriculture and Food)— commissioned a series of exploratory studies to measure the full range of impacts and externalities to identify “full cost pricing” of food. The report, *[Measuring what matters in agriculture and food systems](#)*, synthesizes many of the studies by TEEBAgFood and is a good place to begin.
- *[“True” Costs for Food System Reform: An Overview of True Cost Accounting Literature and Initiatives](#)* published by the John Hopkins Center for a Livable Future in January 2020 provides an overview of True Cost Accounting publications.

Tools

2. Creating Shared Value



Creating ‘Shared Value’ or ‘profit-driven social impact’ is based on the recognition that a company’s financial success and its social progress are interdependent. Rather than an add-on, creating shared value is considered to be a core business strategy.

- Consulting firm FSG’s [two-minute video](#) provides a clear introduction to shared value. This link also takes you to a one-hour webinar providing more in-depth information on applying this concept in business, including case studies.
- [The Building Blocks of Creating Shared Value](#) outlines FSG’s 10 ‘building blocks’ for success fully creating shared value.
- [Measuring Shared Value](#) provides a framework to measure the connection between social and business results, which is key to the success of a shared value approach.

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- Take the [Shared Value Readiness Assessment](#) — This assessment includes 8 questions about company mission, leadership, organizational structures, incentives, and company culture.
- Take the next steps based on your responses in the assessment.

Processing center in Poland.
Photo ©2023 Ann Armbrecht

Tools

3. B-Corp Assessment

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The B Corp model is based on shifting from being a company that is answerable to its shareholders to one that is responsible for its stakeholders, beginning with the environment.

Becoming a B Corp requires significant investment. Below is some information to help get started on the journey.

- [The B Corp assessment tool](#) is a good place to begin measuring where your company stands in terms of social and environmental responsibility. In partnership with the UN Global Impact, B Lab has launched the [Sustainable Development Goals Action Manager](#) to allow companies to combine the B Corp self-assessment with measuring progress toward achieving Sustainable Development Goals. You do not have to be a B Corp to use the SDG Action Manager.
- In this [SHP webinar video clip](#) on The Benefits of Certification, Banyan Botanicals, CEO, Kevin Casey discusses how working with B Corps (and Fair for Life) have helped them set goals, be accountable, and make progress.
- The [SHP case study with Banyan Botanicals](#) outlines what it takes to become certified B Corp, the challenges, and the benefits.

“The process of [becoming a certified B Corp] helped us get our values off our dream list and into a place where we could manifest them.”

- Kevin Casey, CEO, Banyan Botanicals

Tools

3. B Corp Case Study, Banyan Botanicals

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Banyan Botanicals celebrating their B Corp journey.
Photo ©2023 Banyan Botanicals

Key Take-aways from Banyan's Journey:

- It is essential to have buy-in and support from the CEO, CFO, and leadership team on the value of B Corp Certification.
- Start with the *Quick Impact Assessment* to get your feet wet.
- Once ready to dive into the full Impact Assessment, start with the workers section, as B Lab recommends.
- Give each internal department champion (such as an HR Manager and Supply Chain/Purchasing Manager) a tour of the online assessment to give them a birds-eye view, generate excitement, and get buy-in before starting the assessment and assigning questions.
- Brief the entire company that the assessment is coming, and that it will involve work and commitment.
- Have one person at the company complete the assessment. Export the questions into a shared Smart Sheet or Google sheet so that each stakeholder can answer their specific questions.
- If you can hire a consultant, it may save you time and money.



Tools

3. B Corp Assessment Additional Resources



DIG DEEPER

Committed to Higher Standards: Natural Products Companies Turn to B Corp Certification, by Karen Raterman, published in *HerbalGram* 120:32–37; 2018, provides a thorough introduction and overview of B Corps in the Natural Products Industry.

B Corp Resources— Webinar, reports, and case studies to guide companies through the B Corp assessment process, answer questions, and more.



ACT

The B Corp quick impact assessment is a great tool to see where you stand even if you aren't ready to become a certified B Corp. The tool will show you what you are doing well and where you need to do more work.

The *Pending B Corp* status gives start-ups and smaller companies time to prepare for the rigorous process of full B Corp Certification. This link has more information.



SHARE

Whichever tool you choose, share your story. What did this tool allow you to see that you hadn't previously seen? What did it allow you to understand? What is one action step are you taking because of using the tool?

Responsible Sourcing

From Supply Chain to Value Network

Using the term value rather than supply focuses attention on sourcing botanicals as a way to create value in communities, not just source raw materials. And the term network rather than chain better expresses the multi-variant non-linear connections involved in sourcing herbs. The goal then is to strengthen these networks and relationships and thus the resilience of the overall supply.

Passionflower (*Passiflora incarnata*) harvesting.
Photo ©2023 Steven Foster Group

Once a company has a clear mission statement and a commitment from leadership, the next step is to determine how well you understand the supply chains—or value networks—on which your business depends.

Securing a long-term supply of high-quality botanicals depends on investing in the communities which grow, harvest, and process botanicals. This begins with knowing where your herbs come from.

Pillars of responsible sourcing:

1. Wild Harvesting/Biodiversity
2. Healthy Soils/Ecosystems
3. Social and Economic Equity

Every step in sourcing herbs creates value and impact. Responsible sourcing increases positive impacts, helping protect and enhance the resilience of ecosystems and support producer communities.



Responsible Sourcing

Decide Your Values

WHAT ARE YOUR VALUES?



KEY

Decline in plant health and availability, decline in biodiversity

LIMITED STOCK Profit unevenly distributed.

Botanical sourcing

Procuring from trading companies without transparency and traceability to the community

Focus on yields rather than soil and ecosystem health

Botanical sourcing

Fair compensation

Sustainable production

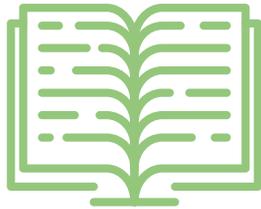
Biodiversity, healthy ecosystem, plant availability

Greater resilience for all stakeholders (human and ecological) and more reliable source of high quality herbs.

Responsible Sourcing

From Supply Chain to Value Network

LEARN



If you haven't already, take the SHP Self Assessment to see where your company falls. Answer these questions.

Is transparency a priority for your company?

- What percentage of the botanicals you source can you trace to the source?
- How much do you know about the raw materials you source and the growers and collectors who produce them?
- How much do you know about the impact of your purchasing on the human and ecological communities from which you source?

If you can't trace your raw materials to the source, learn more about why transparency and traceability are crucial to finished product quality.

1. Watch the SHP video, *Quality and Sustainability*.

In this 10-minute video, leaders from several companies discuss what they look for in sourcing medicinal herbs and why a broader definition of quality, one that includes social and ecological sustainability, is crucial.

Key take-aways:

- Paying attention to the whole supply chain, including biological and cultural diversity, is key to the quality and batch-to-batch consistency of the finished product.
- Building long-term relationships with supplier communities and ensuring transparency and traceability are also essential. This requires hard work, significant investments, and long-term planning.

Read the SHP Blog Post: *How Sourcing Botanicals Impacts Product Quality* – Highlights from “Sourcing Botanicals and Quality Control: A Conversation with Drs. Michael Heinrich and Anthony Booker, an SHP/BAPP Webinar. Includes recording of complete webinar.

Responsible Sourcing

1. Map your supply network

Map the number one botanical that your company uses (in value and/or quantity) from seed to shelf, including all stakeholders involved. Do not worry about the detail; do this quickly to get a general idea.

Questions to Consider:

1. Trace to Source

- How much do you know about the journey this botanical makes from source to shelf?
- What do you know about the ecosystems, the cultures, the economies of the communities where these plants are sourced? What don't you know?
- How do you know what you know? (from desk research/risk assessments, site visits, audits, word of mouth? etc.)

2. Understand Your Impact

- What do you know about the impacts of your involvement on these Community Capitals?
- This is a simplified version of the Community Capitals framework that we are using for a series of case studies on the impacts of sourcing botanicals on communities.



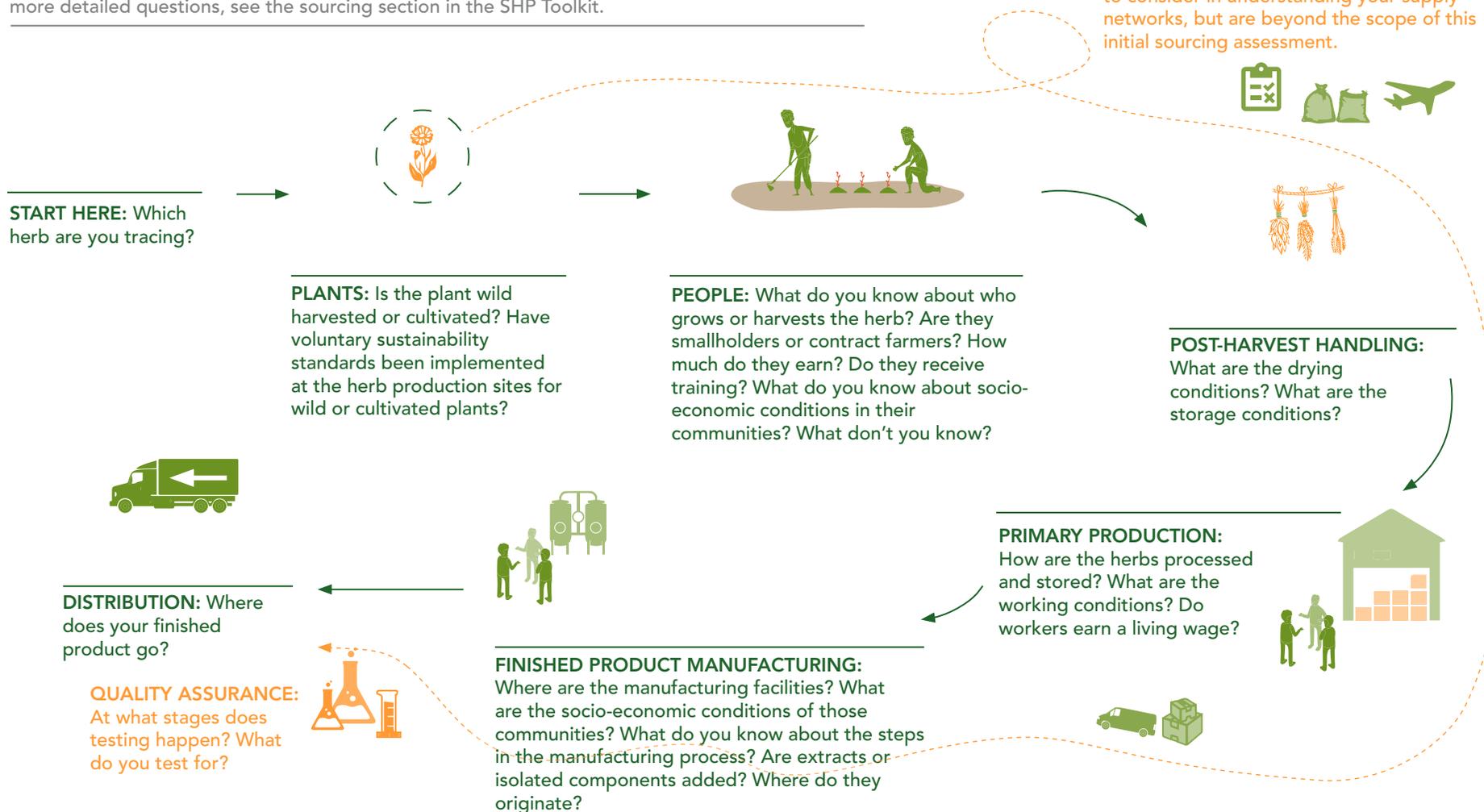
For more information see: [*Promoting Community Vitality and Sustainability: The Community Capitals Framework*](#).

Responsible Sourcing

1. Map your supply network (cont.)

Trace your company's number-one botanical from seed to shelf.

Fill in the blank: Choose an herb that is the number one in value and/or quantity in your company. Do this quickly to get a general idea of what you do and do not know. Note: For more detailed questions, see the sourcing section in the SHP Toolkit.



Responsible Sourcing

1. Map your supply network (cont.)

ACT

Map your supply network



3. Country-Wide Risk Profiles

- If you haven't already, create country-based risk assessments for the top 3 to 5 regions where you source botanicals.
- What are the short-term risks (water, energy use, gender inequality, urban migration, poor health/nutrition, political) and the longer term risks (disruption from climate change, political, etc.)?
- How can you work with your sourcing partners to secure your supply and decrease shorter-term risks, so that communities are more resilient and better able to face longer-term risks?

4. Long-term Sourcing Strategy

Map what you want your sourcing strategy to look like in 1, 3, 5, 10, and 15 years. What actions can you take now to achieve this vision? How can you balance immediate purchasing needs with planning to reach these goals?

- What are you doing to encourage the next/following generation(s) to continue the tradition?

Learn more

Jan Von Enden, Head of Group Sustainability-Supply Chains at Martin Bauer, outlined Martin Bauer's approach to risk assessments for SHP Donors. The recording is available for SHP Donors. Contact [Ann Arrmbrecht](#) for more information.

Responsible Sourcing

2. Develop Relationships with Suppliers



Meeting with suppliers in western Nepal.
Photo ©2023 Ann Armbricht

If you don't source directly, how well do your suppliers understand these issues?

- Do the buyers from whom you purchase bulk herbs know where the herbs come from? If not, how can you find out?
- What is the average tenure of your company's relationships with their suppliers? If you don't know, can you find out?
- Are your suppliers compliant with federal and international codes concerning the growing, processing, sale, holding, and distribution of regulated plant material?
- Do they follow industry-accepted Good Agricultural and Collection Practices (GACPs, for example the *American Herbal Products Association's GACPs* outline detailed guidelines for best practices)?
- Do you screen or evaluate Significant Suppliers for social and environmental impact?
- Is there a formal written Supplier Code of Conduct policy that specifically holds your suppliers accountable for social and environmental performance? See examples of Supplier Codes of Conduct from *MegaFood* and the *Martin Bauer Group*.
- Do you trust your suppliers to establish and handle the relationships with the producers? With the growers and collectors responsible for cultivating and harvesting the herbs?

Key Issues to Consider

- **Decision-making** – If you are responsible for purchasing and sourcing, how can you engage upper management in the issues and challenges you face? If you are executive management, how do you listen to and engage with the challenges those in purchasing and sourcing face?
- **Inventory** – How much material is kept in inventory? How do you handle a spike in demand or insufficient supplies? Do you go out of stock or change your specifications (thereby possibly lowering your quality standards)? What changes have you made, if any, based on how COVID impacted supplies?
- **Priorities** – Answering these questions requires resources. Is your company willing to pay a higher price to secure and ensure a future supply of the raw materials on which your business depends?

For More Information on Next steps, see *Wild Harvesting*, *Regenerative Farming*, or *Social Equity*

Responsible Sourcing

3. Resources for Mapping Ingredients and their Impacts.

ACT



In the 3 years since the first SHP Toolkit, many more companies have begun sharing information on sourcing and transparency. Below are just a few of the more well known examples. There are many other examples available.

Examples:

- *Patagonia*, *VF Made for Change*, and *Marks and Spencer* offer excellent examples of how to approach sustainability in complex supply chains in different sectors. They provide maps of where the raw materials are sourced and/or manufactured, videos and information about the processes used, and links to finished products with some or all these materials.
- *The Coffee Traceability Platform* – developed by Sourcemap, is a secure enterprise cloud that streamlines supply chain management for coffee and offers a model of how the platform can be used for other commodities.
- “*What Supply Chain Transparency Really Means*” – by Alexis Bateman and Leonardo Bonnani and published in the Harvard Business Review, provides an overview of the value of transparency, what it means, and how to begin.
- “*The Potential of Blockchain for Herbal Supply Chain Management*” – by Karen Raterman and published in *HerbalGram* (#123, pp. 52–61; 2019) discusses the use and challenges of blockchain technology as a tool for transparency in the botanical industry.

Responsible Sourcing

3. Resources for Mapping Ingredients and their Impacts (cont.)

ACT



- In partnership with the UN Global Impact, B Lab has launched the [*Sustainable Development Action Manager*](#) which outlines steps needed to make progress in achieving the UN Sustainable Development Goals. These questions are a good place to begin assessing your impacts.
- [*Life Cycle Assessment*](#) – A life cycle assessment is the factual analysis of a product’s entire life cycle in terms of sustainability. [*Open LCA*](#) is a free open-source life cycle and sustainability assessment tool. [*The life cycle case study*](#) of a t-shirt illustrates the questions to ask and types of information to consider.
- [*Source map*](#) – provides technology to help companies map and visualize their supply chains, identify risks, and share stories with customers. The website includes free resources and white papers on how to achieve traceability in your supply chain.
- [*HowGood*](#) is a SaaS data platform with the world’s largest database on food and personal care product sustainability to help brands, retailers, and restaurants assess and improve their environmental and social impact.
- [*MIT Sustainable Supply Chain Lab*](#), an initiative of the MIT Center for Transportation and Logistics, brings together resources to collaboratively address the challenges of logistics and transportation in developing sustainable supply chains.
- [*Sustainable Food Trade Association*](#) offers resources for mapping and improving agricultural networks (SFTA consolidated with the Organic Trade Association in 2021, this link provides more information).

Customer Facing Tools

- [*Provenance*](#) is an eco-rating platform that provides citizens with information on the impacts of the products they purchase.
- [*Supply Chain Self-Assessment Tool*](#) – An online tool for food companies, restaurants, and interested consumers to measure how much they know about ingredients they source. Once the assessment is complete, the site provides Action Cards to help users learn the right questions of producers and suppliers to better support agrobiodiversity. This tool has been created by [*FACT*](#) (Food, Agrobiodiversity, Clarity, Transparency) Accelerator, a multistakeholder group, and the Lexicon, a US-based NGO that uses evidence-based storytelling, strategy, and mobilization to build movements tackling our food system’s greatest challenges.

Responsible Sourcing

4. General Information on Understanding Botanical Supply Networks



For an overview of the steps involved from source to finished product in sourcing botanicals, see the following SHP videos and other resources:

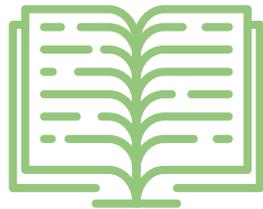
- *The Botanical Supply Chain: A Deeper Look* – The Supply Chain offers videos and information on the key stages in the journeys that botanicals take from source to finished product.
- *Quality Control and Testing* – This SHP video provides a step-by-step explanation of how to implement rigorous quality control and assurance standards and is an excellent introduction for those not familiar with these procedures.
- **Good Agricultural Practices** – Ensure that your suppliers practice Good Agricultural Practices. The American Herbal Products Association (AHPA) has an in-depth set of *free guidance documents for implementing and documenting best practices*. Ben Heron, previously Sustainability Manager at Pukka Herbs, developed *a set of training tools for introducing GACPs to farmers in South Asia* that also provide an excellent foundation for wider implementation of these standards.
- **Controlling the supply from seed to shelf is one way of preventing or limiting adulteration.** The ABC-AHP-NCNPR Botanical Adulterants Prevention Program (a partnership among the American Botanical Council (ABC), American Herbal Pharmacopoeia (AHP), and the University of Mississippi's National Center for Natural Products Research (NCNPR), is a large-scale, international research and educational program that informs the herb and dietary supplement industry about ingredient and product adulteration and fraud.

Echinacea (*Echinacea purpurea*) harvesting.
Photo ©2023 Steven Foster Group

Responsible Sourcing

Wild Harvesting

1. Issues



LEARN

“If you are not trying to make the collectors happy, if you are not trying to decrease their financial stress, they are not going to care about biodiversity. They aren’t going to care about ecological things. They will just try to get as much as possible today without thinking about tomorrow. And so in my thinking, the crucial role in this business is the collectors. To solve these problems, you need to have a fair price.”

- Gocha Dzneladze, COO of GeoFlower, Georgia

According to the *KEW State of the World’s Plants and Fungi 2020*, there are “25,791 species of plants documented to be of medicinal use, 5,411 have been assessed under the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. Of those, 723 (13%) are categorized as threatened.” 4000–6000 species are traded internationally. About two-thirds of herbal medicine species in commerce are sourced from the wild. One in five wild-harvested medicinal plant species is assessed to be threatened by over-harvesting or habitat loss.

The International Union for Conservation of Nature’s (IUCN) Red List of Threatened Species contains the world’s most comprehensive information on the global conservation status of animal, fungal, and plant species. The IUCN Red List measures the pressures on species based on a set of quantitative criteria that estimate the risk of extinction. This list is an important indicator of the health of the world’s biodiversity and a powerful tool to educate and catalyze action for biodiversity conservation.

Unfortunately, many medicinal and aromatic plants have not yet been assessed. To date, only around 7% of ca. 28,000 species that have well-documented uses as medicinal and aromatic plants have been assessed against the extinction threat criteria of the IUCN Red List (and nearly 20% of those are believed to be in urgent need of reassessment). Based on these assessments, one in five of the world’s medicinal and aromatic plant species is threatened, i.e., assessed as Critically Endangered, Endangered, or Vulnerable under the IUCN threatened species criteria.

The proportion of threatened plants varies from region to region, and comprehensive assessments of this group of species are needed. In North America, IUCN Medicinal Plant Specialist Group, Albuquerque Bio-Park, and NatureServe are collaborating on assessing all North American medicinal and aromatic plants, an effort that requires further investment and additional collaborations.

Responsible Sourcing

Wild Harvesting

1. Issues (cont.)



LEARN

Urban Migration

In many places, rural migration to urban areas means fewer people are willing to do the arduous work of collecting wild plants. As younger generations move to the cities, the traditional knowledge of these plants and sustainable harvesting techniques are being lost. This rural-urban migration is a risk to the supply of medicinal plants. When generation after generation harvest the same plants from the same 'general' area, they learn practices to steward those plants. Otherwise, they would not be able to support their families through the decades. With urban migration, this knowledge is also at risk.

Markets for sustainably harvested plants provide a financial incentive to conserve the lands on which these plants grow and, possibly, an incentive for younger generations to carry on the traditional harvest. Yet, wild harvesters typically aren't employees of companies seeking and buying the botanical materials. The harvesters are usually independent contractors paid by the weight of their harvest and may have precarious contractual relationships with the buyers. In many cases, wild harvesting does not provide a viable livelihood.



Drying Jatamansi (*Nardostachys jatamansi*) in rural Nepal
Photo ©2023 Ann Armbrecht

Responsible Sourcing

Wild Harvesting 2. Resources

LEARN



TRAFFIC Reports

These reports by TRAFFIC provide more detailed information on the impacts of the trade of wild plants on the plants themselves as well as on social, cultural, and ecological diversity:

- Schindler, C., Heral, E., Drinkwater, E., Timoshyna, A., Muir, G., Walter, S., Leaman, D.J. and Schippmann, U. 2022. *Wild check – Assessing risks and opportunities of trade in wild plant ingredients*. Rome, FAO. <https://doi.org/10.4060/cb9267en>
- Tymoshyna, A., Ke, Z., Yang, Y., Ling, X., & Leaman, D. (2020). *The invisible trade: Wild plants and you in the times of COVID-19 and the essential journey towards sustainability*. TRAFFIC International.
- Jenkins, M., Timoshyna, A., & Cornthwaite, M. (2018). *Wild at home: exploring the global harvest, trade, and use of wild plant ingredients*. TRAFFIC International.

Convention on Biodiversity/ Nagoya Protocol

Companies need to understand the Convention on Biodiversity and the Nagoya Protocol on Access and Benefit Sharing (ABS) and how these international mandates impact developing herbal products from plant resources. See the following resources:

- *Convention on Biodiversity* - Signed by 150 government leaders at the 1992 Rio Earth Summit, the Convention on Biological Diversity is dedicated to promoting sustainable development. Information and resources are on the website.
- *Union for Ethical Biotrade* (UEBT) provides resources and guidance for companies navigating Access and Benefit Sharing and the Nagoya Protocol. Three resources:
 - What is ABS? Short *introductory video*.
 - Summary of ABS – *Biodiversity and Innovation*.
 - FAQs on the Nagoya *protocol*.
- *Connecting the Dots ... Biodiversity Conservation, Sustainable Use and Access and Benefit Sharing: With a focus on Cameroon, Madagascar, Namibia, and South Africa* – This 2020 report reviews the contribution of ABS to the biodiversity crisis and recommends how to broaden this work to be more effective.

Responsible Sourcing

Wild Harvesting

3. Where to Begin?



Sacks of FairWild certified nettles in rural Poland
Photo ©2023 Ann Armbrecht

What are responsible business and fair-trading practices in this context?

The first set of three SHP videos below share the stories of the wild-harvesters. The second set of three videos highlights SHP Toolkit webinars focusing on what it takes to develop mutually beneficial trade relationships with wild harvesters.

- *Biodiversity and FairWild*, a 4-minute SHP video, explores the relationship between cultural and biological diversity and the responsibility of companies to support rural livelihoods.
- *Wild-harvesting medicinal plants*, a 6-minute SHP video, provides a behind-the-scenes view of wild harvesting in eastern Poland.
- *Wildcrafting in Appalachia*, a 10-minute SHP video, documents the tradition of wildcrafting botanicals from Appalachia.
- SHP Blog posts: *Digging Roots in Appalachia*, among numerous others.

SHP Toolkit Webinars Videos:

- *Wild Plants are our Business* – Co-hosted with Traffic. Speakers discuss sourcing wild plants and the FairWild standard. This link includes the complete webinar and short video highlights.
- *Mutually Beneficial Trade Relationships* – Co-hosted with the FairWild Foundation. Speakers discuss fairness in trade relationships with wild-harvesters, the role of government and other organizations, financial risk in fair trade agreements and other responsible business practices. The link includes the complete webinar and short video highlights.
- *Partnerships in Sourcing Australian Sandalwood* – In this SHP Webinar, Clinton Farmer, Director, Dutjahn Sandalwood Oils, and Keith Drage, Managing Director, WA Sandalwood Plantations, discuss the unique partnership of Dutjahn Sandalwood oils, aboriginal practices of caretaking wild sandalwood trees, and what it takes to create an equitable partnership between indigenous and non-indigenous corporations.

Responsible Sourcing

Wild Harvesting 1. Pick a Plant



Pick a plant

- In the SHP blog post, “[Pick a Plant](#),” Josef Brinckmann outlines steps for becoming more invested in the supply networks from which you source botanicals. Below are some of the key points, for a more in-depth discussion, see Josef’s complete post.
 - a. **Prioritize** – Identify a plant based on how important it is to your company, based on volume or value or risk. As Josef says, “A company can’t afford to go everywhere, so prioritize which plants have the greatest value to your brand and the greatest risks and narrow it down to the ones that are most important to prioritize for action.”
 - i. [WildCheck](#), is an information platform created by TRAF-FIC International and partners to inspire and support responsible sourcing of wild-harvested plant ingredients found in everyday beauty, health, and food products, such as shea butter, baobab, Brazil nuts, and licorice. The WildCheck platform includes social and ecological risk assessments, responsible sourcing opportunities, and a Pledge for businesses making public commitments to sustainable and ethical sourcing.
 - ii. [The Wild Dozen](#) – FairWild has compiled a list of 12 species that are important in trade, are wild-harvested, and susceptible to harvesting pressure and/or unfair trading practices.
 - iii. If you source any of these plants, identify which are most important to your company. If not, select the wild harvested plant that your company most depends on (because of value or quantities).

Saw Palmetto (*Serenoa repens*) harvesting.
Photo ©2023 Steven Foster Group

Responsible Sourcing

Wild Harvesting

1. Pick a Plant (cont.)

ACT



b. Gather information about sourcing and the communities/ ecosystems involved.

i. Environmental Context

- What do you know about the environmental impacts of harvesting this species?
- What is the conservation status of this plants? What are the threats?
- What do you know about the ecological sustainability of current harvesting/management practices?
- Are certified species available?

These databases provide information about medicinal and aromatic plant species, especially those that are wild harvested:

- [*CITES – Checklist of CITES Species*](#)
- [*ENVIS Indian and Global Species Database*](#)
- [*GBIF – Global Biodiversity Information Facility database*](#)
- [*IUCN Red List of Threatened Species*](#)
- [*NATURESERVE EXPLORER*](#)
- [*NBA – National Biodiversity Authority, Government of India*](#) (links to lists of species of plants which are on the verge of extinction)
- [*SPECIES+*](#) (includes conservation and national regulatory controls info for both CITES-listed and non-CITES-listed species)
- United Plant Savers [*\(UpS\) Species At Risk List*](#)
- [*Plants in Commerce*](#) – SHP is compiling profiles of plants in commerce that discuss issues relating to sustainability, trade, and sourcing. We will continue to build this collection, which now includes black cohosh, saw palmetto, turmeric, and oshá, among others.

Responsible Sourcing

Wild Harvesting

1. Pick a Plant (cont.)

ACT



ii. Socio-economic context – What do you know about the socio-economic conditions of the communities where those plants grow?

- Do you work directly with your wildcrafters? If not, how many traders and/or intermediaries are between you and the wildcrafters?
- Do you or your supplier have an ethical wild harvesting agreement that is updated each season?
- How do you ensure that the wild harvesters from whom you are buying this plant are harvesting in a sustainable way and/or are following this agreement?
- Do you offer trainings?
- What do you know about how harvesters are paid for the plants they harvest? How much of their annual income is generated from wild harvesting? What are you—or your suppliers—doing to ensure that the rates they are paid contribute to their making an annual living wage?*
- What state and national regulations dictate harvesting practices for this species?
- How do you assess and confirm what you are told to ensure that that information is accurate?

c. Go to the Source

Do a site-visit or contact suppliers that have visited to answer these questions.

d. Pick one issue that needs to be addressed and begin addressing it.

- See SHP Case Studies for examples of partnerships in sourcing.
- Become an *SHP Member* to collaborate with other companies in identifying solutions to these challenges.

e. Assess

- What do the issues you discovered reveal about your company's policies on wild harvested plants? What are you doing well? What can you do better?

Responsible Sourcing

Wild Harvesting

2. Develop Wildcrafting Standards



Develop Wildcrafting Standards for any wildcrafted plants you source.

Example of WILDCRAFTING STANDARDS By Pacific Botanicals

“We respect our wildcrafters and the heritage they bring to our industry. We strive to preserve the legacy of collection practices for gathering plants in wild ecosystems. We use only wildcrafters who adhere to our policies. Here is a list of the criteria we require of our harvesters.

- **Location and Ecological Niche:** We seek areas that are free of contamination from roadways, housing, poor water, and air quality. We require a description of area, slope, direction, and proximity to streambeds.
- **Percentage of Population Harvested:** We seek to protect pristine stands of herbs from being over-harvested by determining what percentage of species was harvested and when the area was last harvested, to help allow stands to regenerate for future gathering.
- **Handling Methods:** We seek skillful selection with expert knowledge of species. Careful separating, garbling, drying, and cleaning of product ensure herb purity and vitality.
- **Consistent and Accurate Record Keeping:** Harvest protocol sheets are required which include time of day, temperature, weather conditions, and a description of the area; public or private land, logging condition, distance from the road, power lines, and any known history of pesticides or fertilizers for each lot we receive.
- **Personal Guarantee by the Wildcrafter:** Each independent wildcrafter must demonstrate an adherence to the highest standards and must personally guarantee that each herb has been ecologically harvested. They must show regard for the integrity of the plant population and environment and obtain any verification of species required from a botanist that may be necessary.”

Vaccinium myrtillus harvesting.
Photo ©2023 Steven Foster Group

Responsible Sourcing

Wild Harvesting

3. Source Certified Wild-Harvested Plants



The SHP Toolkit webinar, *Certifications as a Path to Sustainability?* discusses the opportunities and challenges of certifications.

Overviews of Certifications Sustainability Standards for Wild-Harvested Plants

Note: For each listed standard there are certain accredited independent third-party inspection and certification organizations that are qualified to carry out audits and issue certifications to operations that demonstrate that they are operating in compliance with the rules of the standard. For the listed verification program, verification certificates are issued by the NGO that manages the program. These are listed in alphabetical order.

- *Ethical Biotrade Standard* –The UEBT Ethical BioTrade Standard is a voluntary sustainability standard that can be applied to the production of any ingredients from biodiversity such as plants, whether farmed or wild collected, plant cells, microorganisms, algae, and beeswax. In addition to UEBT’s Ethical Biotrade Standard, there is also the *UEBT and Rainforest Alliance Herbs & Spices Programme*, which is applicable to all ingredients used in herbal and fruit tea infusions, and other herbs & spices, including vanilla, chili, and pepper. UEBT and Rainforest Alliance Herbs & Spices Program — UEBT and the Rainforest Alliance have developed a joint Herbs & Spices Program certified under this new program will be able to carry the *Rainforest Alliance certification seal*. This includes wild ingredients. For more information see *Rainforest Alliance*.
- *FairWild Standard* – The FairWild Standard is a voluntary best practice standard for sustainable wild harvesting and equitable fair trade. Created through a multi-stakeholder consultation process, the FairWild standard represents some of the best thinking on *implementing social and ecological standards* to promote cultural and ecological diversity. The guidelines are an excellent guide for assessing your harvesting sourcing practices whether you pursue FairWild certification or not. See additional *SHP videos on the FairWild* standard.

Growing turmeric (*Curcuma longa*) in Costa Rica.
Photo ©2023 Ann Armbrecht

Responsible Sourcing

Wild Harvesting

3. Source Certified Wild-Harvested Plants (cont.)

- Forest Grown Verified Program (FGV) – FGV is a voluntary, third-party verification for nontimber forest grown products that are produced and harvested in a sustainable and legal manner. The scope includes farming and wild harvesting in forest areas of the United States. The certification verification is now managed by the medicinal plant conservation NGO United Plant Savers, that also issues verification certificates to qualifying applicants.
- Wild-crop Harvesting Practice Standard – The Wild-crop Harvesting Practice Standard is a regulation of the United States Department of Agriculture (7 CFR § 205.207) requiring that production

practices must maintain or improve the natural resources of an operation under organic certification rules. Organic wild-crop operations must have an organic system plan and are subject to most of the same requirements as organic farms. The regulation also includes natural resources and biodiversity conservation requirements. The scope of the standard is limited to environmental sustainability and does not include criteria for economic or social sustainability of the operation or community.



Humulus lupulus harvesting.
Photo ©2023 Steven Foster Group

Responsible Sourcing

Wild Harvesting

3. Assess the Wild Plants You Source

Actaea racemosa harvesting.
Photo ©2023 Steven Foster Group



Assess the Wild Plants you Source

- Free guidance documents on how to do a resource inventory, a management plan, how to ensure trade practices are fair, etc. These are linked to FairWild but include information on how to approach these issues for non-FairWild certified plants.
- Wild Collection Assessment Tool – The American Herbal Products Association (AHPA) has a free tool to ensure that wild collection practices yield properly identified botanicals materials of the desired quality in a sustainable manner.
- United Plants Savers Risk Assessment Tool – A tool to quantify and compare vulnerability to overharvesting of wild-harvested medicinal plants. See an example of this tool in practice in the studies on oshá harvesting led by Kelly Kindscher, Ph.D.
- Develop Internal Wild Harvest Management Plans – Previous Sustainability Director at Pukka, Ben Heron, developed a plan for his company Biolaya, based on the guidelines of FairWild. It is an example of how a company uses existing standards for internal monitoring.
- FairWild Risk Classification – Using the IUCN MPSG methodology, Danna Leaman and Uwe Schippmann perform risk analyses of specific wild-harvested species. The risk analysis is described here. This report is offered as a fundraising tool for FairWild and so utilizing their services can be a way of supporting the program without entering certification. Contact: secretariat@FairWild.org to learn more.

Responsible Sourcing

Wild Harvesting

5. Find Cultivated Sources

6. Invest in Research



Can you source cultivated plants in ways that are grown more closely to how they grow in the wild, both to maintain the phytochemical profile and further principles of regenerative agriculture? Watch this SHP Video on [Rhodiola rosea](#) to learn more pressures on this wild harvested plant and efforts to cultivate.

Rhodiola spp. has been listed in CITES Appendix II with annotation #2. This means that from February 23, 2022 the international trade of all parts and derivatives of all species in the genus, except seeds, pollen, and finished products packaged and ready for retail trade, need to be accompanied by a CITES export or a CITES certificate of artificial propagation re-export permit.

Plant adoption programs support the research of nonprofits performing or sharing research on specific plants or plant groups. Below are two examples of research needed to assess and respond to the conservation status of medicinal plants.

- **Support sustainability studies** – There is a lack of the solid scientific data on plant populations, harvesting volumes, and regeneration that is essential to developing sustainable practices for wild-harvested species. See the SHP Blog: [Is Oshá being Over-harvested?](#) for an example of one such study.
- **Support in situ and ex situ conservation practices** – [Center for Plant Conservation \(CPC\) Best Plant Conservation Practices to Support Species Survival in the Wild](#): outlines best practices for collecting and storing seed, increasing seed from small samples, and using alternative storage and propagation methods.

“We are a family company. We live here. Our employees live here. We don’t want to pollute the environment with chemicals. We want to keep it for our children and give them an environment which is free of pesticides. It’s not only about the business and the money. It is about feeling good at the end of the day, and leaving nature in good shape for the next generation.”

– Diana Bartolic, The Spider Group

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

Conventionally grown calendula, Germany.
Photo ©2023 Willow Fortunoff



At the current rates of soil degradation, the world's topsoil could be lost within 60 years, a senior UN official said in 2014. A November 2021 report from Greenpeace International, GRAIN, and the Institute for Agriculture and Trade Policy found that the production and use of synthetic nitrogen fertilizer accounts for 2.4% of global emissions, "making it one of the top climate polluting industrial chemicals and that the entire synthetic N fertilizer supply chain from manufacturing to soil application accounts for 21.5% of the annual direct emissions from agriculture.

"If the world stands a chance at effectively dealing with the climate crisis, industrial farming systems that depend on synthetic N fertilisers and other chemical inputs must be replaced with agroecological farming systems that do not use chemicals and local food systems in which animals and feed sources are fully integrated."

New research shows 50-year binge on chemical fertilisers must end to address the climate crisis.

The ways we are feeding ourselves, in other words, is undermining our survival. This holds true for how we grow botanicals as well as how we grow food.

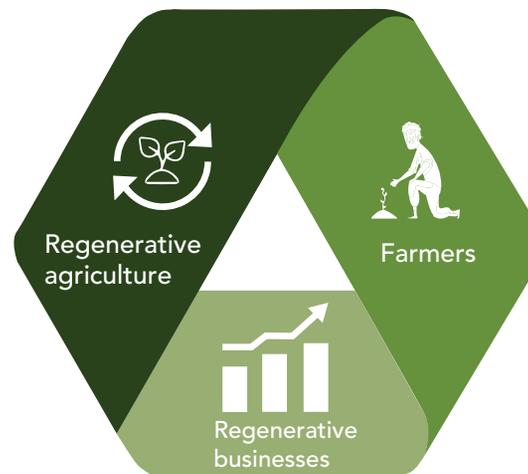
Medicinal plants are often classified as either wild harvested or cultivated. This is an important distinction. But paying attention to how botanicals are grown is equally important. Are they grown in ways that support or undermine the health of the soil, the water, the air, the atmosphere, and the communities that depend on producing those crops for their livelihood?

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

1. What is at Stake?

Sourcing and manufacturing remedies to improve human health should not just improve the health of the end user. It should improve the ecological, cultural, and socio-economic health of the communities where those plants grow.



Regenerative agriculture is a return to what organic agriculture was originally about—rebuilding topsoil, protecting biodiversity, and empowering farming communities. Caring for the soil is at the heart of regenerative agriculture—healthier soil percolates water better and makes more nutrients accessible, which improves the ability of that soil to grow crops. Well-managed soils also have an extraordinary capacity to absorb and hold carbon.

Just as good sourcing strategies are built on actively building and maintaining relationships along the value network, good growing practices should actively build and maintain healthy soils and healthy ecosystems.

Innovative initiatives are going beyond regenerative agriculture practices and embracing the idea of regenerative businesses, thinking about their business not as a machine, but as a living system.

What is at Stake?

- **Synthetic nitrogen fertilizer impacts on emissions** – Food systems are both a significant contributor to greenhouse gas emissions (21-37%) and are and will be increasingly affected by projected future climate change. While nitrogen fertilizers have improved yields worldwide, *recent studies* indicate that the increased use of nitrogen-based fertilizers over the last 50 years has increased the rates of nitrous oxide emissions exponentially, as compared with the rate of use of other fertilizers. The production of fertilizers is one of the two biggest sources of carbon emissions in Martin Bauer’s Scope 3 emissions (Marcus Wehr, Martin Bauer Group, October, 2022, personal communication). The Civil Eats, September 2019, “*The Greenhouse Gas No One’s Talking About: Nitrous Oxide on Farms, Explained,*” is a good place to begin understanding how and where nitrous oxide is produced, why it is a concern, and what farmers can do. “*Climate Change: The way we produce and consume food is inextricably connected to the earth’s changing climate,*” FoodPrint, 9/25/19 is another good introduction to the relationships between agricultural production and climate change.

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

1. What is at Stake? (cont.)



Ginkgo (*Ginkgo biloba*) harvesting. Photo ©2023 Steven Foster Group

- **Loss of Topsoil** – Herbal products companies are already experiencing disruptions in their supply chains from shortages from unprecedented rains, droughts, fires, hurricanes, and other weather events caused by climate change. These disruptions will only increase in the future. Medicinal herbs grow well in mixed cropping or agroforestry and they potentially add tremendously to agrobiodiversity. Adopting regenerative farming practices can be a key strategy to address the climate crisis and help ensure a more stable source of raw materials for your business.
- **Pesticides of unknown origin** – Pesticides of unknown origin are increasingly showing up in certified organic wild-harvested plants and so those plants do not pass inspection. The SHP video *We Can't be Well Until the Planet is Well* focuses on non-point contamination in the botanical industry.
- **Impact on Human Health** – Through direct and indirect exposure, an estimated 20,000 unintentional deaths occur every year as a result of pesticide poisoning while causing acute adverse health impacts to anywhere between 1 and 41 million people.
- **Living Income and Social Equity** (see [Fair Trade and Social Equity](#)). Urban migration is considered one of the greatest threats to the future of the botanical industry. Producing botanicals is arduous work. Those harvesting and growing medicinal plants typically make the least amount in a long supply network. Much of this work is seasonal. Unlike coffee growers, herb farmers and wild harvesters are working with numerous species, which makes it difficult if not impossible to make a living from any single species.

“It’s not regenerative agriculture if we’re not paying a living wage to all of the people involved in the process, from the soil all the way through.”

– Steven Ganister, Black Sheep Regenerative Resource Management

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

2. Where to Begin?



In the last few years, there has been a dramatic increase in the amount of information available on all aspects of regenerative farming. Below we first include Sustainable Herbs Program resources to learn more about soil health and regenerative farming initiatives and to determine what steps make most sense for your company to take. Next we include resources on Regenerative practices more broadly. This is not an exhaustive list but should be sufficient to begin.

SHP videos

- [Quality and Sustainability in the Herb Industry](#) and [What is Sustainable Herbalism?](#) introduce relevant issues in sourcing cultivated herbs.
- Watch the [SHP videos profiling smallholder farmers](#) growing medicinal plants in Bulgaria.
- [Exploring Regenerative Herb Farming in Costa Rica](#)

SHP Toolkit Webinars

In 2020-21, we hosted a series of [webinars focusing on regenerative farming practices in the botanical industry](#) (see below). This post includes links/summaries.

- [Paths to Regenerative Farming in the Botanical Industry: A Conversation with Gaia Herbs, Herb Pharm, and MegaFood.](#)
- [Regenerative Farming Practices on Corporate-Owned Farms: A Conversation with Trout Lake, Standard Process, and Aboca.](#)
- [Regenerative Farming Practices on Family-Owned Farms: A Conversation with Oshala Herbs, ZackWoods Herbs, Green Heffa Farm, and Kauai Organic Farm.](#)
- [Soil Health: What Your Food Ate. A Conversation with Anne Biklé and David Montgomery](#) about their research into the relationships between the health of the soil, the chemistry of the crops grown in that soil, and human health.

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Responsible Sourcing

Cultivated Herbs/Regenerative Farming

3. Research



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“You can see what happens when you change and pay attention to the terrain of the soil. You have healthy plants that are thriving with vitality. That’s what regenerative agriculture is all about. Changing the terrain of the soil.”

– Ric Scalzo, CR Botanicals; Founder, Gaia Herbs

Research

- *Rodale Institute* has resources on their research to uncover the most effective, efficient, and regenerative farming practices.
- **Nutrient Density** – Declining soil quality leads to a decrease in nutrient density in food and botanicals. *New Vegetable Systems Trial* – The Rodale Institute is researching the relationship between quality of soil and nutrient density, working in conjunction with medical practitioners to demonstrate the connections between soil health and human health. MegaFood is *piloting research* with Kauai Organic Farm to measure nutrient density, carbon sequestration, and regenerative farming practices. Also see the *SHP Webinar with David Montgomery and Anne Biklé* about their research on this topic.
- *Farming Systems Trial* – Rodale Institute conducts long-term scientific research comparing conventional and organic farming methods on yields, soil health, nutrient density, and chemical runoff. They have now added a research component looking at organic tilled and no-till practices.
- NRDC Report – *Regenerative Agriculture Farm Policy for the 21st Century*. A report outlining policy recommendations to advance regenerative agriculture, March 2022.

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

4. Courses and Resources



Farming turmeric (*Curcuma longa*) in Costa Rica.
Photo ©2023 Steven Foster Group

Courses and Resources

- [Regenerative Agriculture: How to make it grow](#) – This Scale Lab, an initiative of the Sustainable Food Lab and Midwest Row Crop Collaborative, provides detailed resources on scaling up regenerative farming practices.
- [Kiss the Ground](#) provides educational content on regenerative farming. It has resources and trainings targeted to farmers, ranchers, chefs, business leaders, and others.
- [Mad Ag's Regenerative Stewardship Curriculum](#) – Mad Agriculture's Regenerative Stewardship Curriculum is designed to help all who are interested in regeneration to gain a better understanding of how one's land and business can commit and contribute to regenerative agriculture.
- [Adrian Ferrero](#), co-founder of Biome Makers, a global AgTech company providing advanced technology for modeling soil functionality, in a podcast [on how giving farmers insights into the soil microbial community is key to regenerative agriculture](#). Adrian talks about his company's mission to enhance the productivity of arable soils and recover soil health worldwide, as well as the role of microbial communities in our transition to regenerative agriculture.
- [Soil 101](#)- An extensive collection of videos, interviews, presentations and other educational material on all aspects of soil health.
- The Climate Collaborative webinar, [The Regenerative Toolbox: Developing and Implementing Self-Assessment Tools](#), outlines how to develop and implement self-assessment tools to measure carbon-farming and regenerative agriculture practices.
- New Hope has a series of posts on regenerative agriculture targeted to natural products companies, including [9 Ways Your Brand Can Support the Regenerative Movement](#) with some great suggestions to get started, if this topic is new for your company, and [Why Regenerative Agriculture Must be Measured](#).
- [Regenerative Rising](#) hosts conferences and has a podcast focusing on key issues in regenerative practices and the food and natural products industry. Recordings of past events are available on their website.
- [How Your Company Can Support Regenerative Agriculture](#) – by Rainforest Alliance.

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

5. Resources for Making a Case for Regenerative Farming



Farming turmeric (*Curcuma longa*) in Costa Rica.
Photo ©2023 Steven Foster Group

Examples of Company Actions

- General Mills Regenerative has overviews of [Regenerative Agriculture](#) and [Ecosystem Health](#) and the Regenerative Agriculture Self-Assessment v2.0. In partnership with The Nature Conservancy (TNC), General Mills published [reThink Soil: A Roadmap to U.S. Soil Health](#). The webinar, [“How Big Food Can Drive Big Change: General Mills’ Commitment to Regenerative Agriculture,”](#) discusses broad issues about regenerative agriculture with examples of how General Mills is implementing these practices.
- In this Pure Strategies webinar, [“How MegaFood improved Agricultural Practices and Resilience in their Supply Chain,”](#) Bethany Davis, former Director of Social Impact, MegaFood, and Jordan Pratt, Farm Director, Kauai Organic Farms, discuss their partnership to implement regenerative practices.
- [Connecting to the Farm: How Companies are Engaging in Agriculture to Build Regenerative and Thriving Supply Chains](#). This Pure Strategies report describes the efforts of five companies—Danone North America, Dr. Bronner’s, Sun World, The North Face, and Wrangler—to advance regenerative agriculture in their supply networks, best practices used, and advice to other companies.

Biodiversity and Agriculture

Background information on regenerative farming and agrobiodiversity to make a case for incorporating them into your sourcing strategy:

- [The Agrobiodiversity Index](#) measures agrobiodiversity and recommends steps to support biodiversity in food and agriculture. The first Agrobiodiversity Index Report: Risk and Resilience published in 2019 measures food system sustainability and resilience in 10 countries.
- [Mainstreaming Agrobiodiversity in Sustainable Food System](#) – Produced by Biodiversity International in 2017, this book/website summarizes evidence on using agrobiodiversity to develop more resilient food systems, reverse environmental degradation, combat climate change, and reduce poverty and malnutrition.
- [The State of the World’s Biodiversity for Food and Agriculture](#) – The first global assessment of biodiversity for food and agriculture produced by the WHO’s Food and Agriculture Organization (FAO).

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

6. Certifications



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Voluntary Sustainability Standards that may be implemented by herb producer operations and certified to be in conformance with the requirements of the standard by accredited inspection and certification organizations

- **Ethical Biotrade Standard** –*The Union for Ethical BioTrade (UEBT) Ethical BioTrade Standard* is a voluntary sustainability standard that can be applied to the production of any ingredients from biodiversity such as plants, whether farmed or wild collected, plant cells, microorganisms, algae, and beeswax. In addition to UEBT's Ethical Biotrade Standard, there is also the *UEBT and Rainforest Alliance Herbs & Spices Programme*, which is applicable to all ingredients used in herbal and fruit tea infusions, whether farmed or wild collected, and other herbs & spices. Companies certified under this new program will be able to carry the Rainforest Alliance certification seal.
- **Fair for Life Standard** –The EcoCert *Fair for Life Certification Programme for Fair Trade & Responsible Supply-chains* is a voluntary sustainability standard that can be applied to the production of natural raw materials (crops, wild plants, livestock, beekeeping, aquaculture, sea salt, etc.) except those from mining or those corresponding to Threatened or Endangered species, as well as certain materials used in handicraft. EcoCert also administers the related *For Life Programme: Certification Standard for Corporate Social Responsibility*.

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

6. Certifications (cont.)

DIG DEEPER



- **Fair Trade International Fairtrade Standards** –The Fair Trade International (FLO) Fairtrade Standards are voluntary sustainability standards designed to support the sustainable development of small producer organizations and agricultural workers in developing countries. FLO standards can be applied to cane sugar, cereals, cocoa, coffee, fiber crops (including cotton), herbs, fresh fruit and vegetables, gold, herbal teas and spices, honey, nuts, oilseeds and oleaginous fruits, prepared and preserved fruit and vegetables, sports balls, tea, and textiles. The most relevant FLO Fairtrade Standards for the herbal product sector include:
 - Fairtrade Standard for Herbs and Herbal Teas for Hired Labour and Traders
 - Fairtrade Standard for Herbs, Herbal Teas & Spices for Small Producer Organizations and traders Also applicable to Contract Production for Rotational Crops
 - Fairtrade Standard for Tea Applies to: Hired labour organizations and traders
 - Fairtrade Standard for Tea Applies to: Small-scale Producer Organizations and traders

Fair Trade USA Fair Trade Certification Standards –The Fair Trade USA (FTUSA) standards are voluntary sustainability standards designed to help brands meet their Environmental, Social, and Governance (ESG) goals. The FTUSA Agricultural Production Standard is applicable for agricultural production systems worldwide that produce and sell commodities (including herbs and spices) that are certified to Fair Trade USA standards, apart from dairies. Only U.S. dairies are eligible for certification against the APS.

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

6. Certifications (cont.)



Organic Production Standards – There exist both (a) regulatory standards for organic production which are outlined in national regulations and enforceable by governmental agencies such as the USDA National Organic Program (NOP); and (b) voluntary sustainability standards such as the Demeter Biodynamic® Farm and Processing Standards and the Regenerative Organic Certified® (ROC) Standards:

- **Biodynamic® Farm and Processing Standards** –The Demeter Biodynamic® Farm Standard is a voluntary sustainability standard outlining an organic farming method that requires the creation and management of a closed system minimally dependent on imported materials, and instead meets its needs from the living dynamics of the farm itself. The scope of the Demeter Biodynamic® Processing Standard includes alcohol (beer, spirits, wines), cosmetics and body care, cereals and grains, fruits and vegetables, herbs and spices, meats and meat products, milk and milk products, nuts and seeds, oils and fats, sweetening agents and confectionaries, and textiles.
- **Regenerative Organic Certified® Standards** –The Regenerative Organic Alliance’s Framework for Regenerative Organic Certified® (ROC) is a voluntary sustainability standard that provides guidelines for farming and ranching operations, transportation, slaughter, and certain processing facilities. The ROC is built on three pillars: Soil Health & Land Management, Animal Welfare, and Social Fairness, with required criteria for each.
- **USDA National Organic Program Standards** –The United States Department of Agriculture (USDA) National Organic Program (NOP) is a federal regulatory program that develops and enforces consistent national standards for organically produced agricultural products sold in the United States. NOP also accredits third-party organizations to certify that farms and businesses meet the national organic standards.

Harvesting biodynamically grown valerian at Oregon Wild Harvest.
Photo by Ann Armbrecht

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

7. What To Do



1. Pick a Plant. Learn about your supply. Pick a cultivated plant that your company uses and trace it to its source.

- Are there sources that are certified organic? Are any grown regeneratively?
- What can you find out about the farming practices used? Do the farmers use cover crops? Crop rotation? Smart tools?
- Is it possible to grow this plant regeneratively by working with farmers using value-added cover crops or intercropping with plants such as with milky oats (*Avena sativa*, Poaceae) that can also be harvested and sold?

2. Support Farmer Training – If your company is not vertically integrated or you don't know the farmers growing the botanicals you source, there are still ways to support the shift to regenerative farming practices, either through your supplier networks (see [New Chapter's case study of working with suppliers](#)) or for supporting organizations that are helping farmer's transition to regenerative practices.

- Make a donation to [The Farmland Program](#), a program of Kiss the Ground, which provides a scholarship that funds farmers and ranchers to attend an agricultural training program that best fits their needs and context.
- Pay for farmers in your network to participate in [regenerative farming workshops through Rodale Institute](#).
- Share these [free training tools](#) (videos) for farmers on regenerative farming practices.

Growing turmeric (*Curcuma longa*) in Costa Rica
Photo ©2023 Ann Armbrrecht

Responsible Sourcing

Cultivated Herbs/Regenerative Farming

7. What To Do (cont.)

Turmeric fields in Nicaragua.
Photo ©2023 Ann Armbrrecht



3. Get Engaged

- Join Climate Collaborative's *Rooted Community network* for the guidance and support of leaders in this field. Make a climate commitment to the *Climate Collaborative* for agriculture. *Sustainable Food Trading Association* (now part of the Organic Trade Association) serves as a hub for businesses to learn, improve performance, communicate results, and share common metrics and best practices. Membership includes access to metrics and indicators, templates for reporting, toolkits for sustainability programming, measuring and reporting, etc.
- *Glyphosate Residue Free* – If you can't certify organic yet, commit to reducing some of the chemicals you use, beginning with glyphosate. *What Is Glyphosate? And What Does Glyphosate Residue Free (GRF) Labeling Mean?* By Mega-Food is a clear, informative explanation of why we should be concerned about glyphosate, what the labeling means, and why it is important.

Responsible Sourcing

Fair Trade And Social Equity



Relationships and Trust

Urban migration is considered one of the greatest threats to the future of the botanical industry. Producing botanicals is arduous work and those harvesting and growing medicinal plants typically make the least amount in a long supply network. It is difficult if not impossible to make a living solely harvesting medicinal plants. How can your involvement in herb sourcing (both wild harvested and cultivated botanicals) communities help make this work part of a viable livelihood option?

When companies buy through brokers and contract manufacturers, the social and economic challenges producers face can be invisible. What can you do to learn more about these conditions? How can you begin supporting a living wage? Are there ways to provide support in the community overall?

This work is easier said than done. Companies in all sectors are recognizing the need to address social and economic inequities in their supply networks. New reports and updates are continually being released. While information is important, long term relationships along those networks are the key to ethical sourcing.

These relationships pay off in many ways. Long-term partnerships bring more reliability and consistency to your value network and, thus, to your product. If there is a shortage of raw materials, those partners will be more inclined to ensure you have what you need. They may be more willing to invest the additional effort in meeting requirements for certifications or quality. While they do not have an immediate return on the bottom line, relationships offer a value that is worth putting a price on.

There are good examples and resources for working effectively and respectfully in cross-cultural settings, so that the relationship is a partnership and not just a transaction. Do your homework. Find partners with more experience if this work is new to you and your company.

Meeting with ginger farmers in rural Nepal.
Photo ©2023 Ann Armbrecht

Responsible Sourcing

Fair Trade And Social Equity Relationships Through The Value Network

Relationships

- *Relationships through the Supply Chain* – This SHP video follows Sebastian Pole and Ben Heron of Pukka Herbs as they meet with suppliers in rural India. It provides a window into how this work is done and why relationships are key to sourcing high quality botanicals.
- How Fair is Fair Trade? Watch video highlights and read key points from the SHP-FairWild Webinar, *Mutually Beneficial Trade Relationships*.
- The SHP video *Promoting Livelihoods the FairWild Way* describes the impacts of FairWild on a community in the northwestern Ghats in India.
- The SHP video *Wildcrafting in Appalachia* introduces the challenges facing the communities from which Appalachian botanicals are sourced.
- *Living Income in the Botanical Industry* – A SHP webinar exploring how the living income concept can help address economic inequity in the botanical industry. This link summarizes the key points, includes video excerpts, and the complete recording.

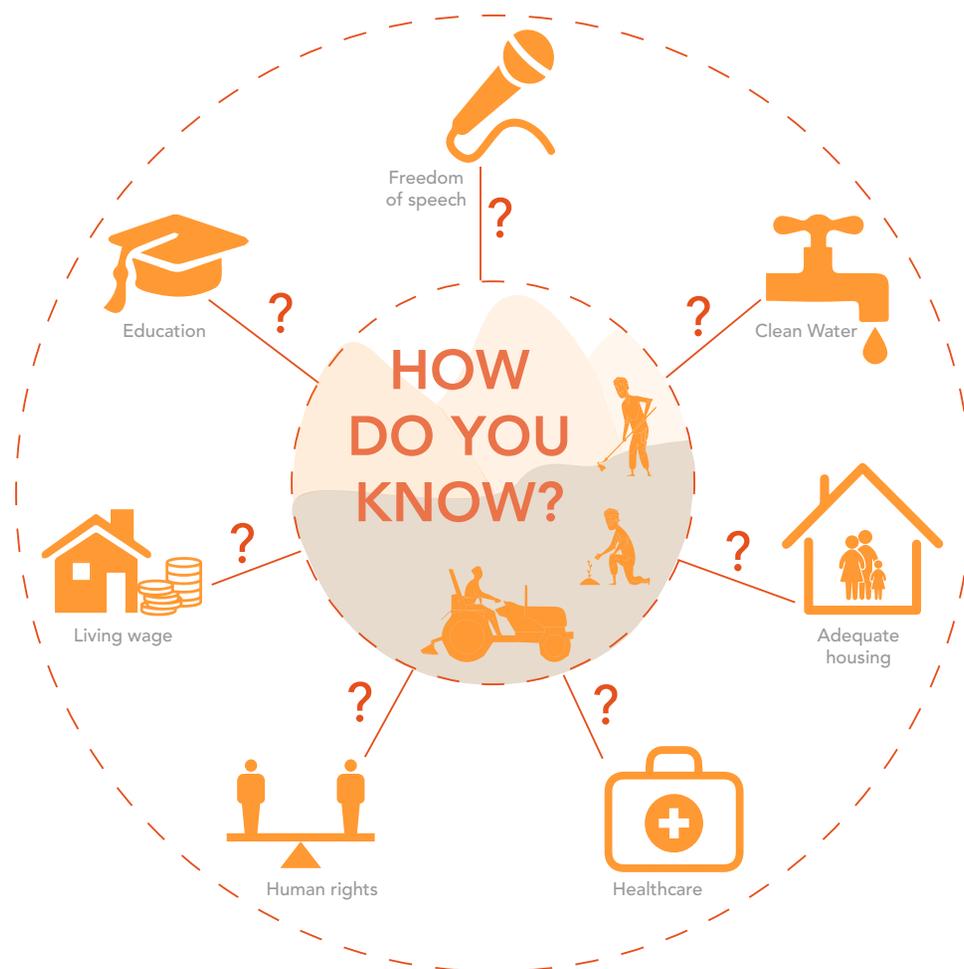
Harvesting lemon balm in Bulgaria.
Photo ©2023 Willow Fortunoff



Responsible Sourcing

Fair Trade And Social Equity

1. Know Your Practices



1. Know Your Practices

How does your company interact with producer groups from whom you source? What do you do to promote, and uphold the best practices and standards for the people along the supply chain?

a. Pick a Plant or region where you work. Answer these questions:

- What are the social and equity issues in the regions where the raw materials you source are grown, harvested, and processed?
- Are the basic needs of the farmers, producers, and harvesters met?
- Do they have access to clean water? Education? Health Care?
- Are there human rights violations? How do you know?

Access to basic needs?



Responsible Sourcing

Fair Trade And Social Equity

1. Know Your Practices (cont.)

b. Document your business practices:

- Do you provide contracts? How far in advance?
- Do you pay on time? Do you pay in advance? Across the board, producer groups and primary processing facilities say that a good company is one that pays on time. Or, as they told one individual responsible for sourcing, “I am not a bank.”
- Are you providing incentives to the farmers and harvesters to meet your guidelines and specifications? See this SHP case study about MegaFood’s *Healthy Farm Standard* for an example of ways to support farmers in improving farming practices.
- What happens to these relationships when the person who developed them, the person who cares about them, moves on? What happens when new company leadership reverse a relationship that has been developed over many years?
- Consider what communities want in terms of investments in their communities. Water? Schools? Who will maintain these initiatives? These investments can be fraught with political and economic inequities. Find partners with experience.

- Consider the extent to which multi-stakeholder initiatives you are involved in are truly multi-stakeholder? Does input/decision-making flow up from the ground level to top levels of companies? Or is it mostly one-directional? In what ways are you ensuring that people have the training and tools to participate and engage in a meaningful way in these conversations.

What does it mean to really respect, promote and uphold the best practices and standards for the people along the supply chain?



Responsible Sourcing

Fair Trade And Social Equity

2. Take Action



Processing ginger in South India.
Photo ©2023 Ann Armbrrecht

c. Quantify the Value of These Relationships

- Put a price on the values your company gains from developing and maintaining long-term relationships with suppliers.
- Include incentives for sourcing staff to maintain these relationships. Reward employees not simply for coming in under budget, but for making a case to pay producers more to take care of that relationship.

d. Decision-Making and Power

- Consider the extent to which the multi-stakeholder initiatives you are involved in truly multi-stakeholder. What can be done to bring in more perspectives and diversity?
- Does input/decision-making flow from the ground level to top levels of companies? Or is it mostly one-directional and top down?
- In what ways are you ensuring that people have the training and tools to participate and engage in a meaningful way in these conversations? How can you develop more equitable relationships and support producers so their voices and ways of knowing are part of decision-making and action?

2. Take Action

- Take the *Sustainable Development Goals* (SDGs) self-assessment to see where you stand in meeting the SDGs. The SDGs are 17 social, environmental, and economic goals that frame the global agenda for sustainable development between now and 2030. B Lab has developed this online platform in collaboration with the UN Global Compact to provide companies with concrete tools to benchmark their progress to meeting these goals. This tool is meant to complement the B Impact Assessment by focusing on how a company can address the SDGs in its operations. This article summarizes the differences between the two tools.
- **Pick one content area or one plant and dive in.**

Responsible Sourcing

Fair Trade And Social Equity Resources on Social Equity in Global Networks



Weeding in Bulgaria.
Photo ©2023 Willow Fortunoff

3. Resources

Below are resources relating specifically to addressing issues of social equity in sourcing on global supply networks.

- Read *Not Fit-for-Purpose: The Grand Experiment of Multi-Stakeholder Initiatives in Corporate Accountability, Human Rights and Global Governance*, a report reflecting on a decade of research into international standard setting MSIs. Through an analysis of *six key cross-cutting insights*, the report invites readers to think critically about the limitations of voluntary regulation and to envision more effective strategies to protect human rights.
- *The Voice, Choice, and Action Framework: A Conservation Practitioner’s Guide to Indigenous and Community-Led Conservation* (version 2.0) is a detailed tool kit for recognizing and working with power differences that exist within communities and across stakeholder groups. See pages 45-51 for resources for establishing effective multi-stakeholder platforms for decision-making. See pages 52-59 for resources for supporting environmentally sustainable livelihood opportunities. An interactive web version of the VCA Framework is *available here*.
- Tenure security — *Prindex* provides data on property rights “to help to build a world where everyone feels secure in their right to their home.”
- *Voices for BioJustice* – A collection of videos, webinars and reports to support greater participation of local groups in policy design and implementation.
- “*No Silver Bullets: Closing the \$10 billion income gap in cocoa calls for cross-sector action.*” This executive summary presents lessons learned from addressing inequity in cocoa producer communities.
- *J.E.D.I. Collaborative* aims to help natural products companies and leaders increase their ability to create space for and work alongside underrepresented communities in the natural products industry. The website offers several guided pathways to action and a collection of articles, videos, and other resources on advancing diversity and inclusion in your company.

Responsible Sourcing

Fair Trade And Social Equity Resources on Living Income

DIG DEEPER



Living Income Resources

There is a growing collection of resources on living income in all sectors and especially in the food sector. Below are some key resources to begin exploring the topic.

- *The Living Income Community of Practice* – This is the best place to begin exploring excellent resources for understanding and helping small-holder farmers achieve a living income. They host an excellent series of webinars (recordings [available here](#)) with case studies from around the world.
- *Roadmap on Living Income: A Platform to Guide Company Action to Close Living Income Gaps in Supply Chains*. The Sustainable Trade Initiative's (IDH) living income roadmap helps companies, along with other stakeholders, take ambitious, aligned actions to close farming households' living income gaps.
- *Roadmap on Living Wages*: IDH has also created a platform to strengthen international alignment and to build tangible solutions regarding a living wage.
- *The UN Global Compact Decent Work in Global Supply Chains Action Platform* – A platform with resources to advance decent work in global supply chains through sustainable procurement practices and engagement with suppliers.
- *Global Living Wage Coalition* – Uses the Anker Methodology to help estimate a region's realistic living wage.
- *Living Income: From Right to Reality: Essential Issues and Recommendations for business*. Briefings for Business on Inequality in Food Chains by Oxfam, 2021.

**Living wage and living income are specific terms. The Global Living Wage Coalition defines living income as "The net annual income required for a household in a particular place to afford a decent standard of living for all members of that household. Elements of a decent standard of living include: food, water, housing, education, healthcare, transportation, clothing, and other essential needs including provisions for unexpected events." Earning a living wage means workers receive sufficient wages to afford a decent standard of living for the worker and their family. For more information see the [Global Living Wage Coalition](#).*

Responsible Sourcing

Fair Trade And Social Equity Resources for Working with Smallholders



Passionflower (*Passiflora incarnata*) harvesting.
Photo ©2023 Steven Foster Group

Organizations Working with Producer Groups/Smallholders

- *Rikolto*: is an international NGO with more than 40 years' experience in partnering with farmer organizations and food chain stakeholders across Africa, Asia, Europe and Latin America. They run programs in 17 countries worldwide through seven regional offices. Rikolto co-founded *AMEA*, the Agribusiness Market Ecosystem Alliance, a global network for accelerating the professionalization of farmer organizations. The *SCOPE methodology* used by Rikolto staff since 2016 is considered the standard tool for assessing the risk of doing business with small farmer organizations within AMEA.
- *Solidaridad* is an international network that works throughout the supply chain to make sustainability the norm and enable farmers and workers to earn a decent income, produce in balance with nature, and shape their own future. They are beginning to expand their focus to include *medicinal plant networks*. For more information on this program, contact *Solidaridad*.

Responsible Sourcing

Fair Trade And Social Equity General Resources



Processing ginger in Nicaragua.
Photo ©2023 Ann Armbrecht

Resources from Other Sectors

- *AIM Progress Living Wage Playbook*: This playbook is designed as a “how to guide” to help companies at different stages of their living wage journey, with examples for each section. It is intended help companies build and implement a living wage strategy, whether for their employees, across their suppliers, or both.
- *The Responsible Sourcing Tool* – a web platform to help visualize and understand the risks of human trafficking in supply chains, including tools focused on the *food and beverage industry*.
- *Verité* – conducts research, advocacy, consulting, trainings, and assessments to help ensure that people worldwide work under safe, fair, and legal conditions. Verité helped Patagonia develop and roll out comprehensive *Migrant Worker Employment Standards and Implementation Guidance*. These standards and Patagonia’s process for developing and implementing them along their supply chain are *described here*.
- *The Farmer Income Lab* – A think-and-do tank founded by Mars Incorporated in 2018, works to identify and test the optimal ways to drive meaningful improvements in smallholder farmer incomes. Their website includes *briefs and insights*, including, “*Boosting Farmer Income: further insights from great cases.*”
- *Fairtrade and Mars Livelihood Ecosystem Advancement Program – An overview of the Livelihoods Ecosystem Advancement Programme* (LEAP) launched by Fairtrade, ECOOKIM (a collection of cocoa co-operatives from Côte d’Ivoire), and Mars to drive towards a living income for all cocoa farmers.
- *Responsible Coffee Sourcing: Towards a Living Income for Producers*. Produced by the Columbia Center on Sustainable Investment (July 2021).

Responsible Sourcing

Fair Trade And Social Equity Certifications



DIG DEEPER

Certification Resources

- A *simple and short video by ISEAL* introducing criteria for evaluating the credibility of certifications and systems.
- *International Guide to Fair Trade Labels* – A reference tool to better understand the issues, guarantees, and certifications provided by fair trade labels, their standards, monitoring measures, and how they differ from sustainable development labels.
- *Fair for Life*, a third-party, voluntary certification standard for Fair Trade and responsible supply chains that allow sourcing of fair-trade ingredients from any country. The website includes lists of certified operators and their ratings by specific standards criteria.
- *Fair Trade International (FTI)*, a third-party, voluntary certification with economic, environmental, and social criteria that must be met by producers and traders to acquire or retain fair trade certification. FTI is limited to products from the Global South.
- *Reference Guide to Fair Trade and Worker Justice Certifications* – Compares and evaluates leading fair trade certifications key issues; useful as an effective comparison tool.
- *California Transparency in Supply Chains Act* – Companies operating in California are required to comply with the California Transparency in Supply Chains Act. Participating in the equitable and fair production and trading systems provides the evidence needed to comply with the California regulation.
- For a more academic discussion of the efficacy of voluntary standards, certifications and ethical labels and their limitations, see “*Business and Human Rights: The Efficacy of Voluntary Standards, Sustainability Certifications, and Ethical Labels*,” by Elizabeth Bennett.

Responsible Sourcing

Contract Manufacturing

How well do you know the companies that are growing, sourcing, and manufacturing raw materials in your name? Many brands buy through brokers and/or contract manufacturers. In choosing suppliers, it is important to build a team to match your values.

Contract manufacturers offer a wide range of quality. They can be price-buying, looking for the cheapest product available, or they can rigorously implement the strict ingredient specification mandates required by their buyers. There is little incentive for a contract manufacturer to purchase more expensive raw materials unless directed by their customer. It is up to the finished product company, i.e., the brand holder, to provide the specifications to ensure that its values are truly represented in the quality of the raw material purchased, and, eventually, in the finished product.

Jasmine oil processing.
Photo ©2023 Steven Foster Group



Responsible Sourcing

Contract Manufacturing Self Assessments and Supplier Codes of Conduct



There are different ways to work with and assess your suppliers. We include examples of three different approaches: *Martin Bauer Group's mabagrown® standard*, New Chapter's self-assessment tool developed in partnership with NSF, and MegaFood's *Supplier Code of Conduct* and their *Healthy Farm Standard*.

New Chapter hired NSF International to help them develop and implement a three-tiered assessment with their business partners, from manufacturing to sourcing, to ensure that these partners adhere to New Chapter's mission, standards, and values. [Read the complete SHP case study here.](#)

The key takeaway: Develop ongoing relationships with your partners. Conduct site visits and audits. Ask questions. Get a voucher. Do they know where plants were harvested? If they cannot give the source, ask more questions: "If you aren't working directly with producers, how do you know the information in your C of A [certificate of analysis] is accurate?"

Additional lessons from New Chapter's experience:

- **Assessments require suppliers to do additional work** — Be considerate of the time and work required; be respectful and collaborative.
- **Enlist outside experts as needed** — NSF's expertise helped in both designing and implementing the assessment.
- **Go slow** — Take time developing the assessment, tailor it to each tier of the supply chain and conduct pilot studies to incorporate lessons into the assessment sent to all their suppliers.
- **Long-term relationships** — Partners with whom they have a long-term relationship were more receptive and responsive to the assessment. These relationships are also deepened as they work together to improve practices.

Working in lemon balm fields in Bulgaria.
Photo ©2023 Willow Fortunoff.

Responsible Sourcing

Contract Manufacturing

Vetting Contract Manufacturers



Tea packing facility in Bristol, UK.
Photo ©2023 Willow Fortunoff.

Create or review your supplier code of conduct.

- Many examples exist; here is a link to [MegaFood's Code of Conduct](#).
- **Consider** – How can you incentivize your suppliers to adopt your sustainability practices?

Vet/audit contract manufacturers. Below are guidelines

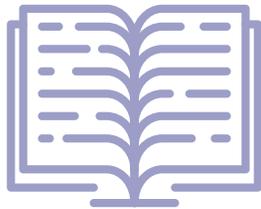
- Do they have Standard Operating Procedures (SOPs) for the following?
- **Science** – Do they understand botanicals, the correct plant part, how to identify them, and test for quality. Do they know how to source at the appropriate time, store and transport for optimal quality.
- **Quality control** – How do they define quality? Do they strictly adhere to cGMPs as required by the FDA? Do they implement additional requirements of quality control? Do they understand adulteration, such as how adulteration occurs, and do they test for known adulterants (as required by GMPs in the United States and many other countries)? Do they buy the whole plant or plant part? Is the raw material in whole form or is it powdered? If powdered, how do they ensure it is the correct material? What else do they test for in addition to identity? How do they qualify their vendors? How do they validate their contract testing lab and/or in-house testing procedures?
- **Sourcing** – If the contract manufacturer is responsible for sourcing ingredients, do they buy directly from producers or through brokers and distributors? Do they know where plants were harvested? If they cannot give the source, ask questions. “If you aren’t working directly with producers, how do you know the information in your C of A [certificate of analysis] is accurate?” Do they understand good sourcing practices (see previous sections on creating Supply Networks and Relationships through the Supply Chain)?
- **Extraction** – Do they understand the technology and the effect of distinct types of extraction on phytochemistry of fresh or dried source plant material? What fillers and solvents do they use? How is waste handled?
- **Regulations** – Do they understand, implement, and audit the regulations required by the countries where they operate?
- Do they formally **screen for social or environmental practices** and performance of suppliers?`

Collaboration And Partnerships

Beyond sourcing, how does your company impact the environment? What else is in the products you produce? What fillers? What solvents? What waste is produced? How do you handle it? What about packaging? What is the impact on the climate?

These issues faced cannot be tackled alone and require collaboration to make the changes needed.

- [*SHP Gaia Case Study*](#) — Read about the importance of partnerships and collaboration.
- The Sustainable Herbs Program offers a pre-competitive platform for companies and organizations to share resources and ideas and collaborate on specific topics. SHP Underwriters and donors meet for quarterly brown bag discussions on key industry topics. SHP working groups meet monthly to collaborate on taking action around specific topics like mapping scope 3 carbon emissions, partnering on social and environmental projects, etc. To find out more, [*contact Ann Armbrecht*](#), SHP Director.
- [*The Climate Collaborative*](#) is a community of natural products businesses committed to bringing climate action into core business operations. They offer tools and resources to help catalyze change within the business community. They offer webinars, host Climate Days at Natural Products Expo East and West, and offer working groups to enable companies to turn climate aspirations into action — including marketing, sales, finances, executive assistance, and operations.
- [*J.E.D.I. Collaborative*](#) is an initiative committed to bringing more diversity equity, and inclusion into the natural products industry.
- [*The American Herbal Products Association \(AHPA\) Sustainability Committee*](#) brings together herbal industry leaders, creating a community of practice that identifies, analyzes, and finds solutions for key social, brand, and environmental risks that require collaborative industry action.



LEARN

“Do one thing and don’t do it alone.”

— Erin Callahan, Climate Collaborative

Collaboration And Partnerships

- Become an *SHP member*.
- *Make a climate commitment* to Climate Collaborative in one of the topic areas most suited to your company. If you have already made one, make another.
- Make a commitment to *J.E.D.I.*
- If you are a member of AHPA, join the Sustainability Committee.

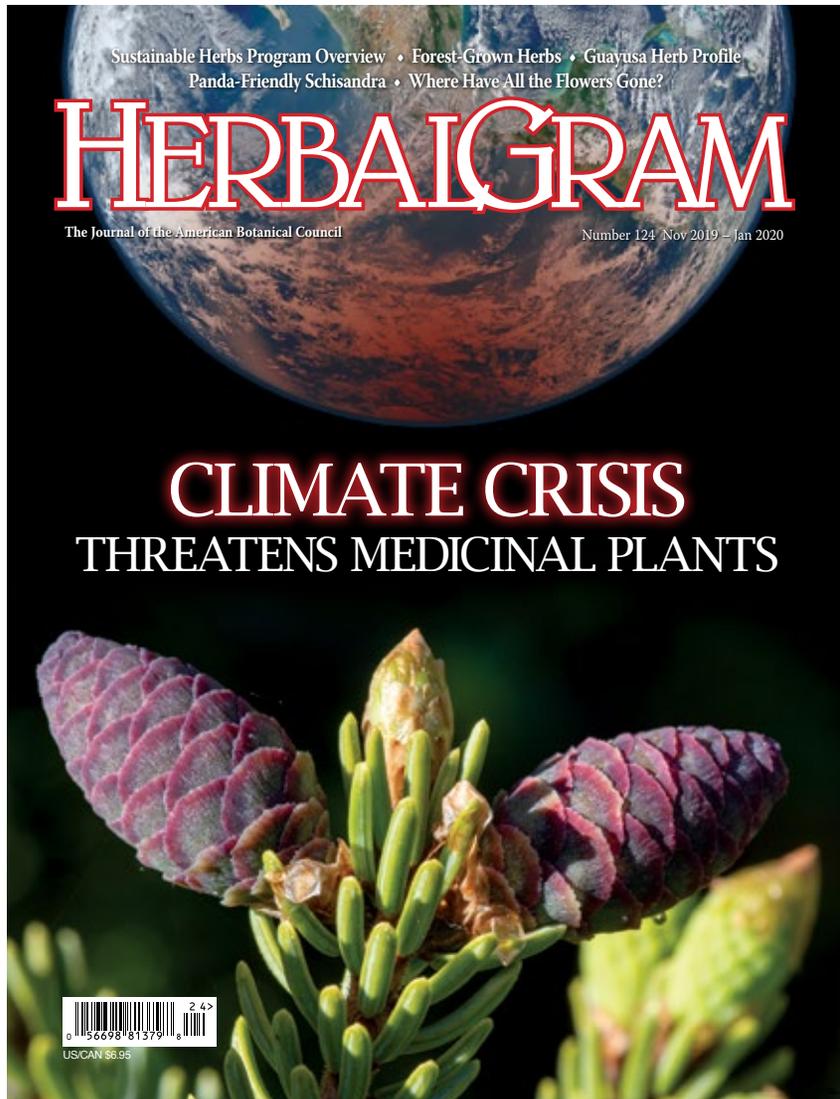
Sourcing Visit in Nepal with Martin Bauer, Pukka Herbs, Yogi Tea and the Sustainable Herbs Program visit Organic Valley, a producer group in Nepal.
Photo ©2023 Terrence Youk



ACT



Issues: The Climate Emergency



Herbal products companies are already experiencing disruptions in their supply chains, including shortages from unprecedented rains, droughts, fires, hurricanes, and other weather events caused by climate change. These disruptions will only increase in the future. The question is no longer whether the climate is changing, it is what we can all do about it as quickly as possible.

The climate emergency is disrupting herbal supply chains around the world. Rains aren't coming or they are coming at the wrong time. Plants are flowering earlier, which means pollination is off and, in turn, harvesting times are off. Wild collectors who have organized their lives around harvesting seasons are having to adjust their schedules. Farmers who used to be able to get by without irrigation are losing crops to drought or at other times of year to flooding from extreme rains. These weather changes increasingly disrupt supplies of medicinal plants and their quality.*

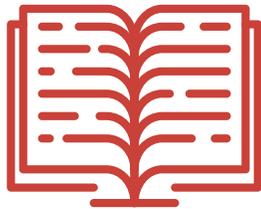
The B Corps recently stated that we are dealing with a climate emergency and outlined three steps for responding:

- **Tell the truth** — Acknowledge this is an emergency and treat it as one.
- **Act now** — Take radical steps to halt biodiversity loss and reduce greenhouse gas emissions to net zero by 2025.
- **Stronger together** — Work with others to create innovative solutions.

*Armbrecht, Ann. 2022. *The Business of Botanicals*. White River Junction: Chelsea Green Publishing.

Issues: The Climate Emergency (cont.)

LEARN

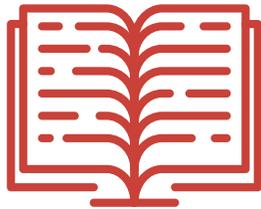


- Watch the SHP Webinar: *The Carbon Footprint of Tea* for an overview of how botanical companies can begin measuring and taking action on reducing the carbon emissions in their supply networks. This link includes highlights from the webinar.
- The *B Corp Climate Collective* is a group of Certified B Corporations working to take action on the climate emergency. The website provides resources to take action, to track your progress, and to advocate for government action.
- *The Climate Justice Playbook for Business v 1.0* – Provides resources and case studies of companies seeking to advance climate justice in their operations, supply chains, and in the communities they impact.
- *Science Based Targets* – The *UN Global Compact* is calling on businesses to step up and commit to set science-based targets aligned with limiting global temperature rising to 1.5°C above pre-industrial levels. Science-based targets can seem overwhelming and intimidating. These resources outline ways to begin:
 - *Take these 9 steps to demystify science-based targets outlines a general approach.*
 - The SHP blog post, *Science-based Targets for Climate Change*, outlines Pukka’s approach to setting and meeting science-based targets.
 - The science-based Target website includes *case studies* with companies discussing how they got buy-in, the benefits, and some of the innovations that are helping them achieve their goals.
 - *Implementing an Advanced Corporate Climate Strategy* by Pure Strategies outlines an approach to setting science-based targets.
 - *ACORN* is a direct trade platform that allows companies and consumers to offset their emissions through agroforestry on smallholder farms without middlemen. The video “*Coffee producers fight climate change*” follows farmers in Colombia to see how this platform works on the ground.

Climate Emergency

Measurement Tools and Other Resources

LEARN



Measurement Tools

- [*Climate Trace*](#) – Climate TRACE’s emissions inventory is the world’s first comprehensive accounting of GHG emissions based primarily on direct, independent observation.
- [*Greenhouse Gas Protocol*](#) – Provides standards, guidance, tools, and training for business and government to measure and manage climate-warming emissions.
- [*Soil & More International*](#) (SMI) works with companies to calculate their carbon footprint, which is the amount of greenhouse gases (GHG), specifically carbon dioxide (CO₂) emitted in the manufacture and transport of their products.
- [*Cool Farm Tool*](#) – An online greenhouse gas, water, and biodiversity calculator for farmers.
- [*HowGood*](#) - A SaaS data platform to document the greenhouse gas (GHG) emissions (and other social and environmental impacts) of product ingredients.

Additional Resources

- [*Climate Smart Agriculture*](#) – An innovative online learning community on private sector engagement in climate smart agriculture created by climate scientists at CGIAR’s Research Program on Climate Change Agriculture and Food Security, USAID, the Sustainable Food Lab, and Root Capital.
- [*Textile Exchange Climate Strategy*](#) – An interconnected approach that goes beyond accounting for GHG emissions, swapping siloed solutions for interdependent impact areas like soil health, water, and biodiversity.
- [*B Corp Global Climate Summit*](#) – A three-day virtual summit in July 2021 for B Corps members to take action on the climate emergency. The link includes a summary of the summit and a recording of the opening session.
- [*Climate Action 100+*](#) – Climate Action 100+ is an investor-led initiative to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change.

Climate Emergency

What To Do

ACT



- Join the [*Sustainable Herbs Program Working Group on Scope 3 Emissions in Sourcing Botanicals*](#). SHP members are exploring ways to collaborate around measuring and reducing the GHG of specific botanicals. To find out more, [*contact Ann*](#).
- Join the [*B Corp Climate Collective*](#). B Corp status is not required to join.
- Join the [*SME Climate Hub*](#), a global initiative to empower small-to-medium-sized companies to take climate action. The Hub is an initiative of the We Mean Business Coalition, the Exponential Roadmap Initiative, and the United Nations Race to Zero campaign in collaboration with Normative and the Net Zero team at Oxford University.
- Make a climate commitment to [*Climate Collaborative*](#) if you have not done so yet. If you have made one, make another.
- Set [*Science-based targets*](#).
- Organize a [*Do Nation*](#) campaign for your employees. To help make every Pukka person carbon-savvy as part of meeting their science-based targets, Pukka launched a company-wide [*Do Nation*](#) campaign. Teams competed against each other to save carbon and change habits. It made carbon saving real by linking it to every day actions, inspired a feeling of community engagement, and improved general sustainability literacy in the company. This helped pave the way to set science-based targets. Take a look at the [*Leaderboard*](#) from their campaign to learn more.

Issues Packaging

Resources

Fifty percent of all municipal waste is packaging. Packaging is one of the biggest issues consumers are concerned about. Yet it can be tricky for companies to navigate the line between actual impacts of different packaging and public opinion. A Climate Collaborative survey found that companies identified packaging as the most challenging commitment.

Below are some resources on the impact of packaging in the waste chain.

Industry-Wide Initiatives and Resources

- [*One Step Closer \(OSC2\) Packaging Collaborative*](#) — An initiative launched at Expo West 2013 to develop compostable packaging solutions. Link includes resources, membership information, and a recording of [*Where Does Our Packaging Go?*](#) a webinar on compost, recycling, and landfill with Waste Managers and their on-the-ground experience. [*Investing in the Earth: Leveraging LCAs to Make Data Informed Decisions*](#) – OSC hosted a webinar for Earth Day that explored how two members of the Packaging Collaborative (Grove & Dr. Bronner's) are using LCA data to make informed decisions around packaging.
- [*Quick Guide: Climate-Smart Packaging*](#) – Climate Collaborative compiled a clear and concise guide to help companies understand (1) climate-smart packaging strategies and (2) a design process to help companies improve the environmental footprint of their packaging. This is an excellent place to begin.
- [*Sustainable Packaging Coalition*](#) – A membership-based collaborative to promote sustainable packaging. Includes a [*wealth of articles*](#) on many topics related to sustainable packaging.

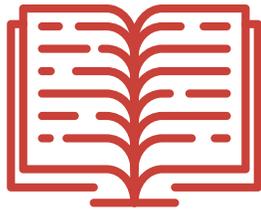


Fifty percent of all municipal waste is packaging.

Issues Packaging

Resources (cont.)

LEARN



Company Practices

- [*Pukka's Sustainable Packaging Policy*](#) outlines Pukka's packaging policy, including their goals and progress.
- This SHP blog post describes Mountain Rose Herbs' [*Environmentally Preferable Packaging Policy*](#).
- [*Traditional Medicinals's Non-GMO Project verified tea bags*](#) and strings produced in partner ship with Glatfelter, made from sustainably farmed abacá leaves (*Musa textilis*, Musaceae) from the Philippines.
- Numi tea created [*compostable plant-based tea*](#) wrappers to eliminate plastic waste.
- [*Ecovative design*](#) uses mycelium, the root structure of mushrooms, to grow materials that replace plastics.
- [*Earth Renewable Technology*](#) (ERT) manufactures patent-pending microfiber additives and specialty compounds for plastic that can increase elongation at break, impact resistance, barrier, and heat deflection temperature.

Additional Resources on Plastics

- [*Biodegradable Plastics: Breaking Down the Facts*](#) – A Greenpeace report on the use and potential benefits of biodegradable plastics.

Take Action

- Make a [*climate commitment*](#) on the packaging initiative and follow their guidance for taking action.
- Attend packaging educational programs at trade shows and engage in the conversation.

Issues: Waste

If food waste were a country, its emissions would rank third in the world, after China and the United States, producing 8% of manmade emissions. A third of the food that is raised or prepared is never eaten. Few resources look specifically at measuring and reducing waste in the botanical industry, but lessons can be learned from efforts to address food waste.

Unmeasured amounts of raw materials are wasted in growing, harvesting, processing, and manufacturing herbal products. Reducing that loss means less pressure on wild plant populations, less energy for transportation and processing, less solvents for extraction, and less carbon emissions from each of those processes.

Plants that are grown, harvested, and handled properly can be of higher quality, and so less raw material is needed to produce products that achieve the desired effects. For example, to get a jump on the competition, some saw palmetto harvesters pick unripe green berries early in the season. Ripe berries, as determined by levels of extractable solids and fixed oil content, harvested later in the season, take fewer pounds of berries to make a given amount of extract that meets appropriate specifications.

Another source of waste that is not well documented comes from rejected material, either raw material or finished products because the product does not pass quality specifications.

Finally, solvents used in manufacturing and labs impact the environment. Solutions to solvent waste include reducing the amounts used as well as keeping that waste out of waterways, etc. in their downstream process.

For more information, see the SHP website section on [Waste and the Botanical Industry](#).

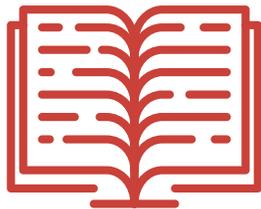
A storage facility in southern India. Poor drying conditions account for some of the greatest loss of raw material in the supply network.
Photo ©2023 Ann Armbrrecht



Waste

Raw Material Waste

LEARN



- **On-field Waste** — On-field waste includes poor planting density, poor germination, inferior quality, diseased, and weather-damaged crops. Minimizing waste begins with good seed selection and good farming practices to improve the quality of plants and soil to increase resilience.
- **Post-harvest Handling Waste** — The greatest losses come in post-harvest handling due to inadequate drying and storage facilities. Even when handled well, some crops with a high percentage of stem lose up to 50% to mill loss.

Turning Waste Streams into Value Streams

- In an innovative partnership, waste products from Euromed's saw palmetto fruit extraction are used to develop ecological dyes fully traceable from nature to fashion produced by Archroma®. Read more at this [SHP blog post](#).
- [Applied Food Sciences](#) (AFS) has found a use for the sweet coffee fruit known as cascara (the Spanish word for bark, not to be confused with 'cascara sagrada', the laxative tree bark from *Rhamnus purshiana*, syn. *Frangula purshiana*, Rhamnaceae). This fruit is typically discarded as the coffee beans are processed; most of it ends up in the landfill. AFS developed CoffeeNectar™ cascara fruit extract to provide a use for this fruit that both generated additional revenue for coffee farmers and kept the fruit out of waste streams.

Waste

Facilities Waste

Artichoke leaves caught in the machinery in the drying process.
Photo ©2023 Willow Fortunoff



Managing waste begins with a systems approach, beginning with evaluating how waste enters the system and redesigning systems to minimize waste streams and reduce reliance on raw materials. This includes raw materials, packaging, solvents, energy, and water use. Below are examples of several companies' and organizations' approaches to waste management.

- **Zero Waste** is a set of principles focused on waste prevention that encourages the redesign of resource life cycles so that all products are reused. For example, Mountain Rose Herbs recycles and composts over 335,000 lbs. of materials every year. They produce around 17,000 lbs. of trash a year. It takes perseverance and commitment to achieve Zero Waste certification. The SHP blog [*The Journey to Zero Waste*](#) describes the experience of Mountain Rose Herbs.
- **Zeroing In on Zero Waste** – [*Gaia's Efforts + 6 Steps You Can Take to Reduce & Reuse at Home*](#) outlines Gaia Herbs's approach to Zero Waste.
- **Unilever** has devoted a section of their website to the topic of waste, from their transition to a circular economy approach to rethinking plastic packaging, working to waste-free manufacturing and tackling food waste.
- **AstraZeneca**, the pharmaceutical company, outlines their approach to [*waste management*](#) which includes stories from manufacturing that are applicable to larger dietary supplement manufacturers.

Waste

Additional Resources

- [*TerraCycle*](#) offers a range of national, easy-to-use recycling platforms. See this 2022 New York Times article, [*The Warehouses of Plastic Behind TerraCycle's Recycling Dream*](#) for a journalist's perspective on the company's practices.
- [*Climate Collaborative*](#) has links and resources on addressing food waste and waste in packaging that are a good place to begin learning more.
- [*ReFED*](#) provides resources for reducing food waste, including a Roadmap to reducing US food waste by 50% by 2030. The website includes data on savings of different approaches to waste reduction (i.e., waste tracking, consumer education, standardized labeling, packaging adjustments).

These savings can be measured in terms of finances, waste diverted, emissions reduced, water saved, jobs created, and meals recovered.



Mentha distillation.
Photo ©2023 Steven Foster Group

Waste

Solvents & Green Chemistry

Solvents can be an unseen component of the manufacturing of botanical extracts used in dietary supplements and herbal products. Intrinsically technical, residual solvents (usually very low processing compounds used in the extraction process that remain in the extract) often remain the unnoticed realm of chemists and manufacturing technologists and are seldom visible in the customer's mind. Solvents must be properly handled at all stages of the manufacturing process.

The selection of solvents is a key component in the botanical extract manufacturing process and is a key consideration in sustainability. Even if a company can demonstrate that little or no solvent residue is in the final ingredient or finished product, what are the impacts on the environment and the workers in sourcing, handling, and disposing of used solvents?

Like any other issue in the herb industry, it begins with understanding the role solvents play and the efforts companies are taking to minimize and, in some cases, eliminate the use of harsh solvents. Then it takes encouraging more companies to follow suit.

- *Manufacturing at Indena* — This 3-minute SHP video documents environmental practices at Indena, a large botanical extract producer at its manufacturing facilities in Milan, Italy.
- *Hey Fashion* — A report by the Eileen Fisher Foundation on the waste crisis in the fashion industry and how to solve it. The web platform offers a good example of how one industry is approaching the waste crisis.



Waste

Solvents & Green Chemistry (cont.)



DIG DEEPER

- Millipore Sigma has summarized Paul Anastas and John Warner's *12 Principles of Green Chemistry* with examples of solutions. Their *DOZN™ Quantitative Green Chemistry Evaluator* is a tool that uses these principles to compare the relative greenness of similar chemicals and chemical process.
- *The Chemical Footprint Project* — Provides a tool for benchmarking companies as they select safer alternatives and reduce their use of chemicals of high concern.
- *The Power of Chemical Footprinting* — A case study of Radio Flyer's move to sustainable chemicals management. While the issues are different for the botanical industry, this case study provides a map for building greater chemical transparency into manufacturing.
- Here's an example of an environmental risk summary for ingredients used in manufacturing products by *AstraZeneca*. This summary is for pharmaceuticals, not dietary supplements, but illustrates one way to provide transparency about manufacturing processes, solvent use, and their risks.

Questions to consider: The Laboratory's Environmental Footprint

What is the environmental footprint of a lab and what can be done to reduce it? What chemicals are being used, what are the impacts and what is the eventual fate of those chemicals?

- **How Green is your Laboratory?** Read the *SHP post* by ABC's Chief Science Officer, Stefan Gafner, PhD — an introduction to sustainability issues in quality control laboratories.
- *Green Biopharma* — Resources to reduce the environmental impact in laboratories and manufacturing.
- MilliporeSigma also offers *greener alternatives* for common lab reagents and chemicals and a portfolio of *green services*, including *returnable solvent containers* and a polystyrene cooler return program.
- *My Green Lab* — Resources to reduce the environmental impact of labs.

Waste

Trade Shows

ACT

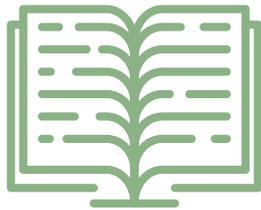


- *The Story of Herb Pharm's Trade Show Booth* — Trade shows generate tremendous amounts of waste. SHP documented Herb Pharm's decision-making process as it designed its Expo West 2020 booth to inspire the industry to think about the environmental impact of trade shows. Read the SHP Blog series [here](#).
- The Informa Markets' *New Hope Network Sustainability Program* includes information on ways they are working to reduce the environmental impacts of their trade shows, guides for exhibitors and attendees to reduce those impacts, and ways to get involved. If you are an exhibitor or attendee to trade shows, look to see how you can support these efforts.

Take Action

- Make a *climate commitment* to address waste via Climate Collaborative. Take advantage of their [resources](#) (videos, webinars, tool kits, and case studies) to take action on this commitment.
- Do a waste audit and begin taking action on reducing through redesign and upstream communication, reusing, recycling, and identifying take-back programs.
- Take the *Chemical Footprint* Project Survey to see where your company stands and whether there are issues of concern. If you do, dig into the resources on this site.
- Consider: How can you redesign aspects of your trade show presence to generate less waste?

Advocacy: Taking a Stand



LEARN

Companies leading the way here believe that it is not enough just to produce a product and pay attention to your supply network. You need to put a stake in the ground and say, “This is what we believe in.” Below are examples of how to get involved in policy.

- In the SHP Blog Post, “[Advocacy and the Climate Crisis](#),” Jane Franch, previous Vice President of Strategic Sourcing & Sustainability at [Numi Organic Tea](#), shared her thoughts on why it is essential that companies engage in advocacy for rapid cross-sectoral decarbonization.
- Engaging in Climate Policy thru collaborative organizing: [A Mountain Rose case study](#) by Climate Collaborative.

MegaFood has been a leader in engaging in policy issues that impact their mission. Bethany Davis, former Director of Advocacy and Government Relations at MegaFood, outlined the key steps in MegaFoods’ glyphosate campaign:

- **Becoming Aware** — Understand what is at stake. As Bethany learned the ways that farming practices are killing our topsoil and threatening the long-term food supply, she realized that nothing MegaFood produced mattered if there was no food.
- **Treat it Like a Business Case** — Bethany made the case to company leadership that, as a whole food-based supplement company, if there was not food, MegaFood would not have products. If the company did not change the way they operated, they would not have a company.
- **Consumers Support Companies Who Care** — Marketing studies make it clear that consumers support responsible companies. Bethany said that even if not all consumers want to do something positive, they do not want to support companies that they perceive as “bad”, i.e., in this sense, engaging in non-sustainable practices. This is also a way of building brand loyalty and repeat customers.
- **Research** — MegaFood conducted a research study to find out which values were most important to its customers.
- **Learn from Partners and Work with Partners** — Do not recreate the wheel. Bethany and her team spent a day at Ben and Jerry’s to learn from their approach. From Ben and Jerry’s they learned to (1) talk about something you have earned the right to talk about and (2) partner with those who know what needs to be done or use your resources to support NGOs already doing the work.
- **Lesson Learned** — The lesson was that people care about this. Retailers care. There is evidence that people want to buy and help promote a company’s products when they do work that is important.

Telling Stories: From Consumers to Citizens



What can you do as a company to engage your customers in a meaningful way in the mission of your organization? Patagonia's *The FootPrint Chronicles* set a high bar for transparency, inviting customers not only to see where and how their products are manufactured, but also to peer into the challenges Patagonia faces in meeting its high standards.

The goal of marketing is to make a message sticky so that people remember it and can easily share it. This requires simplicity.

On the other hand, the work of building sustainability into diverse value networks is complex, detailed, and nuanced. It is extremely challenging to translate that complexity into compelling stories. There is a tension between capturing that nuance in a way that does not overly simplify the message and losing one's audience.

Yadim Medore of *Pure Branding* says that transparency is ultimately about connection. It is about the human desire to be closer to the people who are providing for us, who are working with us and for us. The details of tracing from where raw materials are derived, supporting regenerative farming practices, and ensuring fair wages are all important in that they are part of a story of how a company is working to care for people and the planet. Both are essential to the message, the details and saying why it matters.

Some reflections from our perspective not as marketers but as readers of marketing content:

- Be interesting.
- Tell the truth.
- If you can't tell the truth, change what you are doing so you can.

FairWild harvesters in eastern Poland. Photo ©2023 Ann Armbrrecht

Telling Stories: From Consumers to Citizens (cont.)



BE INTERESTING



TELL THE TRUTH

If you can't tell the truth, change what you are doing so you can.



TELL STORIES

But tell stories about the people, places, and plants to make those lives and places visible, not simply to sell a product. If you sell marshmallow (*Althaea officinalis*, Malvaceae) from Bulgaria, for example, talk about the region of Bulgaria where the marshmallow is grown. Who grows it? What are their lives like? If the plant is wild collected, share a story about the lives of the wild collectors. If you have a tough time finding those stories, that is an indication that you need to invest more into developing those relationships. Asking the suppliers about these stories lets them know you are paying attention. Better yet, visit those regions yourself to get your own stories to share.



TALK ABOUT WHAT'S AT STAKE

Talk about what is at stake and why it matters. The natural products industry focuses on individual and personal wellness at the expense of the broader social and ecological context. How is what you are doing good for the whole?

Some reflections from our perspective not as marketers but as readers of marketing content:



YOUR COMPANY

Share information about your company. The Sustainability Reports of Traditional Medicinals, Gaia Herbs, and Pukka Herbs are good examples of providing evidence of, as Summer Singletary, Content Marketing Strategist, says, "loyalty to results."



SHARE PROCESS

Include information about different types of processing and solvents used. Provide this information not just to convince customers why your company's processes create the best products, but to help them understand the reasons for the choices you have made, what the other options are, and how that impacts the quality of the product.



HOST A WEBINAR

Lots of leading herb companies offer webinars about how different herbs can be used for health benefits. What about also creating webinars with information about how you vet your vendors or select a contract manufacturer? How do you ensure they are doing what they say they are doing? In teaching about the uses of those plants include stories about the supply chain for those particular plants. Of course, the point is still to sell the product, but in the process you will not only be educating your customers about where you get your plants, but also showing that these things really do matter.

Learn more from our [*conversation with Summer Singletary*](#).

Telling Stories: From Consumers to Citizens (cont.)

Hydrastis canadensis
Photo ©2023 Steven Foster Group



Act

Just begin! This is the easy and fun part, a way to celebrate your hard work and share your successes and challenges with others.



Dig Deeper

- In *The Power of Traceability: A Road Map in 10 Steps*, Yadim Medore, founder and CEO of Pure Branding, outlines a straightforward process for developing a marketing strategy that builds on telling stories about where your products come from.
- *The Lexicon* — creative, short videos communicating words that are at the heart of sustainability.
- *INTO* — an online blockchain-based storytelling platform connecting customers with the stories behind a brand through short, visual Instagram-like stories presented via images, videos, maps and text produced and controlled by the company.

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Echinacea farming operations at Trout Lake Farm, in Washington.
Photo ©2023 Steven Foster Group



Inaugural Underwriters:



Underwriters:



Acknowledgments



Echinacea purpurea
Photo ©2023 Steven Foster Group

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