

FRANKINCENSE: SPIRITUAL RESOURCE IN PERIL

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Imagine inhaling a rich, unforgettable scent that evokes tones of earth, citrus, and pine. A fragrance so alluring that it has been prized for centuries and even gifted to baby Jesus himself. This fragrant treasure is not only a feast for your senses but also a powerful healing aid that is thought to speed up recovery and reduce inflammation. What if this substance can be a flagship model of how nature, people and business can thrive together?

This remarkable substance is none other than Frankincense, a resin extracted from the bark of *Boswellia* trees. Frankincense is used in a multitude of products, from fragrances in soaps and lotions, to perfumes (such as in Channel N°5) to essential oils to incense. Unlike other crops, Frankincense is harvested from wild trees and is not grown in typical farms or greenhouses. Instead they grow as a natural part of a wild ecosystem. From baboons that feast on the resin to pollinators that rely on the flowers for survival, it is a complex web of life where every organism has a vital role to play.



Boswellia trees grow in the scorching desert landscape of Northern Africa and parts of the middle east, where the sun beats down relentlessly and water is scarce. Yet, amidst this unforgiving terrain, *Boswellia* trees almost magically produce this amazing resin. While there are several species of *Boswellia*, each with unique growth patterns, resins and harvesting techniques, this article mainly focuses on *Boswellia carterii*, which grows in Somaliland and Somalia as well as *Commiphora confusa* which grows in Kenya.

Unlike other crops, Frankincense is harvested from wild trees and is not grown in typical farms or greenhouses. They are not planted and tended to as traditional crops, instead they grow in the wild and can only be harvested there. They are a natural part of a wild ecosystem. From baboons that feast on the resin to pollinators that rely on the flowers for survival, it is a complex web of life where every organism has a vital role to play. With their roots they prevent erosion and keep the landscape intact, and with their vegetation they actually increase rainfall in their habitat (Spracklen et al, 2012). The *Boswellia* trees are truly guardians of the land.

Beyond the ecosystem, the resin from these trees bring in income that entire communities depend on. Often Frankincense and pastoral livestock are the only forms of income these villages have and the trade directly impacts the quality of life of these people. For thousands of years Frankincense was traded and transported all over the world on networks such as the Silk Road bringing. Frankincense gradually gained cultural significance in many corners of the globe.



Harvesting Frankincense Resin; Source: Arbor Oils Africa

The traditional process to harvest this valuable commodity involves local harvesters making incisions in *Boswellia* trees using a metal tool and returning weeks later to collect the resin that seeped out from the tree. Typically men make the incisions and collect the resin while women sort and process the resin. This is a meticulous and labor intensive process as harvesters have to make specific types of cuts throughout the bark of hundreds of trees and sort kilos upon kilos of resin. An individual typically harvests 100 kilos of resin each season. Each kilo of Frankincense typically sells for between two to four dollars based on market conditions and the market power of the buyers (larger buyers are able to negotiate lower prices). Note however, that the harvesting process varies widely by species though. Some species like *Commiphora confusa* don't require making incisions because beetle larvae naturally cause the larvae to seep out while others produce small, harvestable resin tears as part of their natural growth process (*Boswellia neglecta*).

After being harvested, these resins are transported to local buyers who purchase them in bulk. These buyers often wield significant influence over pricing and frequently fail to provide fair wages. Subsequently, the resins undergo a journey, either directly reaching Western companies or passing through multiple intermediaries. Once in the hands of these companies, the resins undergo processing and distillation, ultimately transforming into valuable products such as essential oils. These finished products can command prices exceeding a hundred dollars per bottle (15 ml).

As with many wild harvested plants though, there are little enforced standards and guidelines for how to maintain a sustainable supply chain, which includes everything from safe harvesting to fair prices. Considering the indispensable role of *Boswellia* trees within the ecosystem and local communities, prioritizing their sustainable and equitable harvest becomes paramount. By doing so, we can address pressures stemming from international markets, climate change and shifting local attitudes to safeguard both the spiritual significance of these trees and the well-being of the communities dependent on them.



An Over Harvested *Boswellia* Tree
Source: Save Frankincense

Over Harvesting:

Over harvesting is a serious threat to *Boswellia* trees. There is a limit to how much resin can be extracted from a tree before it starts to become weak and dies off (Lemenih and Kassa, 2011). Local elders have historically advocated for 6-12 cuts on a tree, but reports have noted trees with over 70 cuts are common; a few even had close to 120. If over harvesting takes place on a larger scale, entire swathes of forests are at risk of disappearing, causing long term damage to both the people who rely on it and the ecosystem. In the short run, part of the solution is raising incomes by steadily increasing the buying price of Frankincense and working with local partners to increase awareness about over harvesting. If the price is suddenly raised it will likely trigger a local stir and cause an over harvest because in harvesters' minds prices often fluctuate, and they are rushing to secure this greater income. So, slow steady raises in price is the best option. As incomes increase and are fair, each individual won't need to over harvest to meet their needs.

Local attitudes about wild harvesting have changed. While some in the new generation are excited about new technologies and sustainable harvesting, many don't feel a visceral connection to the *Boswellia* trees as their ancestors did and are more comfortable over harvesting or leaving the profession altogether. There also is a lack of information about the impacts of the too many cuts among the newer harvesters. Anjanette de Carlo, a lecturer at the University of Vermont and founder of Save Frankincense (a conservation and research initiative dedicated to saving the Frankincense economy) personally spoke to some of the harvesters on the ground. She learned that some of them faced pressure from suppliers to get as much as resin from the trees as possible, but had no idea that making too many cuts would kill the tree in a few years. In the short run raising awareness and raising incomes can help alleviate this problem.

It's important though to not fall in the trap of blaming local community members for these issues. There are vast structural injustices and economic challenges that can make harvesting extra resin the difference between having and not having the next meal. Critical to ensuring a sustainable supply chain in the long run is making sure the communities around Frankincense are given greater educational and economic opportunities as well as fair wages so the root problem can be solved, and over harvesting won't need to occur. Making the supply chain fairer and more transparent is a vital next step to solving these issues. More about this later, but consumers have the power to make this a reality. One of Fairwild's core missions is a future with equitable economic growth through empowered consumers. By consumers purchasing Frankincense only from sources that ensure fair wages and sustainable harvesting, consumers can vote with their wallets and send a message that businesses must be environmentally friendly and socially responsible to be more profitable.

Climate Change:

Climate Change in these regions is leading to severe droughts, altered rainfall patterns and rising temperatures in these regions. Not only is this affecting the health of *Boswellia* trees, but it is also impacting harvesting techniques and the local community. Harvesters know when to make incisions in the bark based on the weather patterns--the start and end period of rain directly guides communities on when to harvest frankincense. Village elders thoughtfully managed the forests, timing the harvests with the rains and making sure the trees were healthy for generations and that trade was sustainable. However, climate change is dramatically changing weather patterns often creating the conditions for a harvest multiple times a year, causing over harvesting.

Further, droughts have become more common which not only damages trees but also the entire community. There is already a high amount of food and water insecurity in this region, and climate change further strains these limited resources. In addition, *Boswellia* trees are almost entirely fog fed. Unlike typical trees that receive water exclusively through wet soil, fog fed trees absorb rain from through their leaves and through water that rolls down to the soil. As climate patterns change, we have limited ideas as to how the health and longevity of these trees will be affected. On the flip side, maintaining a sustaining forest of *Boswellia* trees can actually help communities be more climate resilient through their ecosystem services. As the frequency of droughts increases because of climate change so will erosion, but a strong network of these trees can stabilize the ground with their roots. The forest also helps cool and maintain the microclimate temperatures as well as sequesters atmospheric carbon. These services are all vital to combating the local effects of climate change.



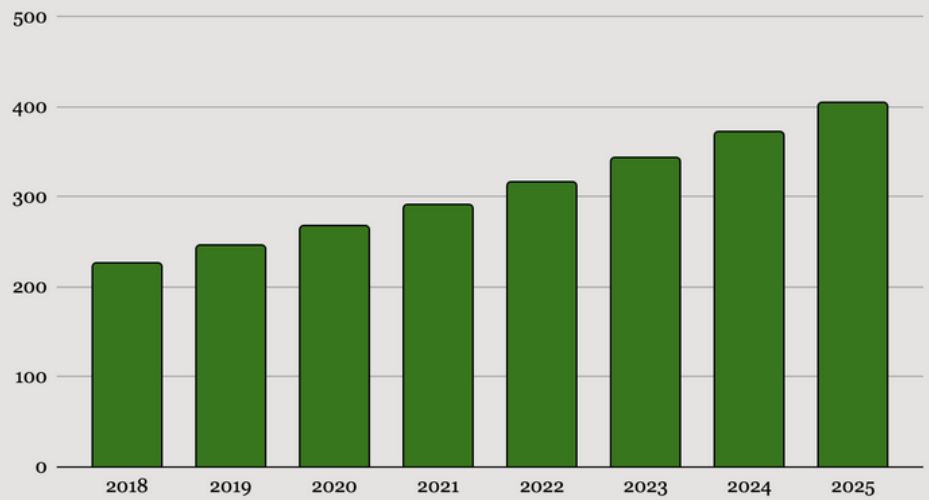
Unethical Business Practices:

Multiple reports have shed light on the exploitative business procedures taking place in the Frankincense trade. Because of the lack of transparent supply chains, buyers are able to take advantage of marginalized communities. A Vice report found startling evidence of buyers using intimidation tactics, not paying the promised amount and also using unfair tactics to eliminate buyer competition.

The report also found that often Western companies that sell Frankincense products, like DoTerra, lie and exaggerate claims about the positive impact they are having in Frankincense communities as well as buying from suppliers that take part in these unethical tactics. In addition, certain regions face extremist group violence, such as from ISIS in Somalia, and are forced to pay an additional tax or be at risk of violence. Pressure from these groups ebbs into the already slim margins. On the western front, companies inflate the sustainability of their supply chains by greenwashing. Since there is limited oversight and regulation, these companies can get away with this and consumers are misled. There is little incentive for companies to do the right thing in this model because it takes away from their profits. As global demand for essential oils and Frankincense rises, traceability and proof of genuine sustainability, which can be ensured through traceability programs like Fairwild, is more important than ever. New technological advancements, such as Blockchain technology, are being tested and can help increase accountability. Blockchain technology is essentially documenting each level of the supply chain through photographs and detailed records.

As mobile apps and phone cameras become more advanced, there is greater potential to track each exchange of this material. Stephen Johnson is the founder of Fairsource Botanicals, an expert on the Frankincense supply chain and is currently working on developing blockchain solutions. He explains the merit of blockchain is that you can “in an indelible way document the good practices that are happening while also identifying where the gaps are... such as with tree health or resin sourcing for example... it becomes an iterative process to continually increase transparency.” This technology will help differentiate companies that are actually green and just claim to be green without actual evidence.

Market Demand For Essential Oils Worldwide From 2018-2025



Global Demand and Projected Demand (in tons);

Source: Statista, Grandview Research 2018

Women's Rights:

In some cases women have been especially exploited in this process. There have been serious reports of unsafe working conditions including no bathrooms, unfair pay and sexual assault. In addition, general issues such as late or less-than-promised pay and inaccessible healthcare lower quality of life. Empowering women is key to everyone’s success. Reports by Banerjee and Duflo have shown women invest more income on their families and on education, so improving the situation would have widespread impact. One Fairwild partner, Arbor Oils of Africa, is working with local communities in northern Kenya to use the Fairwild Fund to make positive change. When consumers purchase any certified fairwild product, a portion of the profits go into a ring fenced fund for social development projects in the collectors’ communities. Based on community suggestions and Fairwild guidelines, Arbor Oils of Africa uses funds to buy and give livestock to local women harvesters to raise communally. Typically, owning livestock is limited to men, so this project gives women not only more sources of income but greater freedom.



Women Collectors With Their Livestock; Source: Arbor Oils of Africa

Consumer Driven Change, A Better Future:

Thanks to the efforts of the dedicated change makers and a new generation of empowered consumers there is hope for a more sustainable future. Research by WGSN has shown “Uniqueness is a priority for Gen Z. The most ethnically diverse generation in history, difference doesn’t scare them as it may have in the past. For Gen Z, there’s more emphasis during adolescence on creating their own path, whether that means building new educational systems or their own personal brands.” As Gen Z makes up more of the market, their unwillingness to accept a lesser status quo will significantly impact the business landscape. They demand companies genuinely make a positive impact in the communities they serve and on the environment instead of empty greenwashed claims. Fairwild is working on building supply chains that protect biodiversity and the local community while empowering the consumer and strengthening the supply chain’s resilience. This is critically important as only 10% of companies include their supply chain in their impact reports.

The Fairwild standard creates a set of policies and framework that ensures good working conditions and sustainability that allows consumers to differentiate between real and greenwashed products. Consumers essentially ‘vote with their wallets.’ By purchasing sustainable frankincense consumers are sending a message that over harvesting and exploitation is not okay. As the next generation, who are more proof of impact oriented, become a larger percent of global consumers, this impact will only be amplified further. This will be good not only for the workers, the environment and consumers but also businesses as they get higher quality resources.



As Nasir Ahmed, General Manager of Ihsan Resins Society Trading LLC said: "Ihsan Resins Society, a corporation made up of Frankincense harvesters, local wild collection area landowners and local traders, strongly believe in Frankincense tree population conservation, sustainable harvesting, and social responsibility. These ideals are promoted and strengthened by FairWild principles. Also, being FairWild certified, which is internationally recognised and respected, demonstrates our compliance with rigorous standards established by FairWild Foundation and our commitment to sustainability, ethical practices, and the conservation of biodiversity." Although the future of Frankincense is threatened, through purposeful changes in the way we do business and look at our wild resources, there is still optimism for a brighter future ahead. Let this be a call to action to demand transparent supply chains with socially responsible and environmentally sustainable practices. By advocating for such changes, we can pave the way for a future that is fairer, more progressive, and harmonious with our planet.