THE FOREST TRUST

2018

CHARCOAL BAG ANALYSIS

THE UK MARKET

A USEFUL BUT CONTROVERSIAL WOOD-BASED RAW MATERIAL

Charcoal is a fuelwood made by carbonising wood in a low-oxygen environment. To produce one tonne of charcoal, you need between four and 12 tonnes of wood. Charcoal is used around the world for different purposes: as energy (cooking, heating), activated carbon (filters), in the steel industry, in the drugs industry, silicon-making processes (electronics and photovoltaic panels) and as biochar (for soil fertilisation).

Charcoal can be the main driver of forest degradation, sometimes deforestation, and lead to desertification and erosion.

In Africa, firewood and charcoal account for 80% of domestic combustibles.

A key issue in developing countries is the use of traditional energy inefficient kilns that need a lot of wood to produce charcoal and that release greenhouse gases into the atmosphere. Once made, charcoal is often burnt in closed atmospheres within houses with inefficient stoves, raising public health issues. Charcoal production can also sometimes be linked with poor working conditions, child labour, human rights abuses and land rights conflicts.

REGULATION IN AN OPAQUE MARKET

While official national export figures indicate that most African countries only export a few trucks of charcoal per year, others might tend to show that these figures are largely underestimated.

Furthermore, charcoal trafficking is significant in protected areas in cross-border lands and in some cases may contribute to financing armed militia. Besides being mainly informal in some countries, the charcoal market in Europe is opaque, meaning that a lot of bags don’t state any country of origin of the wood used to make charcoal.

While imports of many wood-based products are now regulated by the European Union Timber Regulation (EUTR), implemented to prevent illegal products on the European market, charcoal is not part of the EUTR scope.

HOW TFT IS HELPING TO CHANGE PRACTICES

THE HISTORY OF CHARCOAL ANALYSIS

Over the last few years, the charcoal sector in Europe has been mainly dominated by opaque charcoal imports, but now some transparency is appearing thanks to a drive for change. Knowing the market's intricacies, TFT has developed a clear and simple strategy to bring change to the European charcoal industry:

ASK FOR TRANSPARENCY

This strategy has been implemented across the supply chain, from the charcoal bags to the forest. The next few pages provide a brief overview of the journey so far.

WHAT IS REALLY INSIDE A CHARCOAL BAG?

Nobody was really interested in this issue when we first started looking at charcoal supply chains.

In 2012 and 2013, TFT began raising awareness in the French charcoal industry about the potential link between charcoal, deforestation and the exploitation of people. Yet no clear solution was apparent within the sector.

2014

In 2014, TFT decided to innovate in order to reconnect charcoal bags with wood and forest. In parallel we created a robust traceability method on the ground, called the Charcoal Control System, showing the journey of charcoal across the supply chain. We carried out more than 40 assessments at charcoal producing factories. We noticed the visual characteristics of the wood could be seen on the charcoal pieces. And so we began developing a method to analyse the content of a charcoal bag based on three main criteria: apparent density, real density and visual characteristics.

TFT is not a laboratory; we innovate by creating methodologies and using knowledge acquired through our fieldwork, but this helps to create change.

Here is an example of such work, which took place with a well-known retailer that has a strong policy commitment to responsible wood.

Analysing a charcoal bag from the retailer's own brand range, we immediately identified that the wood inside the bag was very likely coming from a tropical area with no traceability and a high risk of deforestation - therefore being at odds with the retailer's wood policy.

TFT's approach is to work with the industry to help to deliver responsible products, not to denounce, which is often the role of other NGOs. We work behind the scenes to drive positive change that transforms supply chains and the product sector.

We produced a technical sheet record that presented our conclusions, and we sent this report to the retailer. We had a meeting, and the next year the retailer decided to switch all their supply towards temperate wood with some forest certification above it. This example has been followed by other retailers, provoking a global change.

2015

We applied this successful methodology to a survey for French retailers. We collected and analysed charcoal bags from all the main retailers in France - a total of 29 bags from 11 retailers. We found that one quarter did not conform to what was written on the bags, and 52% of the bags gave no indication of wood origin.

The French charcoal industry started to ask for transparency on the whole supply chain. This involved many meetings, actions and much field work, with continuous improvement. The appetite for transparency carried through to the following year, and no further fraud was noticed on bag descriptions. This movement by French retailers really changed buying processes, helping to protect nature and people.

2016

We extended our survey to Germany, the biggest charcoal market in Europe, with a larger scope, to raise awareness within and beyond the industry. The results were similar to France's, with a lack of transparency and much charcoal coming from areas with a high deforestation rate. But some mindsets started to change. We decided to create a TFT film in order to inspire others to raise awareness and bring transformation.

bit.ly/TFTcharcoalfilm1

This film helped to inspire industry stakeholders, including retailers, laboratories and journalists.

In France, TFT began innovating with ENSTIB (French Engineer Wood University) to reveal that it is also possible to carry out wood recognition from a briquette. The results and technology were publicly shared to contribute to transforming the sector. Because around half of the German charcoal market uses briquettes, and some fraud can occur, it is important to reveal the content of the briquettes and ask for transparency. Now some German laboratories are able to conduct these charcoal /briquettes tests, and their work is crucial to check conformity.

2017

Our charcoal bag analysis survey now covered four countries, with the United Kingdom and Belgium joining France and Germany in our research.

Today, charcoal bag analysis is becoming a standard in some countries. Whereas TFT will not denounce any case of fraud or non-conformity publicly, some other NGOs take a different position. In 2017, WWF also carried out a charcoal bag analysis survey, revealing publicly the content of each bag and some cases of fraud (including fraud involving certification schemes). This public information contributes to putting more pressure on the entire industry to adapt to more responsible practices.

All the work on charcoal bag analysis inspired journalists in Germany to create documentaries on the issue (appearing on ZDF and 3SAT).

TFT continues to extend the survey, which as of 2018 includes Poland too. Various other NGOs are starting to publicly denounce problems seen in this market, and journalists in different countries are starting to take up the subject on their own.

ASKING FOR TRANSPARENCY WILL ACCELERATE THE TRANSFORMATION OF THE EUROPEAN CHARCOAL INDUSTRY

METHODOLOGY

To tackle the issue of opacity, TFT has developed and implemented a simple but effective methodology to reveal the content of charcoal bags and measure the level of transparency of brands selling their products on the European market. We have developed this methodology jointly with scientific partners but TFT is not a laboratory and does not hold the pretention of being one.

Why is TFT conducting charcoal bag analysis surveys? Each year, we do this to raise awareness of the issues around charcoal and the need for transparency in this industry. In 2018, our analysis covers retailers across five countries: France, Belgium, Germany, the United Kingdom and Poland.

There are several ways to identify wood species, and in some cases the origin of wood, inside charcoal bags. Genetics, density and wood anatomy all play a part. After the pyrolysis process (where the chemical characteristics of the wood change) the anatomical characteristics of the wood are conserved.

Charcoal density depends on wood density, meaning that a dense wood will produce a dense charcoal.

Materials needed in a study are: Binoculars, microscope, wood recognition database, eg. InsideWood, weighing scales, measuring container

The steps followed in an analysis

We record:

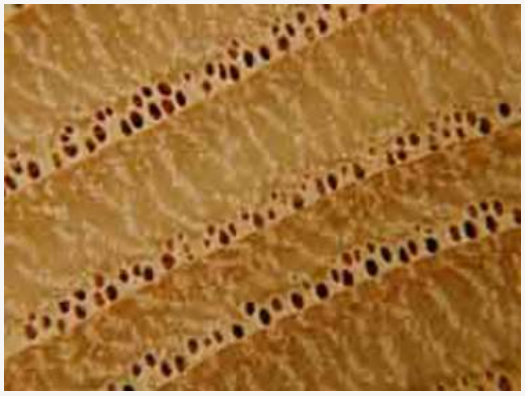
1) The type and name of the retail store, the brand on the charcoal packaging, details of trader/producer, the origin, wood species and any certification stated

2) Measurement of the apparent density

3) Measurement of the exact density

4) Visual check and report of charcoal aspect and wood anatomy (growth rings, vessels, wood rays)

5) Visual check and report of potential foreign bodies found in the bag (stones, plastic pipes, polyethylene twine, small branches)



STUDIED INDICATORS

During and after analysis, some indicators are constructed. The most important are explained here.

Country or region of charcoal production stated on the bag

This indicator enables the consumer to know the origin of charcoal. Asking brands to state it on the bag leads companies to rethink their buying strategies towards more responsible purchasing, or change their suppliers' practices according to the country.

Type of wood or species found in the bag

Based on our methodology, it is possible to determine the wood used to produce charcoal, identifying the species (at least for temperate ones) or climate. Fraud between what is written and what is identified can be detected. Comparing data on wood species with customs data provides us with a good overview of each analysed market.

Certification

It is widely accepted that one way to respond to retailers' demands for responsible products is to supply them with FSC products. Over the years, TFT has detected some fraud within this system. The methodology allows us to detect possible discrepancies between certificate details and what is in the bags. The amount of declared certification hints at how advanced a market is in terms of demand for responsible products.

CHARCOAL BAG ANALYSIS SURVEY: UNITED KINGDOM

In 2017, the UK imported 87,000 tonnes of charcoal (UNComtrade) to meet the demand of the domestic market because of the relatively small domestic production (5,000 tonnes, according to FAO in 2016). This graph shows the main contributors to the UK charcoal market and the evolution over the year.

Source : UNComtrade

Each main actor contributing to the UK market has its own characteristics (in order of quantity exported to the UK):

• SPAIN: Imports as much as it produces. 75% of Spain's imports come from Cuba, Nigeria and Paraguay. Spain's domestic production, mainly informal, relies on eucalyptus and fruit trees.
For charcoal coming into the UK, it's difficult to determine the share of Spainish imports and domestic production.

• NAMIBIA: Faces challenges of encroachment onto environmentally important land. Namibia uses local invasive species to make charcoal. This production can be linked with several issues: smoke emissions (handmade and low efficiency kilns releasing pyrolysis gases into the atmosphere), low yields, the harvesting of protected species, poor living conditions (housing from plastic sheets), poor drinking water access, child labour, migrant complexities and inadequate protective equipment for workers. However, good initiatives and training have been implemented to improve social and environmental practices, through partly adapted FSC standards.

• SOUTH AFRICA: Both producing and importing. Its imports are mainly from Namibia. It is difficult to know how much charcoal coming from South Africa is really produced locally, and how much comes from Namibia.

• PARAGUAY: High biodiversity (mammals, birds, amphibians, flora). Paraguay has one of the highest deforestation rates in the world, with much soil erosion, desertification and cattle breeding. Charcoal production is mainly for export and could be derived from deforestation.

• NIGERIA: Africa's main producer. Nigeria also uses charcoal as the main source of energy for local populations. Nigeria faces water shortages, desertification, ecosystem fragmentation, soil degradation, loss of biodiversity and habitats, pollution from traditional kilns, low yields, low traceability, low forest legislation, corruption, illegal logging, child labour, bad working conditions, land tenure and water access conflicts. There is an urgent need for reforestation programmes and research into alternative sources of local energy.

CHARCOAL BAG ANALYSIS SURVEY

TFT has conducted two market analysis studies in the UK, one in 2017 and one in 2018. The purpose is to evaluate the level of transparency provided by the brands regarding the country of origin of the wood and to check the conformity between what is stated on the packaging and what is actually found in the bags. The scope of the studies were similar in 2017 and 2018: 16 different references found in 18 different stores: supermarkets, discount stores, DIY retailers and garden centres (two identical references were found in several stores and were removed from the study).

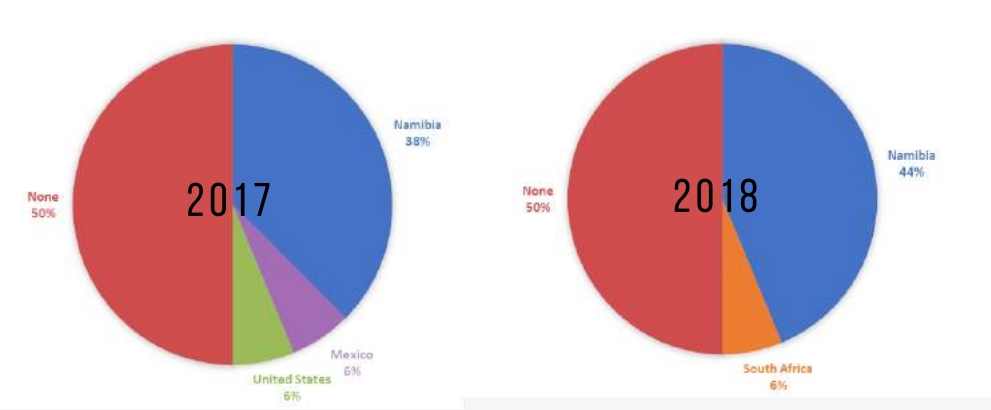


Figure 1 : Declared country of origin written on the bags

Half the bags did not have any information on the country of origin, revealing a high level of opacity in the UK market, both in 2017 and 2018. Among these bags, almost all contained tropical charcoal. Not knowing the exact country or region of production increases the risk of having charcoal linked with degradation of wood-based ecosystems or bad social practices.

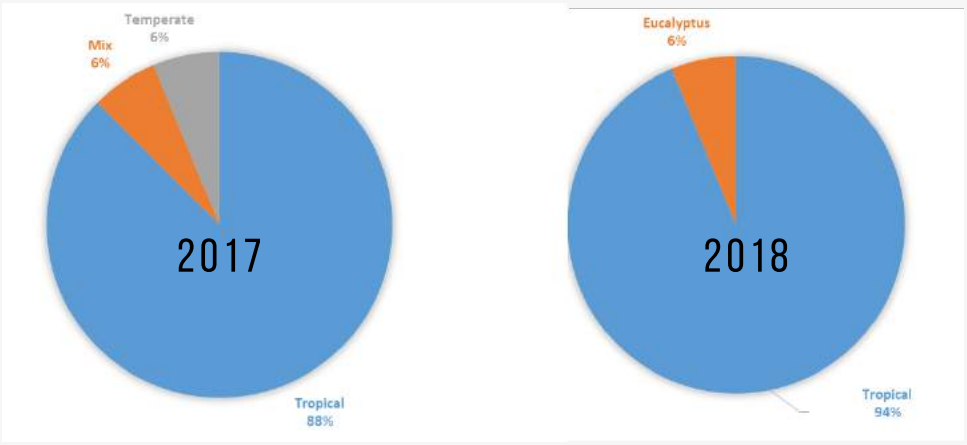


Figure 2 : Type of charcoal found in bags

Almost all the bags contained tropical charcoal, both in 2017 and 2018. Eucalyptus is separated due to its cultivation specificities (often in plantation). Environmental and social issues happen in temperate countries but those issues are more widespread within tropical countries. However, differences exist between these countries; some are more advanced in developing responsible production than others.

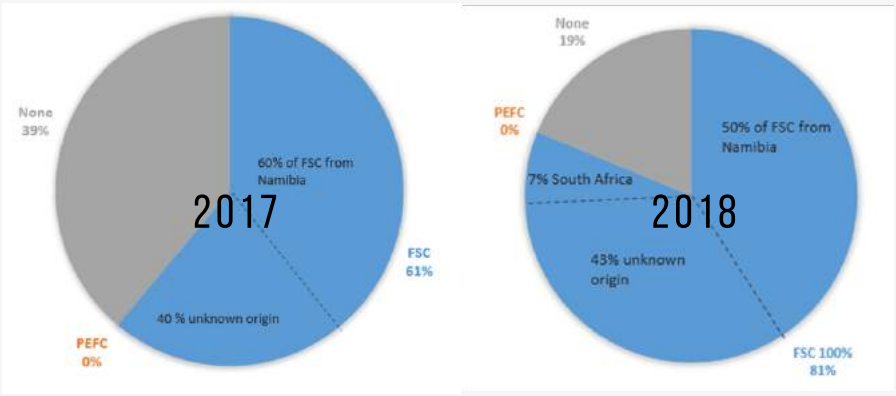


Figure 3 : Certification of charcoal bags

Certification is even more present in 2018, representing 81% of the analysed bags (only FSC certification). Among those certified bags, more than half come from Namibia and South Africa, the others do not state any origin. Under FSC Standards, the origin of the product does not have to be stated.

CONCLUSION

In 2018, **94% of the analysed charcoal bags in the UK contained tropical charcoal**. 81% were certified FSC and only 50% had a declared country of origin, **most often Namibia**. The situation was similar in 2017.

Consumers cannot make an informed choice, because in a majority of cases, information on the country of timber origin is not mentioned on charcoal bags.

Due to relatively small domestic production, the UK imports the majority of the charcoal it consumes each year. This charcoal comes from countries where destruction of wood-based ecosystems and bad social practices happen at varying degrees.

Nevertheless, within some of those countries good practices exist and the UK market should support those practices and help their suppliers to deliver responsible products.

Charcoal is not present within the European Union Timber Regulation. TFT recommends that charcoal be included in the EUTR.

There is still much opacity in the UK charcoal industry; steps need to be taken to move towards greater transparency. This change is urgently needed to reduce degradation/deforestation in tropical areas and to prevent the exploitation of people.

TFT asks for transparency over the entire supply chain to bring transformation and protect nature and people.